

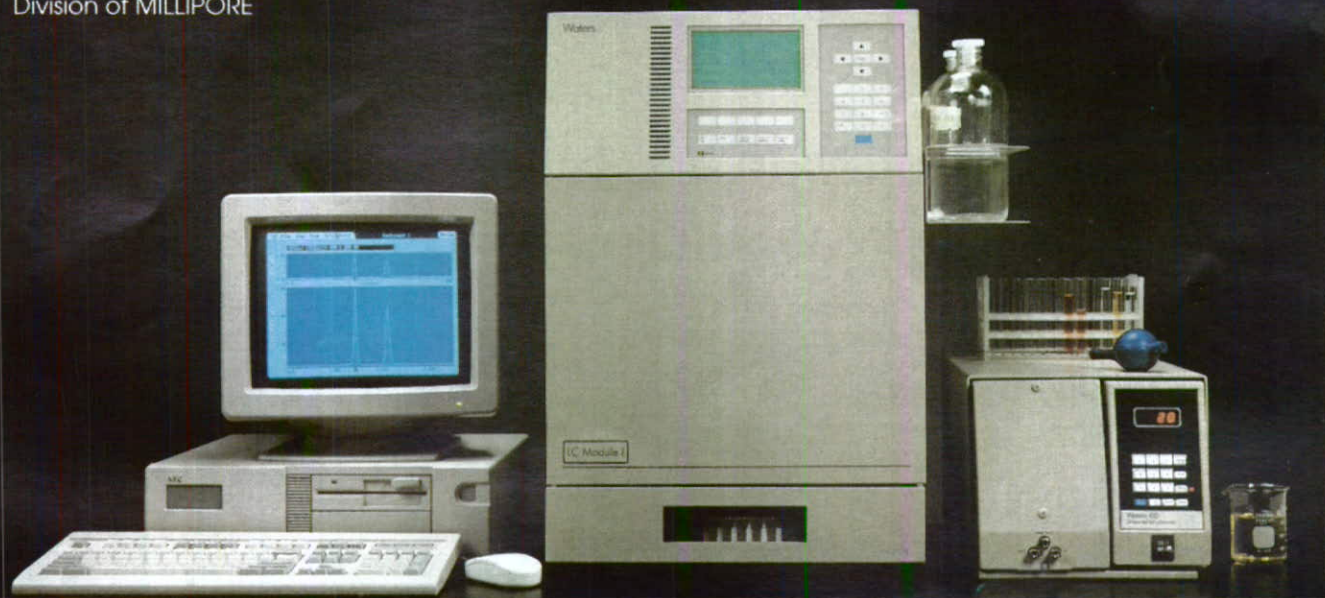


Chemistry

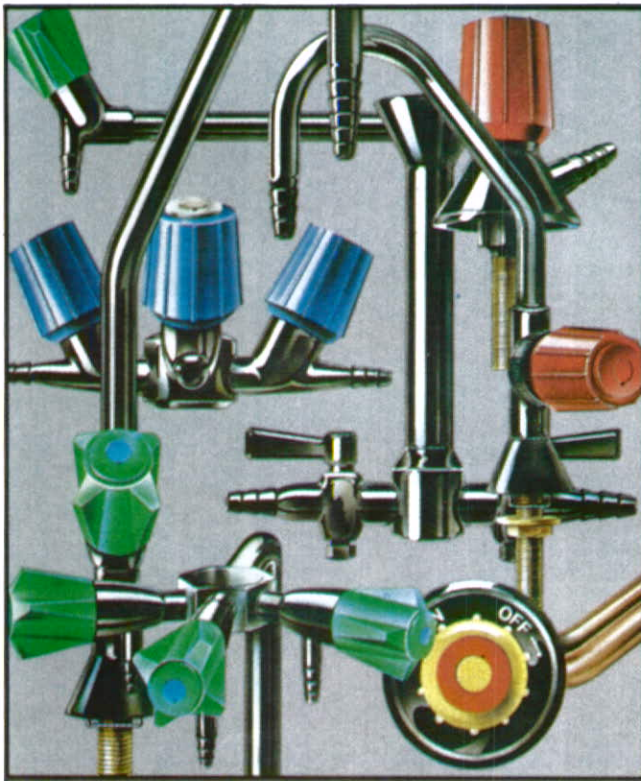
IN NEW ZEALAND

Waters LC Module I

Waters
Division of MILLIPORE



ALPHATECH



brownall Labtaps

Specifically developed to meet modern requirements. Extensively field tested. The materials used, easyclean contours, polypropylene handwheels and TEKTACOTE EPOXY PLASTIC coating give high resistance to corrosion and deterioration.

FLEXIBLE DISTINCTIVE DURABLE RELIABLE

SELECT FROM THIS RANGE

- Water taps, hot and cold
- Single, two-way and three-way water fittings
- Mixer taps
- Multitap fittings
- Waterjet vacuum pumps
- Plastic Valves for special waters (demineralised and distilled)
- Showers
- Remote controlled valves and outlets
- Valves... dry service, gas needle, diaphragm and steam
- Ancillary fittings to cover most laboratory requirements.

Items in regular demand held in stock... other items procured against order.

Like a Brownall Catalogue? A phone call or request on your letterhead will bring one by return mail.



Thermoplastic Engineering Ltd.

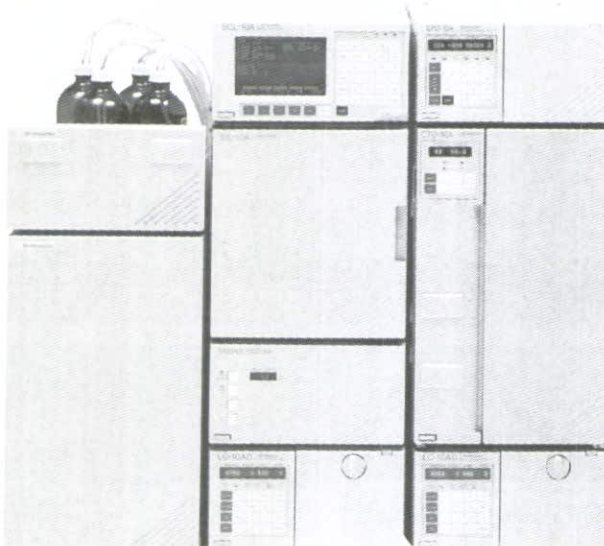
Pacemakers in Plastic Fabrication
151 Park Road, Miramar, Wellington, New Zealand.
Box 15174, Wellington. Telephone (04) 882-092
FAX (04) 887-523.

**SOLE
NEW ZEALAND
AGENTS**

TP24

HIGH^{est} PERFORMANCE LIQUID CHROMATOGRAPHY

The NEW and VERY ADVANCED SHIMADZU LC-10A System



Features:

- ★ Newly developed optics and electronics
- ★ The most sensitive UV detector on the market, with dual wavelength and ratio output
- ★ Really pulse free pump
- ★ Flexible configuration:
 - High or low pressure gradients
 - Simple isocratic or highly automated gradient systems, put it together how you want it.

SHIMADZU and **Douglas Scientific** - *The New Force!*

P.O. Box 45-027 Auckland 8. Phone (09) 793-993, Fax (09) 793-477. Central Park Drive, Lincoln, Auckland 8.

Chemistry in New Zealand readers may well find time over the festive season to consider how they might contribute to filling the pages of their magazine. The magazine now has a good level of security and continuity as the publisher and NZIC have agreed to long term proposals for production on a shared profits - shared losses basis. The success of your magazine now depends to a considerable degree on the quantity and quality of contributions in the form of articles, news items, reviews, topical comment, invited or contributed editorials or letters. Making the magazine interesting and useful to members and their organisations must stimulate advertisers to place advertisements. Advertising revenue is the heart of the arrangement with our publisher; the more there is the less the magazine will cost.

Elsewhere in this issue and in every subsequent issue you will find a list of proposed features for future editions. It is expected that this will encourage suppliers of equipment to advertise, users to submit technical papers and any member to submit an article.

The list of members appearing in this edition is based on the best information available at present. The Year Book which will be published in March will also have a list of members with correct entries for all those noted as incorrect in this issue.

Best wishes for Christmas and the New Year.

R.B. Hall Editor

REQUIREMENTS FOR ARTICLES IN CHEMISTRY IN NEW ZEALAND

Articles should be typed double spaced on A4 paper on one side of the paper only.

Captions for all figures, tables and diagrams should be provided and an indication where they should be placed.

To prevent errors in type setting, tables should be provided if possible, as camera ready print.

All figures should be in camera ready form.

All photographs should have sufficient contrast to provide good reproduction.

Authors should if possible avoid the use of greek or other symbols. If these are necessary provide formulae etc as camera ready material.

The processing of an edition of Chemistry in New Zealand from presentation of copy for typesetting to postage takes 4 weeks. Ideally all articles and similar material should have reached the editor two weeks prior to presenting copy (this does not apply to short items). Approximate posting dates for Chemistry in New Zealand are:

Editorial	75
Special Feature: HPLC — New Ideas Still Appearing	76
New Ceramics from Indigenous New Zealand Minerals	79
Review of the Royal Society of New Zealand Act 1965	85
Letter from the New NZIC President	87
Coming CINZ Features	87
Obituary — N.P. Pitcaithly	92
Obituary — Professor Hugh Parton	93
Cover Story: New Waters LC Model 1	96
NZIC Membership — Alphabetical Listing	97

Editor: R.B. Hall, 64 Mellons Bay Rd, Howick
Phone: 09 534-9109

Publisher: Michael Pervan Holdings.
PO Box 101-189 N.S.M.C. Auckland 10.

Advertising: Carl Roze, Ph: 09 521-5151
PO Box 87-012, Meadowbank, Auckland

Branch Editors:

Auckland: Dr. Robyn Somerville, Mt Albert Research Centre DSIR, Private Bag Auckland.

Waikato: Ron Newth c/- Chemistry Dept, University of Waikato, Private Bag, Hamilton.

Manawatu: Dr. Michael Boland, New Zealand Dairy Research Institute (NZDRI), Private Bag, Palmerston North.

Wellington: Adrian Bennett, BRANZ, Private Bag, Porirua.

Canterbury: Dr. Robert J. Martyn Chem. Division, DSIR, PO Box 29-181, Christchurch.

Otago: Dr. George Emerson, Bio-Chemistry Department, University of Otago, PO Box 56 Dunedin.
Published on behalf of the New Zealand Institute of Chemistry (Inc.) PO Box 12-347, Wellington.

Ph: 04 473-9444. Fax 04 732-324

President: D. S. Winter, Hon. Gen. Secretary/Executive Officer: Alan A. Turner, Hon. Treasurer: D.P. Karl.

Chemistry in New Zealand: Published six times a year in February, April, June, August, October and December.

Editorial: Technical and scientific articles should be submitted to the editor no later than 1st of the month of publication. The editor will always welcome commercial and industrial news of product design, development and testing, processing techniques, company and personal news etc.



	<u>Posting date</u>
February issue	25 February
April issue	25 April
June issue	25 June
August issue	25 August
October issue	25 October
December issue	20 December

Important material if received late will delay publication of an issue.



Waters LC Module 1 is a compact, automated system designed for the high throughput laboratory. Control the entire system from a single point and use other easy-to-learn Maxima™ or Baseline™ software to summarize all results. Easy programming and automation features make the LC Module 1 ideal for unattended analyses. The LC Module 1 provides excellent value for money as a low-cost fully automated HPLC.

Special feature for next issue:
**High Pressure Liquid
Chromatography H.P.L.C.**

HIGH PRESSURE LIQUID CHROMATOGRAPHY

HPLC - NEW IDEAS STILL APPEARING

By Roger Whiting

The technique of HPLC has become well established in the field of analytical chemistry and is now starting to gain recognition as convenient reliable technique of use in preparative chemistry. In line with this growth in the acceptance of the technique there has been a proliferation of different types of equipment available. This is particularly noticeable in HPLC where analysts have a choice of columns and detectors as well as solvents at their disposal.

Detectors

One of the key elements in the chromatographic system is the detection of the analyte. The amount of information from a chromatographic run can be dramatically increased if the method of detection can be used to differentiate between the various components contained in the sample.

With the most commonly employed detector type being the UV detector with a variable wavelength the easiest way to increase the information from the chromatographic run is to measure the absorbance at several wavelengths. This approach has been employed in the new LC1210 detector available from ICI Instruments. This detector measures the absorbance of the analyte at two different wavelengths or it can scan during the run. This detector can give up to four different wavelength ratios at once giving a lot more information to the analyst. Another method of gaining more spectral information from the sample has been used by Waters in the diode array detectors now available. This allows a complete spectral scan instantaneously which enables overlapping peaks to be differentiated. A good example of the use of this type of detector was in the detection and identification of Modified Amino Acids in Synthetic Peptides after their separation on the column¹. In this application some unwanted contaminants can give larger absorbance than the desired products and it required a spectrum to characterise each peak. Interest in Diode array detectors is increasing as a standard design for UV detection rather than specialty high price detectors.

Another variation on the UV absorbance detector is the fluorescence detector. This couples the high sensitivity and selectivity of fluorescence with the component separating power of HPLC and several have been on the market for some years now. ICI have introduced a new development on this theme with the LC1250 spectral scanning Fluorescence HPLC Detector. This detector contains two monochromators which allows scanning of both excitation and emission wavelengths along with high sensitivity from a pulsed Xenon lamp and high speed digital electronics.

One of the most commonly used detectors for HPLC after the UV detector has been the Refractive Index (RI) detector. ICI have advanced this type of detector by introducing the LC1240 Refractive Index HPLC detector which features selectable temperature control and a variety of other functions. While discussing optical detectors an interesting device to appear is the ACS ChiraMonitor. This measures the optical rotation of the analyte as it passes through the cell and gives the result as a positive or negative signal depending on the direction of the overall optical rotation of the eluent. When used with a chiral column this allows the amount of each enantiomer in the initial sample to be measured. This is becoming increasingly important in the pharmaceutical industry where the FDA have proposed making the screening of pharmaceuticals for optical activity a legal requirement.

The appearance of electrochemical detectors during the 1980's aroused a degree of interest for the detection of metal ions but this has recently been extended to detection of carbohydrates. A technical bulletin from Waters details the use of Pulsed Amperometric Detection (PAD) for the detection of oligosaccharides and monosaccharides. The detector used was the Waters 464 with post column addition of sodium hydroxide. The advantage of this type of detector for small sugar molecules is that the sensitivity is higher than the more commonly employed refractive index detector and it also tends to be more stable than the refractive index detector at these higher sensitivities. This higher sensitivity occurs because the PAD detector is sensitive to the number of carbohydrate molecules present not to the mass of molecules present. Thus when the molecules are small the PAD detector gives a bigger signal for a given amount of the component. Clearly this leaves the RI detector with the advantage in the determination of polysaccharides while PAD is preferred for monosaccharides.

An interesting development in the field of detectors has been the light scattering detector which gives an estimate of the molecular size of the component. Typical of this is the Oros model 801. The 801 takes a small sample (40 microlitres) from the flowing stream every 20 seconds and shines a beam of light from a miniature semiconductor laser through the sample. The scattering of the photons by the molecules in the liquid is monitored and used to calculate the hydrodynamic radius of the molecules in solution. From the hydrodynamic radius an estimate of the molecular weight of the component is made. This makes the assumption that the molecule is spherical but for molecules such as globular proteins this is a valid assumption. Even when the assumption that the molecules are spherical is not good the results correlate well with known mixtures. This type of detection is particularly useful for monitoring the fragmentation and aggregation of proteins.

A further development of the light scattering detector is the evaporative light scattering detector. This has appeared on the market in the form of the Vorex ELSA MkII. In this method of detection the liquid eluent is nebulised into an evaporative chamber where the solvent evaporates leaving solid particles of the sample components to travel on through the chamber into a laser light beam. The scattering of the laser light is measured and this correlates with the amount of non volatile material in the eluent. Because this method of detection does not depend on any particular chemical or physical property of the analyte it is termed a Universal detector. As a method of detection some large advantages are claimed for it. The first being that it responds to the mass of a particular component in the sample so small amounts of contaminants give small peaks even if they have high UV absorbances and give large peaks in UV detectors. Another advantage is that the solvent molecules flow through the detector as a vapour and so are invisible to it. Hence if the sample is injected as a solution in a UV absorbing solvent or a gradient elution system is used there is no solvent peak or baseline shift. Application notes are available which describe use of this type of detection in a variety of determinations from carbohydrates to glycerides to polymers.

Columns

The heart of any chromatographic technique is the column used to separate the components of the mixture. This area is one of continual growth as developments in chemistry are making earlier methods and instruments obsolete. Suppliers are introducing new separation techniques and unique selectivities that provide economies in analysis either in terms of easier operations or shorter run times.

A recent survey carried out by LC.GC magazine² gave some interesting information on the trends in column usage in the United States which are probably indicative of the trends occurring or about to occur in New Zealand. The biggest change is the gradual move to shorter columns with smaller particle sizes which allows the same separations as longer columns with larger particles but in less time. Also important is the increasing use of guard columns to protect the analytical column and a concomitant increase in column life with most respondents getting over 10 month use from columns. Another trend is an increasing diversity of the the types of column used. Reverse phase columns which were over 60% of the columns used six years ago are now less than 50%. The growth has been in a variety of areas such as size exclusion, and chiral columns while other types of columns such as normal bonded phase and adsorption are receiving renewed interest after going through a period of low popularity.

A good example of a new column chemistry is the Waters IC Pak C M/D which separates monovalent and divalent cations using a new coordination chemistry. The eluent is EDTA and nitric acid. Utilising conductivity detection linearity is achievable down to parts per billion level without preconcentration. Run times are of the order of 13 minutes.

Another development in column chemistry is the increasing use of phenylpropyl bonded phase columns such as the Rainin Dynamax Phenyl. The traditional reverse phase columns with bonded C-18 or C-8 groups separate compounds on the basis of their hydrophobic character which in some cases may not be very different. With a phenylpropyl bonded phase attached to the support through the propyl groups the surface is effectively coated with phenyl groups and separations depends on the aromaticity of the component. This can vary widely in compounds with quite similar hydrophobic character thus an improvement in separation can be achieved.

Conclusion

With such a wide variety of developments occurring in HPLC as analysts face the challenges arising from the demands of the 1990's we can be sure of many new applications appearing in the coming years.

1 Young M.Y. Burgoyne R.F. and Wheat T.E., Photodiode Array Identification of Modified Amino Acids in Synthetic Peptides Following High Resolution HPLC Separation, *BioChromatography*, 5, 18 (1990)

2 Majors R.E., Trends in Column Usage, *LC.GC*, 9, 686 (1991)

VARIAN'S LC STAR SYSTEM, A WORKSTATION BASED HPLC

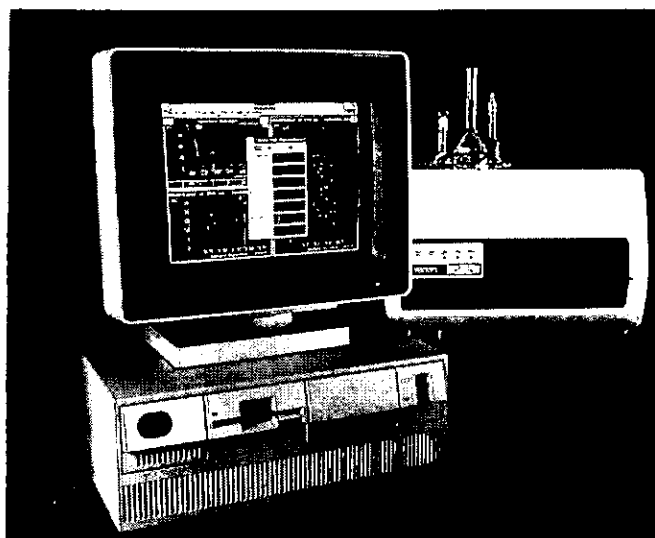
Varian's approach to HPLC has been to design a highly flexible, "integrated modular" system. Using the most up-to-date software environment and with extensive use of colour graphics, windows and mouse user interface, Varian have created a system which allows one-point control of all components of the HPLC from Autosampler to Data Acquisition.

Components of the LC Star system include the 9010 solvent delivery system, a single piston ternary gradient pump, 9100 Autosampler with refrigeration option, 9065 Polychrom Diode array detector, 9050 UV-VIS Detector, 9070 programmable Fluorescence detector and options of compatible components and modules which can be linked to the Star workstation via an analogue/digital converter.

For laboratories who do not want workstation control, the Star components can be operated independently and integrated with modular components from other manufacturers. Signal cables synchronize the operation of the Star components in this case while allowing the operation of later upgrading to a workstation based system if required.

FOR FURTHER INFO:

Wilton Instruments, P O Box 31-044, Lower Hutt
Phone (04) 5697-099, Fax (04) 5697-240



PolyView software takes the drudgery out of diode array spectral processing, and allows it to be an ongoing useful and productive tool. Pictured are the Varian Polychrom Diode Array Detector and LC Star 9020 Workstation.

PURIFICATION OF SOMATOSTATIN AND THREE ANALOGUE PEPTIDES

Objectives

Found in hypothalamic extracts, somatostatin is a 14-amino-acid peptide which inhibits the secretion of growth hormones, insulin and glucagon. HPLC is currently considered to be a superior technique for purity control or purification of somatostatin and its chemical precursors. Fast PCLC is particularly suitable as it may be necessary to optimize the chromatographic conditions for each individual batch, since the type of impurities can differ significantly as a result of minor variations in the synthesis procedure.

Sample preparation

Lyophilized powders of a mixture of somatostatin, Tyr - somatostatin, (D - Trp⁸, D - Cys¹⁴) - somatostatin, (D-Trp⁸) - somatostatin were dissolved in water at a concentration of 25 mg/ml.

Experimental conditions

HPLC system: Gilson Lab-Prep System with a Model 202 Fraction Collector

Column: Rainin, Dynamax C18, 3 μ m 100x21.4mm

Mobile phase: gradient elution linear from 0 up to 60% B.

Solution A: water, 0.01% TFA

Solution B: acetonitrile, 0.01% TFA

Flowrate: 15 ml/min

Detection: Gilson UV 117, 214 nm, 2 AUFS

BEE VENOM PURIFICATION

Objectives

Some allergens contained in venoms can cause severe symptoms and may even result in death. HPLC is used to directly "fingerprint" the various insect venoms as well as for isolation. With FAST PCLC, only one system, only one column is required for both characterisation and isolation in tens of milligrams before the antigenic/allergenic composition of the fractions is studied.

Sample preparation

Honey bee venom powder is dissolved in a mixture of water-acetonitrile, 50-50 (v-v). 50 mg are injected at a concentration of 100 mg/ml.

Experimental conditions

HPLC system: Gilson Lab-Prep System with a Model 202 Fraction Collector

Column: Rainin, Dynamax C18, 3 μ m 100x21.4mm

Mobile phase: gradient elution linear from 0 up to 60% B.

Solution A: water, 0.01% TFA

Solution B: acetonitrile, 0.01% TFA

Flowrate: 20 ml/min

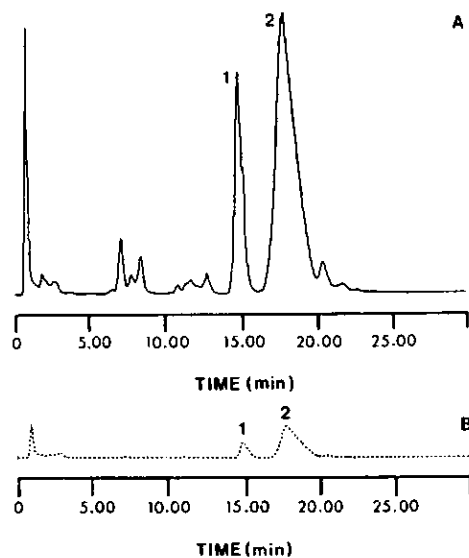
Detection: Gilson UV 117, 280 nm and 214 nm, 2 AUFS

Results and conclusion

Hymenoptera insect venoms are complex mixtures of proteins/peptides which are not easily fractionated due to strong interactions between their constituents. Using reverse phase HPLC eliminates most of these interactions in a short time. In 25 minutes, 50 mg of pure substance were isolated from this complex source material.

Twenty different peaks were detected with monitoring at 214 nm, whereas only the predominant allergens, Phospholipase A and Mellitine were detected at 280 nm.

The high efficiency of the chromatographic column which provides an excellent separation, and the ability of the FC 202 to collect the selected peaks in peak mode with very reliable sensitivity (even when there is a drift of the retention times) are two of the features of the LAB-PREP system used in this preparative separation.



Bee venom purification at (A) 214 nm and (B) 280 nm.
1. Phospholipase A 2. Mellitine.



THE SHIMADZU LC-10A SYSTEM

Every once in a while an instrument is produced which significantly advances the technology in its particular field. The Shimadzu LC-10A is an instrument that just done this for HPLC.

This new system features newly developed optics and electronics, a solvent system which produces an almost completely pulse-free mobile phase stream and high precision column temperature control to ensure unparalleled high sensitivity in analyses.

The new UV-Vis spectrophotometric detectors, SPD-10A(V) ensure higher sensitivity than any conventional UV-Vis detectors, and are provided with new functions such as simultaneous two wavelength measurement, ratio chromatograms and wavelength scanning.

The SCL-10A system controller controls all the component modules via optical fibres for higher reliability. Central and local control of component modules is selectable.

The systems feature compact design and user servicing of the component modules is done from the front.

The modular design ensures maximum flexibility and systems can be configured for high or low pressure gradient delivery and for quite varying degrees of automation.

You have a choice of single or dual plunger pump depending on your requirements.

Shimadzu pumps are by now well known for the exceptional reliability of the liquid end. This has been further refined in the LC-10A system and the pump heads are child's play to work on if you do need to replace a plunger seal.

In short this system offers:

1. High performance specifications.
2. Flexibility for a wide variety of applications.
3. Long term reliability.
4. Space saving design.
5. Attractive appearance, designed with chromatographers in mind.

A question to scientists working with New Zealand natural resources

Are you interested in commercialising your bright ideas?

NZP has developed a considerable amount of technology and experience over the past 15 years in the extraction and purification of biological products from NZ natural resources. If you have a project which requires an input of resources (such as market research, process scale-up etc.) to bring it to commercial fruition, we would be pleased to hear from you.

Please contact: The Commercial Manager, NZ Pharmaceuticals Limited,
P.O. Box 1869, Palmerston North, Phone 0-6-325 8676, Fax 0-6-325 8698

NEW ZEALAND PHARMACEUTICALS LIMITED **NZP**

NEW CERAMICS FROM INDIGENOUS NEW ZEALAND MINERALS

K J D MacKenzie, I W M Brown and G V White, DSIR Chemistry, Private Bag, Petone

New Zealand's natural resources include some very interesting mineral deposits. Of special relevance to the production of new materials are the ironsand deposits which occur on the West Coast of both the North and South Islands (Fig.1).

North Island titanomagnetite:

Component	%	Component	%
Fe ₂ O ₃	75.66	CaO	2.01
TiO ₂	7.40	P ₂ O ₅	0.58
MgO	4.57	MnO	0.51
Al ₂ O ₃	4.53	K ₂ O	<0.01
SiO ₂	4.04	loss on ignition	-2.40
Na ₂ O	3.02	Sum	99.92

South Island ilmenite:

Component	%	Component	%
FeO	36.61	CaO	1.26
Fe ₂ O ₃	4.16	Na ₂ O	0.58
TiO ₂	45.17	K ₂ O	0.26
SiO ₂	6.23	P ₂ O ₅	0.24
Al ₂ O ₃	2.62	MgO	0.14
MnO	1.70	loss on ignition	0.57
		Sum	99.47

Fig. 1: Location of New Zealand's ironsand resources, with typical analyses of North Island titanomagnetite (Waipipi) and South Island ilmenite (Barrytown).

The compositions of the North Island and South Island ironsands are significantly different — the North Island sand is a titanomagnetite Fe₃O₄, containing only 7.4% TiO₂, whereas the South Island sand is ilmenite, FeTiO₃, containing 45% TiO₂. Thus, the North Island ironsand is more suitable as a raw material for producing iron and steel, and, in fact, the Glenbrook plant of New Zealand Steel smelts an ironsand of this composition (this is from the deposit which has been at the centre of the recent dispute over ancient Maori burial grounds). Ironsand from a deposit further south, at Waipipi, was being magnetically concentrated and shipped in bulk to Japan for steel making, until a few years ago, when the trade suddenly collapsed. The magnetic separator at Waipipi has now been dismantled, but a simple separator could readily be re-established.

The South Island ilmenite deposits with their high titanium content have the potential for producing titanium products, and have provided the raw material for TiO₂ pigment production by the Hychlor process developed for Fletcher Titanium by Jim Johnson at Victoria University. Fletcher Titanium has now been bought out by the American company, Sherwin-Williams, and it is doubtful whether the commercial extraction of TiO₂ from South Island ilmenite will proceed.

From a ceramic point of view, these two types of ironsands have possibilities for producing a number of different new materials, and in DSIR Chemistry, a great deal of effort has gone into the investigation of these possibilities over a number of years. Fig. 2 summarises the various ceramic materials which could be made from the NZ ironsands.

POTENTIAL CERAMIC PRODUCTS FROM NEW ZEALAND IRONSANDS

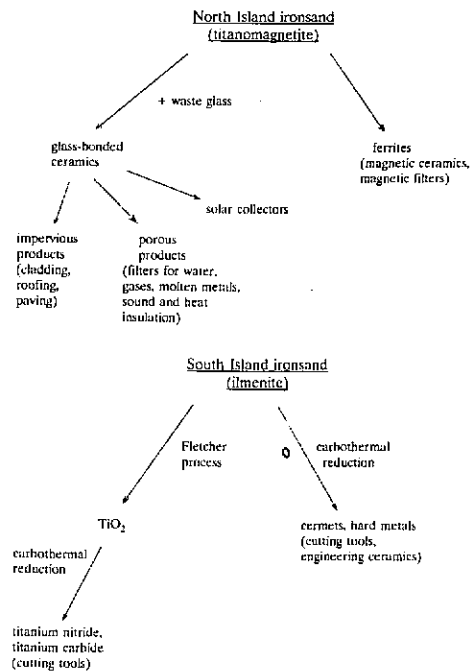


Fig. 2: Potential ceramic products from N.Z. ironsands.

SILICATE-BONDED IRONSAND CERAMICS

One of the first of the new ceramic materials to be developed was the glass-bonded magnetic ironsand, which arose as follows:

Almost ten years ago, the ceramics group at DSIR Chemistry received an approach from Tom Hill, the Director of Silicon Industries, a Hamilton firm specialising in filtration materials and related mineral products. At that time, there was government interest in fostering regional development in Patea, and Silicon Industries wanted to participate in this by developing a new ceramic product using the nearby Waipipi ironsand resource. Prior to this, the ceramics group had just developed a new ceramic from recycled waste glass, in response to an approach from a glassmaking company who were having difficulty disposing of a stockpile of mixed white, brown and green glass.

Our solution was to crush the glass, add a small amount of clay as a binder, and press it into tiles or other shapes (Fig.3). These could then be fired at a relatively low temperature and formed into a very strong material, which could be glazed or decorated by conventional means.

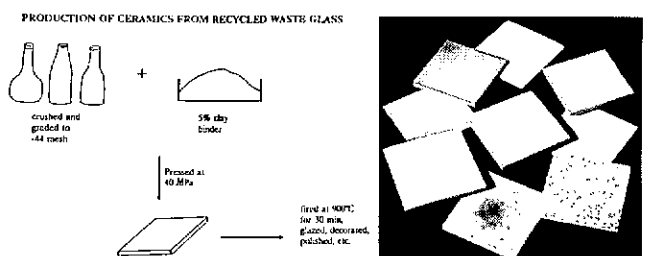


Fig. 3: Schematic process for producing ceramics from recycled waste glass, with some typical tile products.

Due to a disagreement between the New Zealand company and its Australian subsidiary, the waste glass materials never went into commercial production, although a great deal of work was done on understanding the basic science underlying the process [1-3]. This knowledge was drawn upon again in considering possible ceramic products using North Island ironsand, and together with Silicon Industries, we developed a similar process for binding together the ironsand grains into a durable ceramic (Fig.4).

PRODUCTION OF SILICATE-BONDED CERAMICS FROM IRONSAND

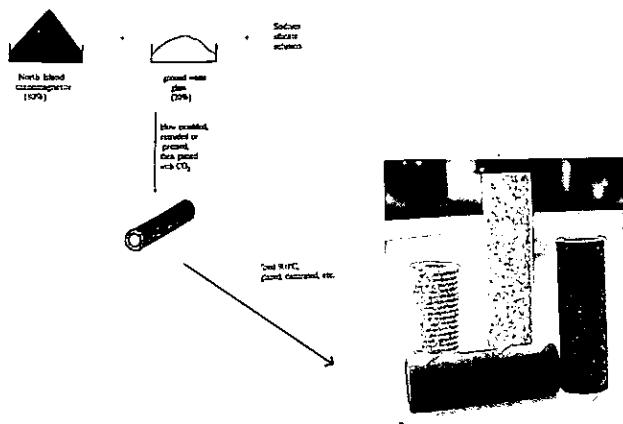


Fig.4: Schematic process for producing silicate-bonded ceramics from ironsand, with some typical water filter products.

In this process, which is now patented [4], ironsand and a small amount of ground waste glass is bonded together, using sodium silicate as a binder rather than the clay used in the glass tiles. Drawing on an idea which is used in the metal casting industry for the production of foundry moulds, the sodium silicate is hardened by exposing it to CO₂ gas. This achievement of unfired (or "green") strength allows the product to be removed from the mould without breaking or damaging it, and, as will be seen later, the gassing also has implications for the chemical reactions which occur when the ceramic is fired to make it permanently hard.

By varying the particle size distribution of the mineral grains, and other variables such as the proportion of glass, the product can be either made very porous or quite dense and impervious. Both of these types of ceramic have their uses. The impervious products which can also be glazed, have obvious applications in the building industry, since they can be blow-moulded to any shape, including the quite complex shape of a roofing tile. The product does not have to be black — it can be glazed and coloured in any shade. The glazing too, can be applied either as a thin coating of conventional frit which is then fired, or as a solid sheet of glass which is heat-bonded onto the surface of the tile or paver. This glass coating can also be decorated by screen-printing with glass inks with a variety of brilliant colours. It is even possible to print logos or photographs onto the surface of these materials, or to give them a burnished metal finish, for special architectural features. Some examples of these products are shown in Fig.5.



Fig.5: Typical silicate-bonded ironsand products currently possible.

Back row, left to right:

Glazed roofing tile, large filtering block, printed decorative piece, water filters.

Front row, left to right:

Printed company logo, assorted glazed tiles, printed monumental portrait.

The porous products are less colourful, but in some ways more commercially exciting, because of their potential in the filtration industry. Over a year ago, a large bank of these filters was installed in the Te Kuiti Borough Waterworks, where they are performing very successfully. As a result, several other municipal waterworks including that of a large North Island city have expressed an interest in installing these filters.

Filters made from this new ceramic have a much longer life than the usual disposal filter elements, because they can be cleaned by back-washing. Being ceramic, they will also withstand high temperatures and therefore have applications for filtering molten metals for the smelting and casting industries. The use of magnetic fields in filtering applications is currently attracting much attention overseas for the removal of flocs. Although the present filters are made from magnetite (Fe₃O₄) which is magnetic iron oxide, the firing process converts them to non-magnetic hematite (Fe₂O₃). However, a process has been developed for retaining the magnetic properties of the ceramic, by forming magnetic ferrite compounds during the high temperature reaction, thereby opening up the use of these materials for magnetic filtration [5].

Another application for these ceramics, which exploits both their porosity and their black colour, is as a combined solar collector and heat-exchanger for passive solar heaters. By recirculating water through a thin layer of this material, a very efficient solar collector is possible, and a collaborative project is presently underway with the Materials and Energy Research Centre in Tehran, Iran, in which a 1 square metre panel is being tested.

There is a great deal of interesting science underlying the bonding process by which these products are made [6,7]. It is of interest to know whether the process will work with other types of mineral grains besides ironsand, and it turns out that although other materials can indeed be bonded, the fired strength of the ironsand ceramic is superior to that of the material made from silica beach sand. The presence of ground glass improves the fired strength of both ironsand and silica sand ceramics (Fig.6).

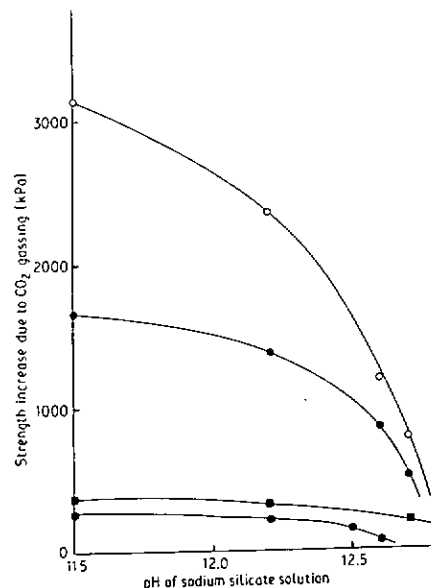


Fig.6: Increase in fired strength of various mineral compacts bonded with sodium silicates of various pH and gassed with CO₂. Open circles — ironsand and glass; filled circles — ironsand; filled squares — silica sand and glass; filled hexagons — silica sand (from reference 7).

Other factors such as the pH of the sodium silicate (which is a reflection of its Na:Si ratio) are also important in determining the final strength of the material. For this reason, a series of experiments were undertaken to examine the hardening mechanism of sodium silicate gassed with CO₂ [6] and the effect of the gassing on the high-temperature bonding reactions [7]. Although the CO₂/sodium silicate reaction has been used in the foundry industry for years and a book has even been written about it [8], remarkably little is known about the chemistry of the reaction. Two possible setting processes are usually cited: (1) Physical dehydration of the sodium silicate solution by the drying action of the gas.

(2) Gel formation by neutralisation of the alkaline silicate by acidic CO₂ (the gassing process is exothermic).

The latter observation suggests that other acidic gases besides CO₂ should set sodium silicate, and we found that SO₂ and H₂S were also effective (Fig.7), whereas the alkaline gas NH₃ and the neutral gas dry N₂ had no such effect [6].

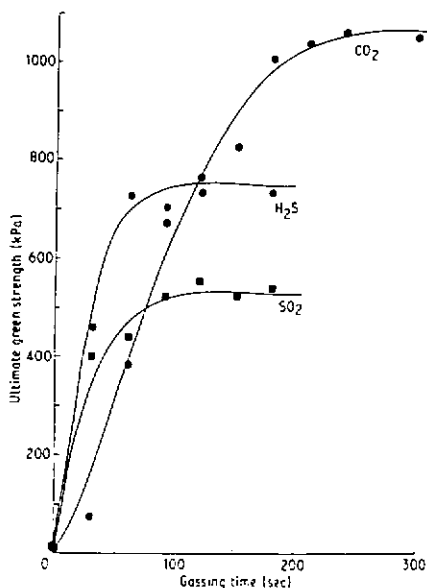


Fig. 7: Development of unfired strength in iron sand bonded with sodium silicate and gassed with CO₂, H₂S and SO₂ (from reference 6).

Of the three acidic gases, CO₂ takes the longest gassing time to reach its ultimate unfired strength, but this ultimate strength is greater than for SO₂ and H₂S. This time dependence is related to solubilities of the gases in water, the least soluble gas (CO₂) requiring the longest gassing time (Fig.8).

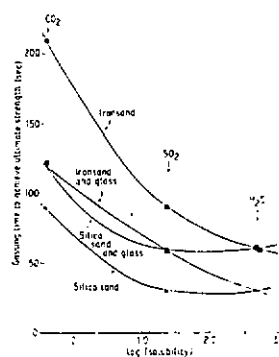


Fig. 8: Gassing characteristics of various mineral compacts as a function of the solubility of the acidic gas in water (from reference 6).

The pH of the sodium silicate also has an effect on the ultimate unfired strength which can be obtained by gassing, the highest strengths being obtained with the highest pH silicates (Fig.9).

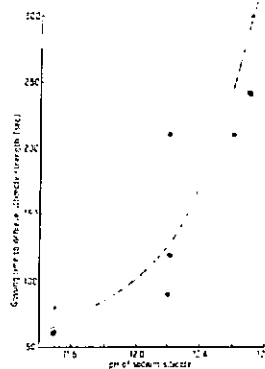


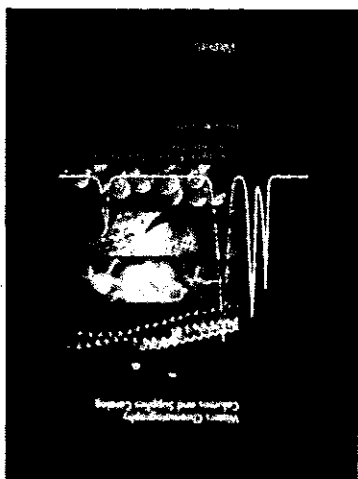
Fig. 9: Gassing characteristics of sodium silicates of various pH with CO₂. Key: hexagons — iron sand compacts, triangles — iron sand/glass compacts, squares — silica sand compacts, circles — silica sand/glass compacts (from reference 6).

NEW! WATERS ANALYTICAL COLUMNS AND SUPPLIES CATALOGUE

This 102-page Catalogue lists WATERS Columns, Bulk Packings, SepPak Cartridges and Chemical Supplies. WATERS are exclusive distributors of the wide range of SHODEX Columns which are also listed in this catalogue. For your free copy contact Steve Lawson at ALPHATECH SYSTEMS, 0-9-770 392.

NEW

Waters Chromatography Columns and Supplies Catalogue



If you would like a free copy of our new catalogue, just mark the box (below):—

This 102-page catalogue lists the full range of Waters columns, packings, sample preparation devices and GC packings.

Waters are exclusive distributors (outside Japan) for the wide range of Shodex columns, which are also listed in this catalogue.

Yes, please send me a copy of your new columns catalogue.

MILLIPORE
Waters Chromatography

For More Information: Please Return this Card in the Reply-Paid Envelope Provided

This is contrary to the results for fired strength, which is greatest with the sodium silicates of the lowest pH. Thus in a practical situation, where both the highest possible unfired and fired strengths are desirable, there has to be a trade-off, and a silicate of intermediate pH is the best compromise.

IR spectroscopy shows that gassing with CO₂ forms sodium bicarbonate initially, which then converts to sodium carbonate as gassing continues. Gassing with SO₂ forms sodium sulphite hydrate, which eventually dehydrates on standing, while gassing with H₂S forms a mixture of polysulphides of deep blue colour, changing to yellowish-green on ageing [6]. Solid state 29-silicon NMR shows that CO₂-gassing produces a range of polymeric silicate species, with an increase in the proportion of more highly condensed species. These trends are even more marked in samples gassed with H₂S and especially with SO₂ (Fig.10).

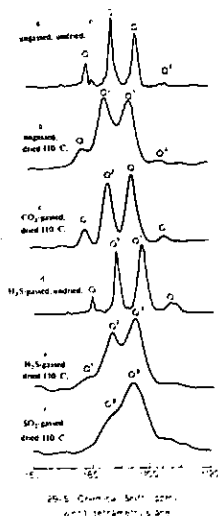


Fig.10: 29-Si high-resolution solid-state NMR spectra of sodium silicate, ungasged and gassed with CO₂, H₂S and SO₂ (from reference 6).

When these gassed samples are processed by firing to higher temperatures, the compounds formed during gassing decompose in a complex manner which depends in the nature of the mineral grains present, the gassing time and the pH of the sodium silicate used [7]. In all samples gassed with CO₂, this gas is evolved in number of stages as various carbonate and silicocarbonate compounds are formed and decomposed. The sequence of these decomposition reactions depends on the mineral grains being bonded (Fig.11).

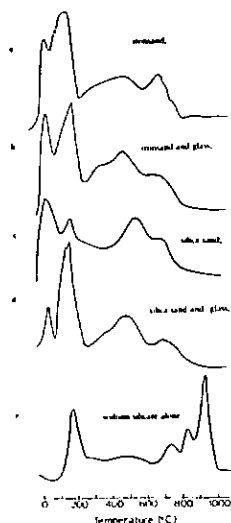


Fig.11: Evolution of CO₂ from CO₂-gassed silicate-bonded mineral compacts during heating (from reference 7).

Similarly complex chemistry was suggested by the SO₂ evolution patterns from SO₂-gassed samples, but gas evolution from H₂S-treated samples could not satisfactorily be detected [7].

CERAMICS PRODUCED BY CARBOTHERMAL REDUCTION

The North Island titanomagnetite sands are not the only raw material suitable for ceramic production; we have shown that different high-technology ceramics can be derived from South Island ilmenite or its TiO₂ by-product.

The key to exploiting these materials is a reaction called carbothermal reduction, in which finely powdered carbon is mixed with an oxide starting material which is then heated to high temperature in a stream of nitrogen or argon. In this reaction, oxide compounds are first reduced, and then immediately react with the nitrogen to form the nitride, or alternatively, in the presence of some other inert gas, further reaction with carbon may occur to give the carbide.

Applying carbothermal reduction to TiO₂ derived from the South Island ilmenite, it has proved possible to produce TiN. This is a material which is used as thin coatings on metal cutting tools to give them greatly extended life, or on decorative objects, to which it imparts the characteristic gold colour. Two different polymorphs of TiO₂, anatase and rutile, can be made by the Hychlor process, and it was found that both were equally suitable as a starting material for carbothermal reduction [9]. Interestingly, the nature of the carbon used in the process seems to influence the reactivity of the system, with carbons of higher ash content being more reactive. The iron and silicon content of the ash appears to exert the greatest positive influence on its reactivity.

The carbothermal reaction sequence in nitrogen was found to proceed by the progressive reduction of TiO₂ through a whole series of lower oxides called Magneli phases [9]. These have the formula Ti_nO_{2n-1}, and n can have values between 4 and 10. Not all these phases are seen by X-ray diffraction (Fig.12) because their conversion to the next member of the series is rapid. When Ti₄O₇ is reached, there is a pause in the reaction, as the next phase in the sequence, (Ti₃O₅) is more slowly formed. This slow step represents a major change in the oxide crystal structures. Thermodynamic calculations predict Ti₃O₅ as an intermediate in the conversion of Ti₄O₇ to TiN. The formation of both Ti₄O₇ and TiN is accompanied by the appearance of CO.

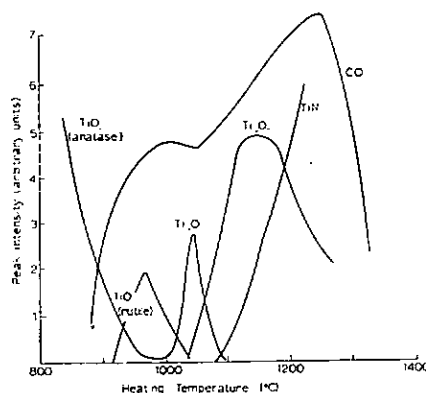
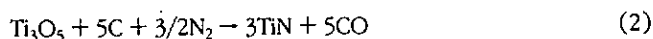


Fig.12: Semi-schematic representation of the phases observed during carbothermal reduction of TiO₂ (anatase), and the CO evolution curve (from reference 9).

Thus the reaction equation may be written in two stages:

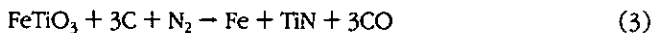


Ti₄O₇ converts slowly to Ti₃O₅, which nitrides:



The greater concentration of CO associated with the second stage is consistent with the experimental CO evolution curve. The overall kinetics of carbothermal TiN synthesis are first order and are essentially independent of the starting materials, a reflection of the complexity of the reaction sequence [10].

Carbothermal reduction is able to produce other high-technology products from New Zealand minerals. For example, if the South Island ilmenite itself is carbothermally reduced, the iron and titanium components behave differently. In nitrogen atmospheres, the titanium component behaves like TiO₂, forming TiN, whereas the iron component is reduced to iron metal.



The product is therefore a composite of iron metal and titanium nitride. Such materials are called cermet, or hard metals, and are used in high speed cutting and machining tools, special refractories, and in aerospace and nuclear engineering applications. In the production of solid objects, the cermet powder is compacted and densified by high temperature treatment (sintering) or hot-pressing to the desired shape.

Under argon or vacuum, ilmenite forms another useful cermet of iron and titanium carbide:



These reductions follow a complex sequence of intermediate compounds. The presence of excess carbon is beneficial, since it can react with the iron metal to form low melting iron carbide phases which assist densification during further processing. DSIR Chemistry has applied for patents in respect of these processes.

Another example of the use of carbothermal reduction is in the preparation of silicon nitride Si_3N_4 , from geothermal silica, a finely divided starting material which can be precipitated in reasonable purity from the geothermal bore fluids from Wairakei and Ohaaki [11]. The total silica content in the discharge waters from Wairakei is about 0.5 kg/tonne, which on present discharge rates, represents about 50 tonnes of silica per day. If recovered commercially, this could constitute a valuable raw material. Carbothermal reduction converts this silica smoothly to silicon nitride at 1350-1440°C:



Silicon nitride powder, as produced by the carbothermal process, is a commercial commodity of high added value, since it is used as a starting material for making specialised products ranging from engine components and cutting tools, through specialised refractories to medical implants, in short, any product where low density, high toughness and wear resistance at high temperatures are important. The final products are made by compacting the powder and sintering or hot-pressing to give the desired density. Silicon nitride occurs in two crystallographic forms, α and β which differ in the stacking sequence of their atomic layers (Fig.13).

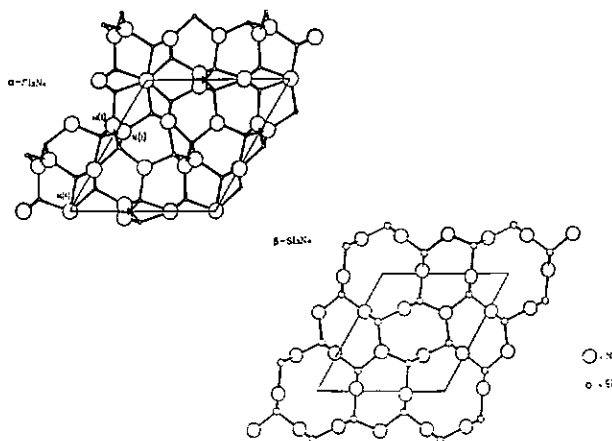
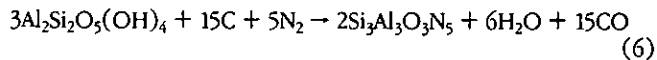


Fig.13: Projection on the 001 plane of the crystal structures of α -silicon nitride (from parameters of Kato *et al.*, *J. Amer. Ceram. Soc.*, **58**, 90, 1975) and β -silicon nitride (from Borgen and Seip, *Acta Chem. Scand.*, **15**, 1789, 1961).

The α -form has a c-dimension double that of the β -form, arising from the insertion of a mirror inverted β -type layer alternatively with the normal β -type layer. The α -polymorph, which forms below 1450°C, since it is more reactive than the β -form, into which it converts when sintered or hot-pressed. Silicon nitride prepared by carbothermal reduction of the very reactive geothermal silica contains almost 100% α -silicon nitride, and is thus a more desirable product than that obtained under identical conditions from other types of finely divided silica (silica flour, silica fume and colloidal silica), all of which produce more β -silicon nitride [11].

In 1972, Ken Jack at Newcastle University replaced some of the silicon in silicon nitride by aluminium, and some of the nitrogen by oxygen, opening up the possibility of a wide range of new ceramics called sialons. These have all the desirable properties of silicon nitride, but are easier to sinter, have better resistance to oxidation and chemical attack, and can be tailor-made for each application. There are a number of methods for making sialons, but once again, carbothermal reduction has been the process of most interest to us, because the starting material is kaolinite or halloysite clay, of which there are good deposits in New Zealand. We also have a great deal of background in the high temperature chemistry of these clays.

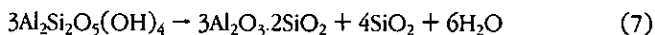
The carbothermal reduction of kaolinite can be represented by the overall equation:



The sialon formed here is β' -sialon, which has a crystal structure similar to that of β -silicon nitride. The composition of β' -sialon can be written $\text{Si}_{6-z}\text{Al}_z\text{O}_2\text{N}_{8-z}$, where Z can have values from 0 (corresponding to Si_3N_4) up to about 4.

Our work with New Zealand clays [12] has shown that the reaction sequence occurs in several stages:

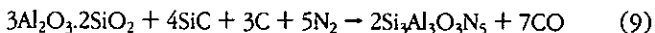
(1) The normal thermal breakdown of the clay into mullite and silica at about 1300°C.



(2) Conversion of the silica to silicon carbide at 1300-1400°C.



(3) Reaction of silicon carbide with mullite to form a series of sialons, ending with β' -sialons.



The reaction sequence in NZ halloysite is shown in Fig.14.

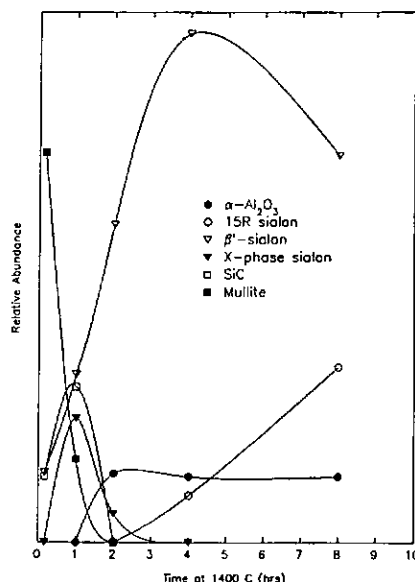


Fig.14: Formation sequence of various phases during carbothermal reduction of halloysite to form sialon (from reference 12).

In addition to these desired reactions, a number of side reactions are also possible, leading to the formation of less desirable compounds such as silicon nitride or aluminium oxide (corundum). Silicon nitride formation can be controlled by using a clay with a low iron impurity content and keeping the nitrogen flow low, to prevent the rapid removal of CO. Corundum formation can be retarded if the silicon carbide content is kept as high as possible [12].

The main objective of this talk has been to indicate what a versatile resource we have in our New Zealand minerals, and what a wide variety of new and useful ceramic materials can be produced from a relatively small number of starting materials. In

the present economic climate in New Zealand, the limiting factor in the successful exploitation of these products is the present survival mode mindset of New Zealand industry rather than shortcomings in our technical innovation. With the exception of a very few small companies, of which Silicon Industries is a prime example, industry finance for the implementation of new products and processes is simply not available. So far, the technological thrust has survived, as illustrated by the work described here, but it is to be hoped that by the time New Zealand industry begins again to take a proactive stance on new technology, the new technology will not have gone offshore, but will still be here to be picked up. Products like these hold the key to a brighter future in which we all hope to share, and it would be a great pity if New Zealand missed out because of timidity or survival mode thinking in the boardrooms of our major mineral-based industries.

REFERENCES

- 1 Brown, I.W.M. and MacKenzie, K.J.D., *J. Mater. Sci.*, **17**, 2164, (1982).
- 2 Brown, I.W.M. and MacKenzie, K.J.D., *J. Mater. Sci.*, **17**, 2171 (1982).
- 3 Brown, I.W.M. and MacKenzie, K.J.D., *J. Mater. Sci.*, **17**, 2184 (1982).
- 4 MacKenzie, K.J.D., Brown, I.W.M. and Hill, T.A., NZ Patent 212330, (1986).
- 5 MacKenzie, K.J.D. and Cardile, C.M., *Thermochim. Acta.*, **165**, 207, (1990).
- 6 MacKenzie, K.J.D., Brown, I.W.M., Ranchod, P. and Meinhold, R.H., *J. Mater. Sci.*, **26**, 763, (1991).
- 7 MacKenzie, K.J.D., Brown, I.W.M. and Ranchod, P., *J. Mater. Sci.*, **26**, 769, (1991).
- 8 Nicholas, K.E.L., "The CO₂-Silicate Process in Foundries" (British Cast Iron Research Association, Birmingham, 1972).
- 9 White, G.V., Ryan, M.J., MacKenzie, K.J.D., and Johnston, J.H., *Mater. Sci. Forum.*, **34-36**, 657, (1988).
- 10 White, G.V., MacKenzie, K.J.D. and Johnston, J.H., Euro-Ceramics, Vol. 1, "Processing of Ceramics" deWith, G., Terpstra, R.A. and Metselaar, R. (Eds), (Elsevier Applied Science, London, 1989), p614.
- 11 Perera, D.S., *J. Mater. Sci.*, **22**, 2411, (1987).
- 12 Bowden, M.E., MacKenzie, K.J.D. and Johnston, J.H., *Mater. Sci. Forum.*, **34-36**, 599, (1988).

WEST-WALKER McCABE

Patent & Trade Mark Attorneys
Intellectual Property Law

- PATENTS ▪ TRADEMARKS
- DESIGNS ▪ COPYRIGHT
- INTELLECTUAL PROPERTY
- LICENSING

Call for an obligation-free discussion

Tel 04-382 9085

Fax 04-473 0466

Fraser House 160-162 Willis Street
PO Box 215 DX 8961 Wellington 1

HAZARDOUS AND LIQUID WASTE MANAGEMENT

Are you satisfied with your company's waste disposal practices?



Managing hazardous waste is an increasingly difficult and complex challenge and is a continuous process of responding with technology to the challenges posed by technology.

In addition to our New Zealand services to manage solid waste, Waste Management NZ Ltd has since 1985 operated a hazardous/liquid waste treatment facility in Manukau City.

Waste Management NZ Ltd is committed to the complex, on-going process of challenge and response necessary to ensure the safe and effective management of hazardous wastes.

Today, our services include:

- Waste removal and transport
- Emergency spillage response
- Consultancy
- Waste treatment and disposal
- Sample retrieval and analysis
- Recycling



If you have a specific waste disposal problem, or an ongoing need for hazardous liquid wastes treatment and disposal - or if you just wish to know more about us contact:

WASTE MANAGEMENT NZ LTD.

Hazardous/Liquid Wastes, 25 Diversey Lane, Wiri, PO Box 76108, Manukau
PHONE: (09) 278 3644, (09) 278 2433. FAX: (09) 278 1975

WASTE MANAGEMENT NZ LTD.

Box 356, Rotorua. PHONE: (073) 490 222. FAX: (073) 461 659

WM Waste
Management N.Z. Ltd.



CROWN RESEARCH INSTITUTE DIRECTORS APPOINTED

As this edition of *Chemistry in New Zealand* goes to press the appointments of the chairpersons and members of the boards of the new Crown Research Institutes have been announced by the Minister, Simon Upton.

The New Zealand Institute of Chemistry congratulates all those appointed and wishes them every success in their difficult task of managing New Zealand research.

The new boards and their chairpersons are:

Industry Development CRI

Chairperson: David Bone, B.Sc. (Hons), Mech.Eng.
Members: Wayne Hart, B.E. (Hons), M.B.A.
Richard Honey, B.E. (Mech), M.E. (Mech)
Llew Richards, B.Sc., M.Sc. (Hons), Ph.D.
Humphrey Rolleston
Des Scott, B.Sc. (Chem), M.Sc. (Hons) (Chem)

Forestry and Wood Products CRI

Chairperson: Professor Raymond Mayer, B.E. (Mech), Ph.D.
Members: Richard Bellamy, B.Sc., M.Sc. (Hons), Ph.D.,
FR.S.N.Z.
Doug Gartner, B.Com., A.C.A.
John Groome
Cornelius Grow
Devon McLean, B.For.Sc., M.Sc.

Pastoral Agriculture C.R.I.

Chairperson: Alan Frampton, B.Agr.Sc., M.Agr.Sc., Ph.D.
Members: Jock Allison, B.Agr.Sc., M.Agr.Sc., Ph.D.
Geof Page, B.Sc., Ph.D.
Nick Wall
David Wallace, B.Agr.Sc.

Horticultural Products CRI

Chairperson: John Palmer, B.Agr.Sc.
Members: Professor Ian Cornforth, B.Sc. (Hons), Ph.D.
Alan Haronga, B.C.A.
Jane Hunter, B.Agr.Sc., Dip. Teaching
Professor Neil Waters, B.Sc., M.Sc. (Hons), Ph.D.

Field Crop Products CRI

Chairperson: Graham Robertson
Members: Mary Earle, B.Sc., Ph.D.
Ross Mitchell, Ph.D.
Kay Peterson
Bruce Ross, B.Agr.Sc., M.Agr.Sc.
Richard Wood

Geosphere CRI

Chairperson: Trevor Scott, B.Com., A.C.A.
Members: Michael Allen, B.A. (Chem), Ph.D.
Richard Bentley, B.E. (Hons), M.Com.
Paul Quinn, B.Agr.Sc.
Barbara Simpson, B.Sc., M.Sc. (Hons)

Land Environments CRI

Chairperson: John Kneebone
Members: Terry Heiler, B.E. (Hons), Ph.D.
William Lee, B.Agr.Sc., M.Agr.Sc.
Susan Mackin, B.Sc., B.Com., Ph.D.
Guy Salmon, B.A.
Michael Walker, B.Sc., M.Sc., Ph.D.

Atmosphere and Water CRI

Chairperson: Colin Jenkins, B.Sc., B.Com., M.Sc.
Members: Robin Falconer, B.Sc., M.Sc., Ph.D.
Paul Hargreaves, B.Com., A.C.A.
Emeritus Professor Anthony Mulcock,
B.Sc., M.Sc., Ph.D.
Margaret Mutu, B.Sc., Ph.D.

Environmental Health and Forensic Science CRI

Chairperson: Christopher Mace
Members: Professor Ralph Cooney, B.Sc. (Hons), Ph.D.,
FR.S.N.Z.
John Haigh, LL.B.
Linda Holloway, M.B., Ch.B., M.D.
Sir Robin Irvine, M.B., Ch.B., M.D.

Human Resources CRI

Chairperson: Allan Bollard, M.A. (Hons), Ph.D.
Members: Peggy Koopman-Boyden, B.A., M.A. (Hons)
Paul Stannard, B.A., M.B.A.
Hon. Hugh Templeton, B.A., M.A.
Harry Waaka, M.Sc.
John Williams

POLICY AND PUBLIC AFFAIRS COMMITTEE

REVIEW OF THE ROYAL SOCIETY OF NEW ZEALAND ACT 1965

SUMMARY OF SUBMISSIONS TO THE REVIEW TEAM

THE NEW ZEALAND INSTITUTE OF CHEMISTRY RECOMMENDS THAT:

- 1. THE ROYAL SOCIETY BE RETAINED**, ESSENTIALLY IN ITS PRESENT FORM AND ROLE, MODIFIED AND UPGRADED TO MEET NATIONAL NEEDS UNDER THE RECENT REFORMS IN SCIENCE ADMINISTRATION.
The Royal Society is seen as a key element in fulfilling Government's stated objectives in science, as re-iterated in the Consultation Document (Introduction, page 6; Review, page 9).
- 2. THE ROYAL SOCIETY REMAINS A STATUTORY BODY**, UNDER AN ACT UP-DATED TO MEET CURRENT REQUIREMENTS AND CONDITIONS.
Statutory status is seen as essential to the status and permanence necessary to fulfil Government objectives.
- 3. THE ROYAL SOCIETY BE CHARGED WITH THE FUNCTIONS LISTED ON PAGE 10 OF THE CONSULTATION DOCUMENT.**
These functions are further detailed on pages 11 - 12, from which we **exclude** funding of research.
- 4. THE ROYAL SOCIETY RETAINS ITS POSITION AND STATUS** IN THE ORGANISATION STRUCTURE SHOWN ON PAGE 9A OF THE CONSULTATION DOCUMENT, INDEPENDENT OF THE MINISTRY OF RST, **CHARGED WITH:**
— **MAINTAINING AND DEVELOPING THE DISCIPLINES OF SCIENCE**
— **PROMOTING AND MONITORING REQUIRED STANDARDS OF EXCELLENCE**
— **PROVIDING EXPERT SCIENTIFIC ADVICE TO THE MINISTER OF RST**
- 5. THE FUNCTIONS OF AN ACADEMY AND A FEDERATION (OF SCIENCE) BE CLEARLY SEPARATED** BUT UNDER AN EFFECTIVE ADMINISTRATIVE UMBRELLA WITHIN THE ROYAL SOCIETY.

Responses to individual questions listed in Annex G follow:—

1. Monitor the health and well-being of each scientific discipline. Promote, develop and support each and encourage collaboration between them.
We recommend necessary strengthening and extension of the Society's original object 8(a).
We do not see funding of research as an appropriate Society function, expect for those activities supported by Trusts and Awards (such as the Prince and Princess of Wales and Young Scientists Awards).
2. (a) The Society has the unique resources, infra-structure, expertise and drive to fulfil this vital function - essential for the very survival of science, let alone its progress, necessary to meet New Zealand's needs.
(b) With the disbanding of traditional government establishments, notably DSIR, no other organisation remains to effectively fulfil this function.
Indeed, the Ministry for R,S & T, in setting up Crown Research Institutes, has looked to the Royal Society and its member bodies to take over this function.
(c) Rectification of this deficiency is seen as the responsibility of the Minister for Research, Science and Technology.
(d) Government should provide the appropriate structures (legislative), communication lines and resources.
3. Yes; we see this as essential.
4. Major Academy functions would include Awards and Medals; Publications; International Science; Advice to Government. Major Federation functions would include Public Awareness of Science and Technology; Relations with the media, government, and parliament; Science and Technology policy;

Science and Technology statistics (including directory of expertise); Science Education and Career Development; International Science Committees; Industrial Research and Development encouragement.

Particular functions that would be joint between the Academy and the Federation would include Public Awareness of Science and Technology; Science Education; and International Science.

5. The wording of the organisation structures (page 13) appears somewhat ambiguous.

We favour a structure along that proposed under the third (listed), but under an effective overall umbrella (per the fourth): "certain defined functions" need to be clearly defined. Such structure will identify and separate academy and federation roles, under an effective umbrella.

We do not favour the first, second and fifth listed alternatives.

6. Our favoured model:

- * provides status, definition and control
- * separates academy and federation functions
- * allows definition, independence of and co-operation between individual disciplines
- * promotes productive exchange of views and transmission of relevant viewpoints.

We see no reason to comment on other alternatives at this stage.

7. This advantages as listed on pages 14 - 15 heavily outweigh any perceived disadvantages.

We read the words "may" and "could" more as "will".

Item (listed) Nr 4 appears rather facetious, not really valid and we see no real difficulty with item Nr 5 - indeed, this could prove to advantage in ensuring really necessary alterations. Access to government (Nr 7) should surely be independent and on the true merits of each case.

The need to report to Parliament under Statute is seen as an additional advantage.

8. Overwhelming.

9. Moderately well, with some limitations which could readily be remedied - especially, to make membership more positive for those affiliated through member bodies.

We see a sound, credible basis of membership essential for an organisation representing and speaking for science in New Zealand and overseas.

10. A structure based on:

- * honorary or life Fellows, recognised for their outstanding contributions.
- * Fellows, recognised for their professional standing and overall contributions.
- * Members, recognised for their professional qualifications and experienced in a field of major science, as recognised by the appropriate affiliated body.
- * Associate members, practising in field of science or technology not recognised under full membership. This would include persons and bodies working in a variety of minor sciences and derived technologies, not eligible within major, established professions.
- * Local (Branch) members, comprising anyone actively interested in any branch of science or technology.

11. Not well, as too much dominated by the Academy section.

12. Better balance between "academy" and "federation" bases.

13. All fundamental and applied sciences which confer professional status - including the broadest range of medical, engineering and social sciences.

A more selective approach is recommended for "technology" to include those directly related to a fundamental science from those which are better regarded as "crafts".

14. We cannot comment on other disciplines but are concerned that our own will no longer have adequate support under the CRI regime.

15. Through the Royal Society functions here proposed.

16. Yes.

17. To provide regional bases for linking the specialist societies within the RSNZ, to provide regional interests in policy formation, and to provide a link between the scientific and technological specialists and the community at large (outreach role). To support regional developments.

18. No - provided there are no exclusions. The aim should be to strive for the "best available".

19. The question of adequate, on-going and independent funding must be considered, to enable the Society to fulfil its intended role and functions.

for: POLICY & PUBLIC AFFAIRS COMMITTEE

NEW ZEALAND INSTITUTE OF CHEMISTRY INC.

Dr G Leary

Dr H Percival

Mr W Freitag (convenor).

8 October 1991

ANNEX G: ISSUES BEING ADDRESSED BY THE PANEL

1. Should consideration be given to any other possible functions for a non-government technology and science organisation?
2. For each of the functions outlined above what is:
 - a the importance of that function
 - b the extent to which it is adequately addressed by existing structures
 - c the extent to which any inadequacy should be a government responsibility
 - d the means by which government ought to respond to the need
3. It is helpful when thinking about the role of non-governmental science agencies to use the distinction between academy and federation functions?
4. What functions ought to be ascribed to each of two categories (academy, federation)?
5. Are there other models for establishing organisations which ought to be considered?
6. What are the advantages and disadvantages associated with each structural model?
7. What are the advantages and disadvantages of having a public statute?
8. What is the strength of the case for establishing the organisation by public statute?
9. How well has the present approach to membership worked?
10. What alternative approaches to membership could be taken in a new constitution?
11. How well has the present approach to the election of a Council worked?
12. What alternative approaches to governance ought to be considered?
13. What scientific and technological disciplines or professions ought to be a part of any non-government technology and science organisations?
14. Are there any scientific or technological disciplines which appear to be inadequately supported at present?
15. How might disciplines be better recognised and assisted?
16. In establishing a structure, should provisions be made for the existence of regional scientific and technological societies?
17. If there should be regional societies what should be their functions?
18. In establishing a structure should there be specific provisions in relation to gender, EEO, ethnicity or the Treaty of Waitangi?
19. Are there further issues to be considered?

ERRATUM & APOLOGY

The publisher and editor apologise to the author for the many errors which appeared in the article by Harry Percival in the October 1991 edition. The errors and text transpositions were such that the corrected article is reprinted in the February edition.

LETTER FROM THE PRESIDENT

Dear Member

This is my first letter to you as your new president and on your behalf I would like to thank our past president Dr Harry Percival for the fine service he provided during his year in office, often in difficult circumstances.

As an Industrial Chemist it is a continual struggle in difficult financial times to convince the "Accounts Section" that all this chemistry in the work place is vital and valuable. I know this is the same in all branches of our science. My concern is that we need to be aware of the need to sell ourselves as indispensable to society. However this will be difficult as even in scientific arenas we have a problem.

The 12 October 1991 issue of "New Scientist" has taken NZ Scientists to task in a way which reflects poorly on us all in the international scene. The comments are a bit "over the top" but we should take note. A brief summary is as follows:-

(pg.3) "At the 60th ANZAAS congress, held last week in Adelaide, only one of 102 papers presented came from New Zealand.

The reluctance of the New Zealanders to participate ... is just one of the problems facing ANZAAS.

... Scientists are becoming so caught up in their narrow fields that they are losing sight of 'the broad vision' of science and its place in society. It is a self-perpetuating problem. If the best scientists don't debate issues in public, their fellow scientists will not attend and the media will lose interest.

If Australia didn't have ANZAAS, an association established in 1888, it would have to invent a similar organisation to popularise science."

(pg 10) There certainly is a job to be done. The Science Minister reported that in a survey of young people Scientists were called "nerds and losers."

A chance exists for NZIC to prove this wrong at the 9th Convention of the RACI at Monash University in late 1992. The opportunity is here to provide a range of papers from students, researchers and chemists at large to demonstrate the world class of our scientists. So I encourage you to participate in this Congress.

It is good to see the Institute developing a vigorous political lobbying arm and making timely submissions through the various committees set up specifically for this purpose. Look for reports of these submissions in Chemistry in New Zealand. If you are aware of any matter that should be commented on do immediately communicate this to Alan Turner in Wellington so it can go to the appropriate group for submissions to the Minister, FORST etc. My industrial experience is that continual pressure will bring results so send in your concerns. If you don't tell us we can not process your concerns.

Do remember Chem NZ. It is a vital link between the Institute and Chemistry teachers. The Editors always can use quality educational articles, and you should pass on your contributions through Alan Turner.

It remains to wish you all compliments of the coming Christmas Season and a refreshing holiday in the sun.

Regards
Stan Winter



COMING FEATURES

FOR CHEMISTRY IN NEW ZEALAND 1992

The following are proposed features for Chemistry in New Zealand for 1992. Contributions are invited.

February:	NMR HPLC and Flow Injection Analysis.
March:	Year Book.
April:	Balances and capillary Electrophoresis.
June:	Sample preparation and extraction techniques.
August:	A.G.M. report. Fourier Transform Infrared.
October:	Company or organisational profile. Thermal Analysis.
December:	Data acquisition systems, Auto analysis, Data Processing and data presentation.
February 93:	Spectroscopy. UV and AA etc.
March 93:	Year Book.

At any time the editor is prepared to publish articles based on the general theme: The role of chemists and chemistry in each of the new Crown Research Institutes.



OMISSION

The October Issue's front cover illustrated the MDS-2000 Microwave Digestion System manufactured by CEM, the world leader in laboratory microwave technology. This equipment is marketed by John Morris Scientific, the sole N.Z. distributor. — The publisher regrets this omission.



PRODUCT NEWS

NEW DANGEROUS GOODS CONTAINER FROM SKELLERUP

Skellerup Rotomould Ltd., a subsidiary of Skellerup Industries Ltd has launched a new product — the Skellerup Bulkibox, a 1000 litre, United Nations approved dangerous goods container.

"The bulk storage and transportation of dangerous goods in containers such as the Bulkibox offers significant cost and handling advantages including transport and warehouse costs, inplant handling and employee safety," said Rotomould's manager, Mr Ian Borley.

Rotomoulded in tough U.V. resistant Polythylene, the Bulkibox is made under license to BTR Nylex Australia who have supplied over 3000 of these units in the Australian market.

Bulkibox has been classified as safe for carrying three classes of dangerous goods under the strict new United Nations regulations.

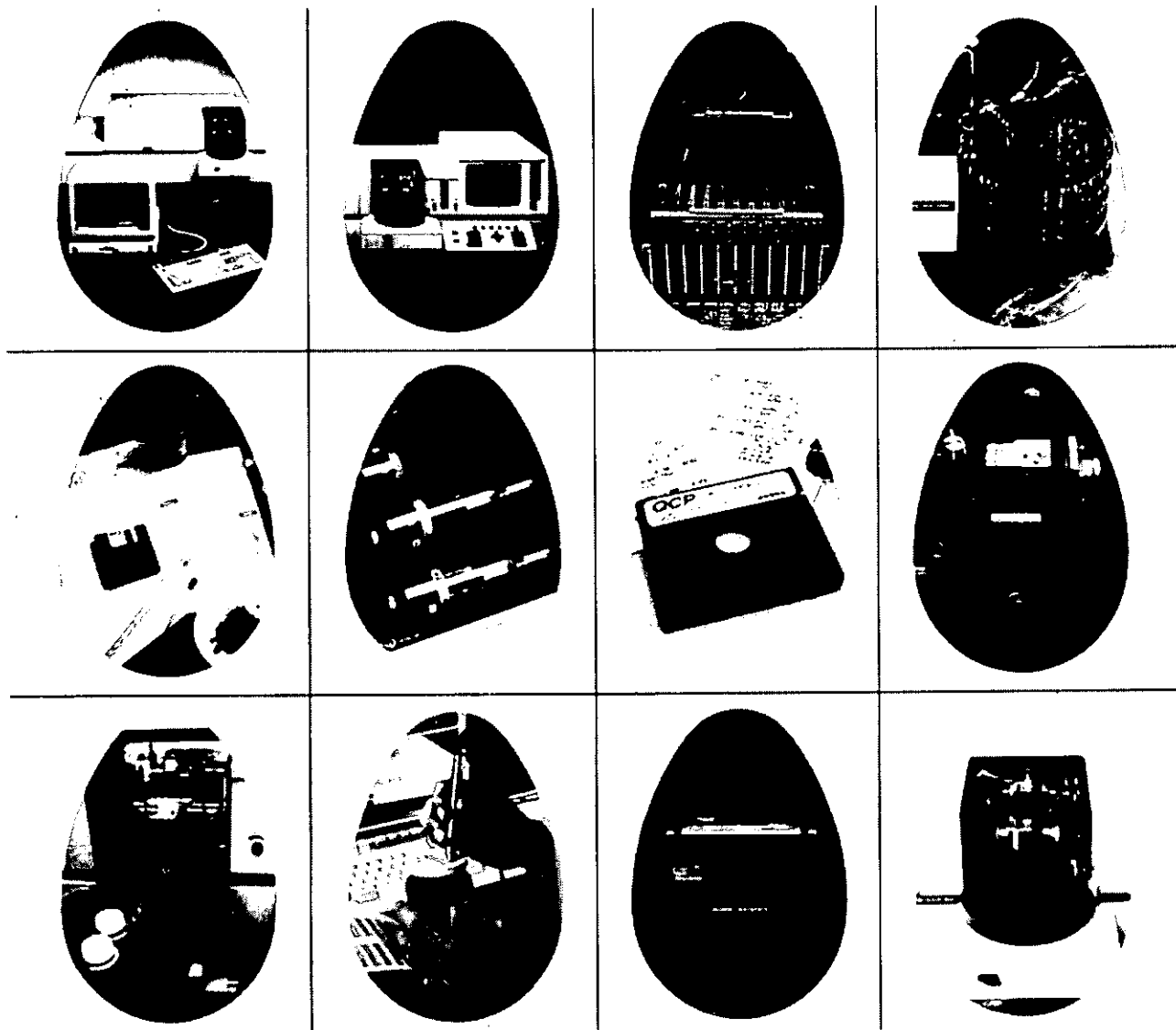
To gain United Nations approval the containers successfully survived a 1.2m drop test when full. The stringent tests were supervised by the Department of Labour inspectors.

Mr Borley says the Bulkibox has already won its first order. A number of containers have been supplied to Du Pont NZ's new hydrogen peroxide plant in Morrinsville.

Hydrogen peroxide is a class 5 chemical and Bulkibox is the only container of its type to gain such approval.

FOR FURTHER INFO:

Sue Anderson
Phone (03) 651-243.



A dozen good reasons to choose Varian AA

With the powerful SpectrAA series of atomic absorption spectrometers, you can select from dozens of state-of-the-art components. Such as the innovative VGA-76 for fully automated hydride and cold vapour analyses, and the GTA-96 with hot injection to enhance graphite furnace productivity.

Choose the spectrometer that suits your needs; from the moderately-priced SpectrAA-10/20 to the top-of-the-line SpectrAA-300/400. Central control from an IBM PS/2 Model 30-286™ ensures simple operation, extensive method and data storage, and access to dozens of software packages.

Take advantage of SpectrAA's features for fully automatic multi-element analyses, advanced sample handling, and powerful reporting capabilities. Varian's patented Zeeman Background Correction technology ensures fast, accurate correction of spectral interferences and structured background for every sample.

Add high performance accessories to your AA toolkit such as the Mark VI spray chamber and burner, the ACT-80 Atom Concentrator Tube, and productivity tools such as bar code readers for rapid entry of sample labels.

For consistent, quality results time after time, choose Varian AA. For further information, call the sole NZ agents today:



WILTON INSTRUMENTS

People you can count on

Auckland, Private Bag Northcote 9. Tel 418.3039
Lower Hutt, Box 31-044. Tel 569.7099
Christchurch, Box 1813. Tel 366.3663

A member of the Salmund Smith Biolab group.

NEW FROM PERKIN ELMER

PERKIN ELMER'S NEW HPLC CONTROLLER PROVIDES INTEGRATED LC CONTROL AND DATA HANDLING

The new 1020 LC Plus Controller from Perkin Elmer is an intelligent alternative to the conventional system controller and provides single-point control of the LC system including gradient pump, auto-sampler and detector plus data processing and chromatography monitoring at the local level.

The 1020 LC Plus Controller, a new enhanced version of the Perkin Elmer Nelson Model 1020 Personal Integrator, incorporates a built-in, nine-inch CRT allowing analysts real-time viewing and manipulation of chromatograms, drop-down menus, and a hard disk for long term data storage. This "Smart" controller also provides "hot status" information about the LC system including flow rate, pressure reading, solvent composition, run time, method number and sample number.

Occupying only 12 inches of bench space, the 1020 LC Plus Controller's screen windows and prompts allow for easy parameter and method editing. In addition, the chromatographer may view one or two real-time plots and perform reintegration, chromatogram addition and subtraction and many other tasks at will.

THE NEW PERKIN-ELMER SYSTEM 2000 FT-IR

Perkin-Elmer's System 2000 is a new concept in FT-IR spectroscopy, designed specifically to meet the changing requirements of analytical and research chemists.

The concept is based upon Open Architecture design in the three key areas of sampling, optical configuration and data handling.

Open Sampling Architecture is achieved by discarding the conventional internal and external sample compartments in favor of an interferometer module with up to four equivalent output beams arranged symmetrically at the four corners. Each output beam can be configured with a Sampling Station, including single and double sample compartments, FT-IR microscopes, GC-IR interface, TG-IR interface and Near-IR FT Raman. The optical symmetry means that today's sampling requirements can be met, leaving the system open for further upgrades or reconfiguration.

System 2000's optical flexibility allows multiple sources, beamsplitters and detectors to be fitted to the same unit to cover all or any part of the range 15000 to 20cm⁻¹. In addition, an external source position and auxiliary detector input means that any new developments can be added without compromise. At the heart of the system the Dynascan^(TM) interferometer self-compensates for dynamic alignment errors and can deliver a resolution of 0.15cm⁻¹.

Open Data Handling on System 2000 means using an industry-standard 386-

based computer platform so that the system fits easily into virtually any laboratory software and network environment. Perkin-Elmer uses parallel-processing Transputer^(R) technology in order to provide computing power equivalent to a top-of-the-line workstation. For the first time, a Research-Grade FT-IR system can take advantage of an industry-standard computer without sacrificing performance.

PERKIN ELMER RELEASE A NEW CHNS/O ELEMENTAL ANALYSER

Perkin Elmer recently announced the Model 2400 Series II CHNS/O Analyser.

Building on the features and outstanding performance of the 2400 CHN Analyser the Series II instruments offer up to three modes of analysis: Carbon, Hydrogen and Nitrogen; Carbon, Hydrogen, Nitrogen and Sulphur; and/or Oxygen.

An optional column switching accessory is available for quick and easy switching between CHN or CHNS and O modes. Sample sizes from 0.1 mg to 0.5 grams can be analysed and a 60 position auto-sampler is available for automated operation.

A full range of supplies and accessories including chemicals, standards and Ultramicrobalances with a sensitivity of 0.1 microgram are available also.

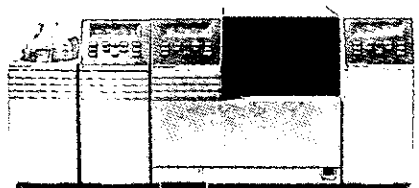
FOR FURTHER INFO:

Perkin Elmer
New Zealand P.O. Box 22 - 159
Auckland.
Phone (09) 276-2230.
Fax (09) 276-5602.

NEW SPECTRA-SYSTEM FOR LC LABS

The new SPECTRA PHYSICS Spectra System is a modular designed system for LC laboratories. The system can be configured to cater to various applications and laboratories as there is a wide range of autosamplers, pumps and detectors available.

Beginning with autosamplers, there are three in the Spectra System range. The first is the AS3000 variable volume autosampler. This unit provides 120-vial capacity, multiple injection modes, random vial access, re-use of calibration standards and non-volatile storage of 4 complete methods.



Next there is the AS3500 Inert Auto-sampler which provides all the features of the AS3000 but in a metal-free, inert version. Ideally, this autosampler is suited to biological applications or applications that utilise corrosive solvents or buffers.

Finally the AS1000 Fixed-loop Auto-sampler is designed especially for laboratories which process large numbers of samples on a routine basis. Injection volume can be varied by simply changing the sample loop. The standard unit allows 120 vials, multiple methods, and re-use of calibration standards.

SPECTRA PHYSICS now offer a completely new range of pumps for liquid chromatography. The selection offered is from single or binary solvent isocratic and from binary or quaternary gradient pumps.

The isocratic pumps come in two models — the P1500 Binary which has the unique feature of a choice of two solvents, and the P1000 which is a rugged single solvent pump, and has a convenient maintenance log tracks operation which reminds you when maintenance is scheduled.

For gradient pumps there is the P4000 Quaternary which features 4 solvents, 11 user files and the multi tasking software lets you change operating conditions in real time for programme files while the pump is running.

The other gradient pump is the P2000 Binary which is designed for more routine two-solvent operations. It features 4 named files, a queue for file linking and like the P4000 and P1500 is available in stainless steel and inert (PEEK) versions.

The final module of the Spectra System is the detector. Again the detectors can be chosen to match certain LC requirements. The detectors are available for both single and dual wavelength UV/Vis applications.

The UV2000 is a dual wavelength UV/Vis detector which provides six user files, a queue for file linking, and automatic lamp startup and shutdown enhance operation. Spectra can be collected on-the-fly without stopping the flow and any spectra can be replayed, or the complete spectral data can be displayed on the LCD.

The UV1000 is a programmable wavelength detector which enhances the sensitivity or selectivity for different compounds in a separation. After programming using a keypad and display the "Status Lock" feature prevents accidental changes in parameters while the detector is running.

Various options and accessories are also available and fit compactly into the System, thus ensuring that the maximum range of applications are covered without compromising the reliability, control or compatibility.

FOR FURTHER INFO:

Watson Victor
P.O. Box 1180
Wellington
(04) 385-7699
(09) 579-3039
(03) 669-282
(03) 477-7291

COMPANY NEWS

OXYPLAST CHANGE NAME

Oxyplast (New Zealand) Ltd., the long established market leading supplier of powder coatings to the Australasian region will be changing their name with effect from 4th November 1991.

From this date the company will be known as *Evode Powder Coatings (NZ) Ltd.*

Since being acquired in March 1989 by Evode Group plc, a major British public company, Oxyplast have played an increasing role in Evode's Globalisation plan for powder coating manufacture. The technical and commercial interchange has proved most successful and the Auckland site is now the Regional Headquarters for the whole of the Pacific Rim Activities.

This change of name will bring together the Group's powder interests in the region under the same Corporate identity.

This latest move follows a major investment programme during 1990 and 1991, which now provides the company with the most up to date and flexible manufacturing facilities in the Southern Hemisphere.

This resource, together with immediate access to the latest world-wide technology will be crucial to the success of powder manufacturers in the 90's and *Evode Powder Coatings (NZ) Ltd* will be at the forefront in servicing the needs of the powder coating market.

FOR FURTHER INFO:

Paul Cox (09) 444-6514.

FIRST FOR LUCAS BATTERIES

The maker of Lucas automotive, traction, industrial and marine batteries has joined a very select band of New Zealand companies who have gained registration with TELARC, the national quality assurance agency.

YUASA JRA Batteries Limited has become the only battery manufacturer in New Zealand to be awarded the highly sought-after TELARC certification.

The TELARC registration to international quality standard ISO 9002 was achieved after a year-long quality improvement drive by the Auckland-based company.

The move is seen as crucial by YUASA JRA Batteries because of the potential for winning increased business, especially in the export sector.

YUASA JRA Batteries is a joint venture by the world's leading battery maker, YUASA of Japan, and JRA Australia. It holds the trademark licence for Lucas brand batteries in New Zealand.

Marketing manager Brian Holland says: "TELARC registration provides a benchmark for customers to measure the quality of Lucas brand battery products and our service back-up.

"It will help open the door to the number of new business opportunities for us in the future, as more local and international companies and organisations mover to buy only from a registered TELARC supplier.

"For example, it now allows us to quote for both the New Zealand and Australian Defence Ministry business."

Mr Holland says it also inspires confidence among existing customers who can see proof of consistent quality in product, service and operating systems.

Quality that has allowed the company to offer a 5-year guarantee on its Lucas Deep Cycle Traction Batteries, which are supplied to a number of companies in New Zealand and export markets for use in forklift trucks.

The company is also a leading producer of solar power batteries, made exclusively for BP Solar Australia and used throughout the Southern Hemisphere.

Mr Holland says that in addition to improved product performance and reliability, the quality control systems introduced at the YUASA JRA Battery factory are leading to less wastage and reduced numbers of rejects, which translates into lower costs.

YUASA JRA Batteries is going even further in its quality quest, by training its workforce to use Kaizen leadership skills, based on the principle of constant improvement.

"This will enable us to move ahead of the competition, instead of keeping up with it," Mr Holland adds.

ANOTHER FIRST FOR BP LUBRICANTS

BP has set new standards in the lubricants industry by joining a select group of New Zealand companies awarded ISO 9002 accreditation from TELARC, the national quality assurance accreditation agency.

The ISO 9002 quality accreditation is a first for a lubricants company in New Zealand and confirms BP's premier position in the oil business.

Only 50 other companies in New Zealand have reached the ISO 9002 standard and BP believes the move will provide it with a competitive advantage over other lubricants suppliers.

It follows BP's success early in 1991 in gaining recognition as an official TELARC registered supplier.

Mike Hanff, Manager of BP's New Zealand Lubricants Manufacturing Centre, says: "ISOO 9002 registrations is vitally important because it will become the basis for doing business in the future.

"Increasingly our customers are demanding proof of quality — not just with the product, but throughout our

operation, from management to distribution and service back-up.

"ISO 9002 is an internationally recognised standard that governs the quality management of our systems and ensures that customers receive goods and services to their exact specifications."

TELARC New Zealand is an independent body set up by Government to carry out audits for quality assurance against international standards. TELARC accreditation is an endorsement of a company's commitment to quality, cost competitiveness and customer satisfaction.

Development and implementation of the quality systems to meet the ISO 9002 standard was initiated by BP more than 18 months ago, to coincide with a major upgrading of the Lubricants Manufacturing Plant and reorganising of its warehousing and distribution services.

BP reached the first level of accreditation, ISO 9003, earlier this year, confirming good management procedures and the high standard of products it supplies. The next level, ISO 9002, now takes into account quality management systems and the level of service provided to the customer.

"We take great pride in the fact that we are the first oil company in New Zealand to achieve this," Says Michael Joblin, Manager Quality and Loss Control.

"The most pleasing aspect to emerge from this exercise is that it confirmed we were already doing a first class job."

Mr Joblin says advantages to the customer from BP's ISO 9002 registration are being seen in a number of areas:

- * Consistently high quality products that can be used with complete confidence.
- * Greater efficiencies, from reductions in wastage, higher productivity and streamlined management procedures.
- * Better service — BP Lubricants can supply from its immediate stock 99.5% of all lubricants products.

BP produces more than 800 different packed items, including high quality motor oils, lubricants for agricultural, marine, hydraulic machinery, aviation and industrial uses, together with anti-freezes, brake fluids and solvents.

The Lubricants unit has helped to develop products especially for these markets, including ENVRON, New Zealand's first premium quality re-refined motor oil.

Joshua Ofa keeps an eye on the pack filling operation at BP's Lubricants Manufacturing Centre.

DOUGLAS SCIENTIFIC: A NEW NAME IN SCIENTIFIC PRODUCT SUPPLY AND SUPPORT IN NEW ZEALAND

Douglas Scientific is a newly formed division of Douglas Pharmaceuticals Ltd, the leading New Zealand owned manufacturer and distributor of pharmaceutical

products. This development reflects Douglas' desire to increase its presence in the analytical, healthcare and biotechnology markets.

Sci-Med has been purchased by Douglas and will comprise a major proportion of the Scientific Divisions' activities. We expect this association to add considerable financial, management and marketing resources to the operation of Sci-Med.

As a consequence of this move, Sci-Med's head office is now located in Auckland at Douglas Pharmaceuticals corporate headquarters.

A significant development for Douglas Scientific is the agreement it has reached with Shimadzu Corporation for the distribution and support of their analytical instrumentation and support and both Douglas and Shimadzu are looking to the long term to provide a continuity of service to existing and prospective users of their wide range of analytical instruments. It is Douglas' stated intention to re-establish Shimadzu to its premier position in the New Zealand marketplace.

The company intends to characterise its operation by a high level of scientific and technical proficiency in its main areas of operation and in all dealings with its clients. It has access to a large amount of information detailing new applications and emerging analytical technologies and believes it can provide a useful service by disseminating this to the scientific community.

The company's personnel are experienced in their fields of expertise and so

can provide appropriate solutions to clients requirements.

DOUGLAS SCIENTIFIC: — THE PEOPLE

Bruce Fraser — Manager.

Bruce's background is in analytical chemistry with particular emphasis on chromatography. He was previously employed by Sci-Med from 1980 to 1987 in various roles including sales, chromatography specialist and market development. For the last four years he has been employed by ATI as a lecturer in the chemistry department and was responsible for the development of several short workshop courses in chromatography and spectroscopy. He confesses to being excited to be back in the industry and delighted at the opportunity to restore both Shimadzu and Sci-Med to leading positions in the market.

Chris Nipper — Product Manager.

Chris' background is in Medical Laboratory Technology. He trained as a medical technologist at Auckland Public Hospital, specialising in clinical biochemistry, radioimmunoassay and toxicology.

Chris has worked in the scientific instrument industry for the last six years servicing and promoting mainly medical laboratory instrumentation and products.

Nigel Beardsworth — Service Manager.

Nigel's background is in electronics. After gaining his NZCS he worked for a number

of years in the medical electronics facility at Auckland Hospital gaining experience in the service and operation of a very wide range of instrumentation. He worked for a period at AWA and then joined Sci-Med three years ago. During his time with Sci-Med he has been responsible for the service of many types of instruments in both the analytical and clinical areas. Nigel has just completed an intensive five week service training course at Shimadzu's factory in Kyoto which will well place him to manage the service requirements of these instruments in New Zealand.

Clare Hodgson — Customer Service.

Clare's background includes a science degree and a business diploma, a mix which well qualifies her to oversee the administration of Douglas Scientific and to communicate and expedite client requests. Clare will in many cases be your first point of telephone contact with our operation.

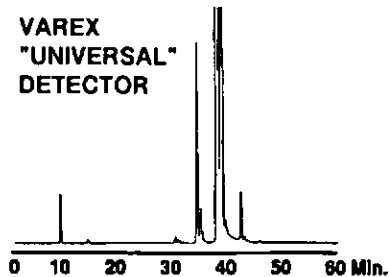
Douglas Scientific is presently setting in place the logistics necessary to service your requirements both internally from its head office and in terms of local service support. In 1992 you will see the appointment of technically proficient sales people in other regions to provide immediate response to local needs. The company invites you to use them and will endeavour to ensure that dealing with them is both a useful and an enjoyable experience.

VAREX

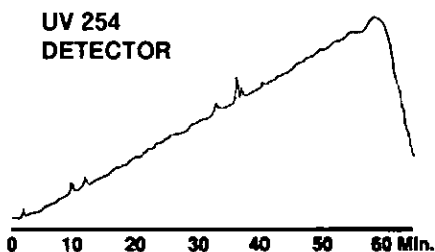
The Varex HPLC Universal Detector REVEALS

Fatty Acid Analysis by HPLC

VAREX
"UNIVERSAL"
DETECTOR



UV 254
DETECTOR



The Varex HPLC Evaporative Light Scattering Mass Detector:

- Responds To All Non-Volatile Solutes
- Operates with Multiple Solvent Gradients
- Detects
 - Carbohydrates
 - Lipids
 - Triglycerides
 - Polymers, Surfactants and More
- Unrivalled Stability

Winners of R & D Magazine 'Top 100' Award for innovative products in 1989

For full technical specifications, including a 30-page folder of Applications' Chromatographs, contact:

Alltech

ALLTECH ASSOCIATES INC

P.O. Box 100-352, N.S.M.C., Auckland 10

Phone: 09-444-3230 • Fax: 09-444-2399

Free-phone: 0800 652 766

OBITUARY

N. P. Pitcaithly

Ngata Prosser Pitcaithly, who died on 28th April this year at the age of 84, was an Associate of the Institute of Chemistry for 60 years, and an Honorary Fellow for the last ten years.

He was born in 1906 in Waimate, South Canterbury, the son of the Rector of Waimate Boys' High School. The name Ngata was given him because of his father's great admiration for Sir Apirana Ngata. He attended Nelson College and Auckland Grammar School. In 1928 he took his B.A. at the Auckland University College. He qualified M.A. in Chemistry in 1931. In the same year he was admitted A.N.Z.I.C. on 29th July.

Early committed to a career in teaching, Bill Pitcaithly - as he was known - qualified with a Teachers' Certificate (1928), and a Diploma of Education (1939). He taught first at Auckland Grammar School. Then he was appointed to be Head Teacher of the Intermediate School in Rotorua, transferring later to be maths and science teacher at Rotorua Boys' High School. Then in 1938 he became First Assistant at Dannevirke High School.

He had had a successful career as a teacher, and had distinguished himself as a man with a dynamic personality and the ability to command respect, while yet understanding the needs and difficulties of his pupils.

In 1947 he was appointed to be Principal of the new Northland College at Kaikohe. This was a pioneering job, establishing a school with good standards of instruction and traditions of performance, and he attacked it with enthusiasm. He knew the district well: the family had had a farm on the shores of Lake Omarepe. He had taken the opportunity while at Rotorua, of learning to speak Maori. He could speak to the pupils in their own language. This gave him a unique advantage in Northland, and he quickly established himself as a strong leader in school and community.

As a consequence of his success at Kaikohe, he was appointed to open in 1956 a new school in Auckland's eastern suburbs. He chose the name Selwyn College, and again set about building up a school of character and quality. He was not afraid of innovation, yet he believed in many of the traditional values of our schools. By the time he retired in 1965 he had established a school with a fine reputation for academic and sporting achievement.

As a Principal, Bill Pitcaithly had a powerful presence calculated to instil fear into the miscreant and encourage the faint-hearted. He had a real feeling for the needs of the disadvantaged and often went to great trouble to correct an injustice or to make an opportunity for a child to progress further. He readily shared responsibility with his staff, and he encouraged them to take initiatives and try new ideas.

In private life he was very much devoted to his family. His chief recreation in retirement was sailing, and he took great pride in caring for his beloved boat.

Bill Pitcaithly was a major influence on the lives of thousands. He was a colourful figure who set us all an example of courage and dedication to an ideal. We are grateful for the influence he had on all of us who knew him.

Owen W.G. Lewis,

Principal,

Selwyn College 1966-1979

CONFERENCES

RACI NINTH NATIONAL CONVENTION Monash University IMPORTANT ANNOUNCEMENT

Due to unexpected circumstances over which we have no control, it has become necessary to change the dates of the Ninth National Convention. The Convention will now be held during the week Sunday December 6th to Friday December 11th, 1992. This change of date will enable us to provide adequate accommodation in the Monash Halls of Residence for the large number of participants expected at 9NC. It may also make it easier for our colleagues from New Zealand to participate since the earlier dates were during New Zealand term time. The 9NC

Organizing Committee apologizes for any inconvenience this date change causes. We do not expect it to have a significant effect on the planned programme which is summarized below.

Registration will start on Sunday December 6th and the registration area will be the student union. The convention mixer will be held on the Sunday evening and will be sponsored by the RACI Victorian Branch. The opening ceremony on the morning of Monday December 7th will be held in the Robert Blackwood Hall; it is hoped that it will be attended by the presidents of the American Chemical Society, the Royal Society of Chemistry, The New Zealand Institute of Chemistry, and the Federation of Asian Chemical Societies. Four convention lectures are planned. These will be presented on Monday December 7th and Wednesday December 9th, with two lectures on each morning. The convention lectures will cover the topics "The Role of Chemistry in the development of Antiviral Drugs" (Professor Eric De Clercq, Rega Institute, Belgium), "Protecting the Ozone Layer: the Search for Solutions" (Dr. Leo Manzer, Central Research and Development, DuPont, USA), "Targeting Nucleic Acids with Metal Complexes" (Professor Jacqueline Barton, Caltech, USA), and "the Public Awareness of Chemistry" (Speaker to be announced). The convention programme will conclude on Friday December 11th with a barbecue followed by a workshop/symposium on "Chemistry — Towards 2000".

The extent of divisional participation is likely to be as follows:

Analytical (2 days), Cereal (2 day symposium on "Near IR analysis for Quality Control"), Chemical Education (full), Colloid and Surface Science (full), Electrochemistry (2 day symposium on "Instrumental Methods and Corrosion Research"), Environmental (1 day symposium on "Soils and Land Pollution"), Inorganic (full), Medicinal and Agricultural Chemistry (full), Organic (full), Physical (2 days), Polymer (2 day symposium on "Polymer Blends"), Solid State (full), Archives and History Group (1 day), Women in Chemistry Group (0.5 day), Young Chemists (0.5 day).

A national convention provides an ideal opportunity for divisions to interact and to exchange ideas in areas of common interest. Some joint symposia are being organized, and two will cover "New Materials" (Inorganic and Solid State) and "Pharmaceuticals" (Organic and Med. & Agr). We strongly encourage continued consideration of possible joint symposia topics.

An exhibition of laboratory equipment and products plus reference books will run throughout the duration of the convention. Any company interested in participating in the exhibition should write for a prospectus.

Ron S Dickson,

Chairman, Organizing Committee,

Dept of Chemistry, Monash University,

Clayton, Victoria 3168, Australia

CONFERENCES

CALL FOR PAPERS 1992 CSCHE CONFERENCE

October 18-21, 1992: Hilton Hotel, Toronto, Ontario

CONFERENCE THEME: Progress through Innovation

The Canadian Society for Chemical Engineering will hold its 42nd annual conference Sunday-Wednesday, October 18-21, at the Hilton Hotel in downtown Toronto, across from City Hall and close to major attractions. The conference is intended to bring together chemical engineers with a wide spectrum of interests, including but not limited to the topics shown below. A combination of contributed and invited papers will be included in the program.

SYMPOSIA

Coal/Heavy Oil Co-Processing

Food Processing

Future Transportation Fuels

Systems & Control

Mathematical Applications

For information contact:

Dr. Rein Luus, Conference Chairman

Dept. of Chemical Engineering, University of Toronto

Ph (416)978-5200, Fax (416)978-8605

CONFERENCES

Chemistry: Vital to our Future ■ La Chimie: C'est notre avenir

75th Canadian Chemical Conference and Exhibition
75e Congrès canadien de chimie et exposition
Edmonton Convention Centre, May 31 - June 4, 1992

Plan now to attend the 75th Canadian Chemical Conference and Exhibition sponsored by the Canadian Society for Chemistry. The conference will be held at the Convention Centre on the banks of the North Saskatchewan River in downtown Edmonton, Alberta from May 31 - June 4, 1992.

Contact: Dept of Chemistry, 75 CCC University of Alberta
Edmonton Alberta T6G 2G2 Canada. FAX (403) 492 8231

OBITUARY

PROFESSOR Hugh Parton, MSc (NZ), PhD (London), HonDSc (Cantuar), FNZIC



Joseph, we are told, was the Ruler of all Egypt and yet a generation arose which knew him not. In a similar way, in the ongoing life of the Institute of Chemistry, it is possible to lose our awareness of the outstanding contributions made by others in former years. For this reason it is important, as well as a privilege, to record this small tribute to the professional life and achievements of Emeritus Professor Hugh Noble Parton who died in

Christchurch in September 1991 at the age of 84 years.

Hugh Parton became a member of the NZIC in the year of its formation in 1931 and continued his involvement throughout the forty years of his professional life and, as honorary Fellow of the Institute, for the twenty years of his retirement. He served at various times as Chairman of both the Canterbury and the Otago branches, was President of the Institute in 1961 and was Editor of the Journal from 1941 to 1947. His work for the Journal was very significant. The Editor who succeeded him wrote as follows in 1948. "Dr Parton took over the Journal at a difficult time: the finances of the Institute were such that there was very little to spare for the Journal, and publication had been allowed to fall behind. Dr Parton is a modest man and he tackled the Journal in a modest way. He did the whole job himself, being his own publisher, proof reader, despatcher and business manager, and in all eight years the Journal was always published on time."

Professor Parton was a particularly loyal Institute member and regularly attended and contributed to the Branch meetings, and also the Conferences at which he was always a popular, a witty and an impressive speaker. He had a greater than usual awareness of the philosophy of science and of its history and present direction, so that the details of the research he was discussing were always set in a wide context. Many members have appreciated these contributions, but may not have realised that they were made for a definite purpose. Professor Parton had a firm conviction about the educative role of the Institute — that it should enable its members to maintain an awareness of the major developments in Chemistry throughout their professional lives, despite the specialisation or the absence of academic involvement forced upon them by their particular employment. He explained this to me when I was first to address the Otago Branch, recently returned and full of zeal from the rarefield atmosphere of PhD studies in polymer science in the UK. I modified my notes accordingly! It was for this reason also that he was doubtful of the wisdom of forming the Specialist Groups within the Institute, suggesting that we might better seek to understand and to support Chemistry as a whole. It is a valid point of view although there are contrary arguments.

The New Waters "LC Module 1" A complete HPLC for the busy laboratory

☆ Simplicity ☆ Reliability ☆ Flexibility ☆

The LC Module 1 is compact and fully automated. It has:

- Fully-variable UV detection, a pump with auto seal wash and all-electric autosampler, combined from proven modules — for reliability.
- Push-button prime, 4-solvent gradient — simplifies and automates start-up, column conditioning, shutdown.
- Auto deuterium lamp start-up/shutdown — maximises lamp life.

Please mark this box to be sent more details. 8

THE "LC MODULE 1" IS READY TO GO!

I may be interested in purchasing an LC Module 1:

9 Soon 10 in 3-6 months 11 in 1-2 years

MILLIPORE

Waters Chromatography

For More Information: Please Return this Card in the Reply-Paid Envelope Provided

Professor Parton's own professional life was fully bound up within the NZ university system. He gained his MSc degree from Canterbury University College and a short time later was appointed as Assistant Lecturer there in 1930. In 1934 he completed his PhD Degree at Kings' College, London, and during the next twenty years at Canterbury he rose from Lecturer to Senior Lecturer and eventually to Associate Professor. It is indicative of his leadership qualities and of his popularity with his colleagues that he was elected as a lecturers' representative on the Professorial Board, on the Council of the College and on the Academic Board of the University of New Zealand. As an Associate Professor he automatically had further membership of the Professorial Board but it is noteworthy that while still not full professor he became Deputy-Chairman and, for a time, actually Chairman of that Board. During the same period he was Dean of the Faculty of Science from 1948 to 1954, in which year he was appointed to the Mellor Chair of Chemistry at the University of Otago.

At Otago University, as well as heading the Chemistry Department from 1954 to his retirement in 1972, Professor Parton was Dean of Science from 1967 until 1971. Here also it is readily acknowledged that few people have contributed more to his colleagues, to his Department and to the University as a whole than Hugh Parton. Another mark of his reputation is that in a time of severe staffing shortages world-wide he persuaded several of his former students in Physical Chemistry to return from overseas to join him.

On the national university scene also Hugh Parton's contributions were of pioneering quality. We today owe more to the small group of enthusiastic reformers of which he was a member than we sometimes realise. The eminent philosopher of science, Karl Popper, was on the staff of Canterbury College from 1937 to 1945. He greatly influenced the group in re-inforcing their belief in the importance, for a university's standing, of research by staff members in collaboration with research students. Through their efforts the PhD degree which had been abandoned as a failure by the University of New Zealand in 1926, was reintroduced in 1949 with benefits that would now be hard to

over-estimate. Again at the crucial time of the replacement of the federal university of New Zealand by separate Universities in 1960 as recommended by the Report of the Hughes Parry Committee, Professor Parton was one of the three academic members on the new University Grants Committee, on which he served with distinction (as well, I think, with considerable stress) until 1967. The stress derived not so much from the complexity of the decisions which were required as from the vagaries of regular travel in all weathers between Dunedin and Wellington. The slogan "If you've time to spare go by air" was not so much a joke as a grim reality in those days, and there were occasions when I gave his Stage 1 lecture while Professor Parton was forced to fill in time waiting at an airport. Professor Parton also served the New Zealand University system as a member and an assessor of the UGC Research Committee from 1972 to 1983, and as a member of the Scholarships Committee for a shorter period. It was through the assessing activities of the Research Committee that many university staff members nation-wide came to experience and benefit from the deep commitment of Professor Parton to the encouragement and support of aspiring young researchers. The modern (and, one trusts, temporary) concentration on specified research outputs for university research represents rather shallow thinking in comparison with a philosophy such as that expressed in these words of Professor Parton himself: "Education was not developed in order to enable people to produce more goods and services, but to enable them to understand better the world in which they live, and express more fully their potential capacities, whether intellectual, spiritual or material." For his national work for universities Professor Parton was awarded an OBE in 1986.

A less familiar demonstration of Professor Parton's genuine concern for university students world-wide is found in his role for about twenty years as the New Zealand president of the World University Service. This organisation, with headquarters in Geneva, was first concerned with fund-raising to restore student facilities in postwar Europe. Over the years the focus shifted to helping students in developing countries, with internationally funded projects such as a student health clinic on the Cheng Mai campus in Thailand and scholarships to New Zealand to study

Laboratory scale peptide purification with FAST PCLC

Preparative HPLC is recognised as a prime method for attaining pure compounds from complex mixtures. It is often proposed that prep HPLC can be satisfactorily performed with low efficiency, large diameter columns, usually operating under overload conditions.

A thorough examination of the parameters relating to preparative HPLC shows that this low-tech route is not the best option.

Short, fine particle columns permit baseline resolution of closely eluting compounds. Used in conjunction with gradient elution and multicycle automation, the 1-inch bore will isolate 1 mg of each of several substances, but may also be used to obtain up to 200 g of a single compound.

This technique, called FAST PCLC (Preparative Column Liquid Chromatography), reduces analysis time, so throughput is greater. For example, a 5 μ m column can handle a throughput of 1 gram in about one-sixth the time required on a 30 μ m column.

In addition, lower capacity factors mean a higher concentration of solute in the collected fractions, which in turn leads to easier processing of eluted compounds.

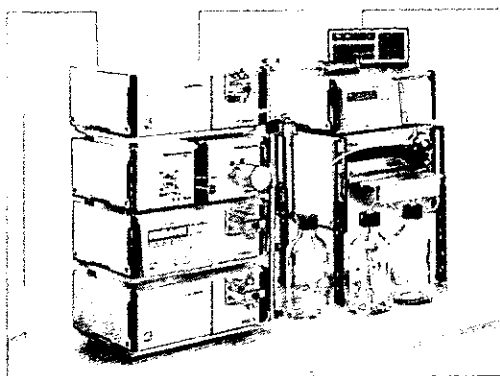
Finally solvent consumption is reduced, contributing to a more economical procedure.

With their short re-equilibration times, these columns are fully compatible with gradient elution which can greatly enhance the total system performance. It should also be remembered that, even under overload conditions, high efficiency columns will still out-perform those of low performance!

FAST PCLC is performed with Rainin DYNAMAX® columns on a Gilson LAB-PREP™ system.

Complete preparative separations can be developed on the same system with the same column. Having completed method development, the chromatographer can leave the system to operate unattended.

Repetitive cycles instead of scale-up substantially reduce labour and column costs. The same instrument is then used to immediately check the purity of collected fractions.



A Gilson Lab-Prep System
To efficiently isolate 1 mg to 200 g of pure substances from unknown and complex mixtures, FAST PCLC implements automated sequential HPLC with gradient elution from a short, fine particle column (Gilson, Rainin).

Implementing FAST PCLC on a LAB-PREP system with DYNAMAX columns is a high efficiency approach to preparative HPLC.

 **GILSON**

John Morris Scientific Ltd
AUCKLAND (09) 444-5836
LOWER HITT (04) 528-7600
CHRISTCHURCH (03) 653-825
TOLL FREE 0800-651700

LAB-PREP is a trademark of Gilson Medical Electronics (France), S.A.
DYNAMAX® is a registered trademark of Rainin Instrument Co. Inc.

agriculture for disadvantaged students from South Africa. Professor Parton was often very much alone among senior staff members in giving active support to this mainly student-based activity.

The fruits of Professor Parton's detailed knowledge and considerable experience and influence in university affairs in New Zealand are presented in two books which he wrote during his very active retirement, one the formal "History of the University of New Zealand", published by Oxford University Press in 1979, and the other a fascinating account of "The First Eighty Years of Chemistry at the University of Canterbury" published in 1985 and of particular interest to those involved. Another extremely rewarding book is an edited selection of Professor Parton's many public addresses on a wide range of topics, entitled "Science is Human". This was published in 1972 by the Otago University Press to mark the occasion of his retirement. It is these essays which give the best insight into the remarkable blending of the sciences and the humanities in Professor Parton's thinking. When he was awarded an honorary DSc by the University of Canterbury 1972 the Public Orator said that "*the Two Cultures which we used to bear so much about have been shown to be largely a fallacy by scholars like Professor Parton, who is equally at home among the liberal arts as he is among the sciences.*"

Professor Parton's own research was in the field of the thermodynamic behaviour of electrolyte solutions using the methods of both equilibrium and irreversible thermodynamics. His publications generally reported the results of careful and sometimes ambitious experiments designed by himself to test particular ideas and carried out in association with MSc and Ph D research students. The work was always relevant in relation to current international activity and much of it retains its significance to this day. Even while this account was being written my attention was directed to a reference to one of Professor Parton's papers from 1939, on the thermodynamics of oxalic acid dissociation, in the very latest issue of the Journal of Solution Chemistry. A symposium on "The Physical Chemistry of Solutions" with strong international participation from many who had shared his research interests, and in some cases had been his students, was organised in honour of Professor Parton's 75th birthday as part of the NZIC Golden Jubilee Conference in 1981. The proceedings were published by Massey University Press. In the Foreword I write these words: *The reasons why academic people have been drawn to Hugh Parton and which led some to cross the world to do him honour even ten years after his retirement are to be found in his special qualities as a person. Among these qualities are those of high scholarship in both the theory and the philosophy of science; a rich blend of wisdom, vision and zeal in the sphere of university policy; encouragement in relation to students and colleagues; and modesty with respect to himself. The former two gave him influence and brought respect; the latter ones made for him many enduring friends.*

Those friends and many members of the Institute of Chemistry generation of today will join in honouring the achievements and the humanity of Hugh Parton, FNZIC.

GN Malcolm

BOOK REVIEW

TRACES OF GUILT, Guy Brown and Peter Llewellyn
Collins Publishers, New Zealand, 1991.

This interesting and easily read little book presents nine varied criminal cases where the skills of the New Zealand Forensic Scientists played a considerable part in securing a successful prosecution. Following the route of the investigators, the reader gains a fascinating and perhaps a little before available insight into the world of the Forensic Scientist. It brings home to us all the importance of the maintenance of high scientific standards when collecting and interpreting evidence that may ultimately be used to convict a criminal and the importance to our society of the principal of "innocent until proven guilty". It reveals the time, effort, dedication, patience and infinite attention to accuracy and detail required for the performance of this work.

One forms the impression that the would-be criminal is soon going to need a science degree to avoid detection in a world where science hopefully will continue to gain ground in the race against crime.

A most enjoyable read!

Dr A D Cluroe, B Med Sci, BM, BS, FRCPA

Senior Lecturer in Forensic Pathology, Auckland School of Medicine

PEOPLE

NEW FELLOWS OF THE ROYAL SOCIETY OF NEW ZEALAND

The Royal Society recently announced the election of seven scientists to the Fellowship of RSNZ. Two of our members were amongst those honoured:

Professor Ralph Cooney: Professor of Physical Chemistry at Auckland University, Ralph Cooney has contributed pioneering spectroscopic studies to an exceptionally wide range of surface types, including ionic solid surfaces, zeolite surfaces, disordered and ordered oxide surfaces, carbon and coal surfaces, noble metal electrode surfaces and corrosion systems. Several of these studies have been the first of their kind in the world.

Much of Professor Cooney's current work is specifically relevant to New Zealand, including chlorofluorocarbon (CFC) decomposition, electromechanical decomposition of cyanide, electrocatalysis of methane, durenene oxidation catalysis and hydrocarbon get formation.

Recognition of Professor Cooney's major contribution to his field has resulted in invitations to deliver plenary lectures at international conferences in three fields: spectroscopy, surface chemistry and electrochemistry.

Professor Philippa Wiggins: Medical Research Council Career Fellow and Honorary Professor of Medicine at the Auckland University School of Medicine, Professor Wiggins' research career spans more than 40 years. It has been marked by an outstanding ability to criticise constructively current dogma concerning a number of important theories relating to the biological functions of membranes and the distribution of ions across membranes and within living cells.

For example, she concluded that the widely accepted theory of molecular pumps was unsatisfactory and devised a totally original theory, incorporating what was known about the structure of membranes and vicinal water and discarding previous speculations which had achieved the status of honorary fact.

Her work has been characterised by challenging scientific orthodoxy and establishing the validity or otherwise of a number of novel hypotheses.

PROFESSOR WARREN ROPER WINS PRESTIGIOUS ROYAL SOCIETY HECTOR MEMORIAL MEDAL

Three New Zealand scientists of international eminence have been awarded prestigious national prizes by the Royal Society of New Zealand. The Royal Society is New Zealand's national academy of science, and is comprised of Fellows, Branches and affiliated societies, with 17,000 members. NZIC Member Professor Roper won one of these prizes.

The Hector Memorial Medal: This award is made annually to the investigator working in New Zealand who has done most to advance a particular branch of science. It is awarded in rotation for work in plant sciences, chemical sciences, human sciences, solid earth sciences, mathematical, physical and engineering sciences, and animal sciences. In 1991 the award is being made for research in the chemical sciences.

The recipient is Professor Warren Roper, Professor of Chemistry at Auckland University. A Fellow of the Royal Society, London, Professor Roper is a world leader in the field of organometallic chemistry. His work aims to increase understanding of how compounds containing metals catalyse useful chemical transformations, such as the conversion of simple petroleum products into valuable polymers.

He does this by seeking to isolate intermediates and modelling individual steps in these transformations. Professor Roper's research has resulted in many of the first examples of new types of molecules being assembled in his laboratory.

CHEMISTRY IN NEW ZEALAND

YEAR BOOK

It's FREE to be included in the Chemistry In New Zealand Year Book.
The next Year Book edition will be in March 1992

If you and your company wish to be included in the Year Book, or if the information included in the current Year Book is incorrect or dated and needs revision then we need to know.

Return this form to:
Chemistry in New Zealand
Year Book
P O Box 101-189 NSMC
Auckland 10

APPLICATION FOR THE 1992 CHEMISTRY IN NEW ZEALAND YEAR BOOK:

Company: _____

Address: _____

Phone: _____ Fax: _____

Simple statement on Company: (one sentence only) _____

We supply: Lab Instruments _____

We supply: Lab Equipment _____

COVER STORY

THE NEW WATERS LC MODULE 1 SIMPLICITY AND RELIABLE PERFORMANCE IN A COMPACT DESIGN

In a footprint no bigger than a desktop blotter the LC Module 1 combines WATERS most dependable technologies into an automated liquid chromatography system that's as easy to use as 1, 2, 3.

1. Load the carousel with up to 96 samples.
2. Recall a Program for the entire Module from one easy to use Keypad. All parameters are loaded and displayed in the large LCD Screen; Pump, Injector, Detector and Temperature control parameters are automatically set up at the press of a button.
3. LC Module 1 is loaded with features to ensure easy trouble-free operation;
 - ★ Automatic pump seal wash
 - ★ "Lamp Save" turns the Detector Lamp on and off after sample analysis.
 - ★ Self Diagnostics that monitors system performance.
 - ★ Automated all-electric injector that minimizes sample carryover and provides extended maintenance free operation (4 instruments in test since October 1990 logged 92,500 injections without failure.

★ Convenient Auto Prime automatically purges and primes the system and startup and shutdown including Detectors and Autosampler.

★ Built-in Column Temperature Control for a variety of optional column ovens.

★ Wavelength Programming, Autozero attenuation and polarity programming.

★ Automated Solvent Degassing.

★ Four solvents for ease of method development or automated switching.

★ Complete method documentation and storage for 15 methods.

The compact design of the LC Module 1 saves valuable bench space and its easy programming and automation features get any operator up and running quickly.

For further information or brochures please contact:

Steve Lawson,
Alphatech Systems
Telephone: 0-9-770 392

DRAFT LIST OF MEMBERS

The lists which follow have been published in *Chemistry in New Zealand* with the express purpose of seeking corrections and amendments from members. Please peruse your entry and of those known to you. If corrections are required please send these urgently either to Alan Turner, P.O. Box 12-347, Wellington, or if you wish to Michael Pervan Holdings, P.O. Box 37-098, Parnell, Auckland.

The revised list will be published again in March as part of the *Chemistry in New Zealand Year Book*.

Revisions must be received no later than 31 January 1992.

NZIC MEMBERSHIP Specialist Group Listing

ANALYTICAL

Albertson SJ
Anderson JA
Barnett PR
Bathurst ETJ
Baxter JA
Beresford GD
Bond MA
Bouwmeester MJ
Bridle J H
Bryson WG
Buchanan H
Burggraaf S
Burton NH
Campbell AD
Caughley BP
Chang NVR
Clinton OE
Close ME
Coplestone JC
Cowles RJ
Crump RT
Dawson BSW
De Mora SJ
Devereux I
Erasmuson AF
Evans LP
Fergusson JE
Forrester AM
Forss DA
Freeman MC
Freitag SA
Freitag W
Fuavao V
Gifford FV
Graham BWL
Gray MJ
Greenaway AM
Guild JR
Gunn BI
Heng S
Henshaw G
Hentschel PR
Hill RJ
Hogan DJ
Hope SJ
Horn AH
Hunt IS
Johnson J
Judd M C
Kee HC
Keeley GM
Kenny FM
Komen FG
Lester P
Liddle JR
Low SC
Lyon RB
Manning TDR
Miners JO
Mumford RN
Naim DK
Newth RP
Ng KS

Parker EF
Patel DB
Peterson MJ
Powell HKJ
Reeves RD
Robertson JM
Rogers DA
Sahasrabudhe N
Scott GR
Shirer CA
Simpson C D
Singh J A
Smith CR
Smith TJ
Steedman MR
Sutton BM
Tan ST
Taylor CM
Walker NW
Wallaart JC
Walsh RS
Watkinson JH
Weaver SD
Welsh IK
White RE
Williamson AG
Wright GJ
Young PNW

BIOCHEMICAL

Bailey RW
Bell DJ
Bollard EG
Bourke BJ
Brittain T
Clark AG
Clarke NH
Creamer LK
Cropp PL
Crow KE
Davey CL
Denny WA
Dunckley JV
France JT
Hancock WS
Heenan MP
Holloway WD
Husbands DR
Johns AT
Lee D
Locker RH
Mansfield BC
Miller HM
Ozich DJ
Payne E
Pearce EIF
Plowman JE
Richardson BC
Robertson JG
Robinson JR
Robinson MF
Shepherd MG
Sissons CH
Sullivan PA

Trotman CNA
Williamson AG
Wright DE
Zabkiewicz J A

CHEMICAL EDUCATION

Adams JA
Adcock MA
Ainscough EW
Aldridge LP
Ayers JS
Baird WN
Baker RT
Barker MA
Barton AFM
Best PG
Billcliff JS
Blunt JW
Bond MA
Bowles JC
Bowmaker GA
Brimble MA
Brodie AM
Brothers PJ
Bull L
Burggraaf S
Burns GR
Burns JR
Butcher JA
Campbell AD
Campbell AS
Candy BJ
Carr MD
Carr RM
Caughley BP
Causer JE
Chang HM
Claridge RF
Clark CJ
Clark MDT
Cockburn BL
Coldham JK
Cosgrove MM
Coxon JM
Cretney JR
Cronshaw DR
Cross DJ
Curtis NF
Daniel RM
Davenport SJ
Davis BR
De Mora SJ
Denne AM
Denton GM
Dicker GL
Dobbie RS
Douglas JG
Dowrick NC
Eames AR
Edmonds NR
Entwistle ER
Fergusson JE
Fletcher ECG
Fletcher KP

Fletcher RA
Freeman CG
Freitag W
Furness AR
Gallagher RT
Gibson MGC
Green JC
Greenaway AM
Grinsted MJ
Groom PS
Groves AG
Halton B
Happer DAR
Harland PW
Hartle KRS
Hartshorn MP
Harvey WE
Hassall BE
Hastrop JH
Herd AC
Hintz FB
Hitchings TR
Hodson D
Hogan DJ
House DA
Howarth DT
Hoy KF
Humphreys RE
Hunter KA
Husheer GA
Jackson BL
Judd W P
Kay GA
Kilmartin PA
Kirk CM
Komen FG
Langdon AG
Laws GF
Ledger R
Lee D
Legal Deposit Office
Lester P
Lewthwaite DE
Llewellyn DR
Mackney AW
Maclagan RG
Madle DV
Maister SG
Malcolm GN
McCartain MJ
McCurdy AU
McEwan MJ
McQuillan AJ
Metcalfe LJ
Mills JR
Morris GC
Morris PJ
Morris PM
Murray GJ
Nairn DK
Naish G
Nelson PE
Newth RP
Nicholson BK
O'Keefe RM
OMahony R S
Odell AL
Officer DL
Ogilvie LJ
Opie MC
Orchiston HD
Oughton TJ
Packer JE
Peake BM
Peddie WS
Penfold BR
Phillips LF
Ralfe TC
Reeves RD
Richards KE
Roberts KG
Robinson WT
Rodley GA
Rogers J
Rosser MJ
Roy RU

Rumball SV
Russell LE
Schollum BW
Seadon JK
Sherlock RR
Suuring D
Swedlund BE
Sweetman LJ
Tapper RY
Tennant WC
Thompson MB
Ussher JA
Wansbrough NC
Waters JM
Waters TNM
Watson DJ
Watson ID
Weatherburn DC
Weavers DG
Webster DR
Welsh IK
Wheatcroft AJ
Whimster AT
White GR
Whitney RS
Whittle KR
Wignall APD
Wilkins CJ
Wilkins DJH
Williamson AG
Williamson BE
Winter HW
Woodgate PD
Wooff AH
Wright GA
Wright GJ

CHEMICAL ENGINEERING

Harland CW
Jenkins LA
Williamson AG

CHROMATOGRAPHY

Alford S
Atkinson PH
Baker DJ
Baker RT
Batchelor JP
Baxter JA
Beresford GD
Bingham AG
Bouwmeester MJ
Brennan AL
Bridle J H
Briggs PM
Bryson WG
Buchanan H
Burton NH
Carlisle VF
Chang HM
Claridge RF
Clark CJ
Cooke A
Cooper DE
Couch RAF
Cowles RJ
Crook F
Daniell R
Dawson PJ
De Mora SJ
Deacon NA
Duxbury M
Eade LM
Edmonds NR
Emerson GW
Eyes L
Fenemor DR
Fenton DM
Ferry DG
Forss DA
France JT
Franch RA
Fraser BRW
Friar MJ
Garland RP

Gibson MGC
Gifford FV
Goeth ME
Graham BWL
Granger DJ
Grant WD
Gray IK
Gray MJ
Guild JR
Hannah DJ
Harding DRK
Harley MS
Harvey WE
Hawke JC
Hawkes AD
Herd AC
Hill RJ
Holland PT
Hope SJ
Indyk H
Jacobson DR
Johnson CB
Johnson I
Judd M C
Karl DP
Keen AR
Kirk CM
Lake RJ
Lane GA
Lauren DR
Lavery R
Lodge N
Lyon RB
MacDonald CG
MacDonald ML
MacGibbon AKH
Manning TDR
Martin PL
Martin W
McCraw RH
McDonald H
McDonald KF
McLaughlin JR
Mercer CE
Millar KR
Miners JO
Mitchell JW
Morcom AT
Morris PJ
Munro MHG
Nelson PE
Newman C M
Nolan SL
Norris RJ
O'Donoghue EM
O'Kane JM
Oats OJ
Odell AL
Olsen G M
Pastelidis D
Payne E
Perry NB
Petersen MJ
Pritchard NE
Rae WJ
Rawdon PD
Richardson RK
Robinson PG
Rodgers BE
Rosser MJ
Scoltock I
Seelye RN
Severn WB
Shaw DJ
Shirer CA
Simpson C D
Sims RJ
Sissons CH
Smith CR
Smith JN
Smith RAJ
Stewart GM
Strange G A
Sutton BM
Swallow WH
Tan ST

Tapper BA
Tham EKS
Thomas PW
Vannoort RW
Visser FR
Walker NJ
Walker NJ
Watkinson JH
Weatherall IL
Webster DR
Welsh IK
Wilkins AL
Williamson AG
Williamson WS
Wills BD
Woo CP
Wright GRG
Young H
Young L
Zabkiewicz J A

ELECTRO-CHEMICAL

Bailey PCA
Creamer LK
Earl WB
Evans AA
Fellows SK
Husheer GA
Johannesson JK
Matheson RA
McKeown RH
McQuillan AJ
Naish G
Penhale HR
Smedley SI
Tomlinson JW
Welch BJ
Wiggins PM
Williamson AG
Wright GA
Wyatt G N

FATS AND OILS

Ababio B
Atkinson PH
Bain PJS
Bluck RS
Body DR
Buisson DH
Calder PC
Cambie RC
Cant PA
Chang NVR
Davey CL
Duxbury M
Eyes L
Fenton DM
Hancock WS
Harris W
Hoare JL
Indyk H
MacGibbon AKH
Novelle AJ
O'Connor CJ
Pattinson ME
Perry NB
Rankin DA
Rawdon PD
Robinson PF
Robinson PG
Roughan PG
Rowden MW
Ryburn G M
Seakins JM
Shortland FB
Singh J A
Webster G A
Williamson AG
Wilson AD
Wong RJ
Wotherspoon JS

GEOCHEMISTRY

Ambler PK
Barnett PR

Campbell AS
Carr RM
Cope DM
Devereux I
Ellis AJ
Freitag SA
Hardie GM
Harvey CC
Haverkamp RG
Hodder APW
Horn AH
Hulse CA
Husheer GA
Johnston JH
Kitt W
Lawrence MJF
Liddle JR
Rafferty WJ
Rafta TA
Rogers J
Seal KE
Shirer CA
Smith MG
Sutton MM
Timperley MH
Turney TA
Wilkins CJ
Williamson AG

INORGANIC & ORGANO-METALLIC

Ainscough EW
Aldridge LP
Arnold LJ
Baker EN
Barris GC
Bhula R
Bibby DM
Bingham AG
Bowmaker GA
Boyd PD
Brodie AM
Brothers PJ
Buckingham DA
Carr RM
Clark GR
Curnow OJ
Curtis NF
Deva MM
Dunningham EA
Evans SM
Fergusson JE
Gainsford AR
Gainsford GJ
Gommans LHP
Graham PG
Grant MC
Hancock WS
Hanton LR
Hedwig GR
House DA
Kennerley RA
Leung KF
Luca V
Lundie KL
Mackay KM
Main L
Matheson TW
McGrouther KG
McKee EVA
Milestone NB
Mok KF
Nicholson BK
Norris GE
Odell AL
Ong CC
Peake BM
Penfold BR
Percival HJ
Plackett DV
Powell HKJ
Reed CA
Rickard CEF
Robinson NP
Robinson WT

Rodley GA
Rollo JR
Roper WR
Rumball SV
Sahasrabudhe N
Shirer CA
Simpson J
Sims AJ
Sims AW
Siriwardena A
Smith DW
Smith RAJ
Steel PJ
Sutton PA
Taylor MJ
Wallaart JC
Waters JM
Waters TNM
Watson AA
Weatherburn DC
Wikaira JL
Wilkins CJ
Williamson AG
Williamson BE
Wright LJ
Young L

ORGANIC

Anderson BF
Ayers JS
Baxter JA
Blunt JW
Body DR
Brimble MA
Cambie RC
Cant PA
Carlisle VF
Carr MD
Cooper DE
Corbett RE
Couch RAF
Coxon JM
Craig JT
Creamer LK
Cretney JR
Dansted E
Davis BR
Dunningham EA
Fan J Y
Ferrier RJ
Forss DA
Furneaux RH
Gallagher RT
Garland RP
Grant PK
Gray IK
Green RF
Grimmett MR
Halton B
Hancock WS
Happer DAR
Harding DRK
Hartshorn MP
Harvey WE
Hawke JC
Hemmingson JA
Heng S
Ingham PE
Johnson AL
Laws GF
Leary GJ
Madle DV
Main L
Maister SG
McDonald IR
McGrouther KG
McKeown RH
McLennan DJ
Miles CO
Mitchell RE
Munro MHG
O'Connor CJ
O'Donovan GM
Osborne GO
Packer JE
Palmer BD

Perry NB
Porter LJ
Rae WJ
Rewcastle GW
Richards EL
Richards KE
Ronaldson JW
Russell GB
Rutledge PS
Southward CR
Steel PJ
Suuring D
Swallow WH
Swedlund BE
Taylor CM
Taylor MW
Vannoort RW
Visser FR
Walker NW
Watson AA
Watson CC
Weatherall IL
Weston RJ
White EP
Williamson AG
Woodgate PD
Young H

POLYMERS

Andrews J
Baggen EF
Barber P
Barton AFM
Betty SM
Boyer KG
Christmas MJ
Cooney RP
Cowperthwaite TC
Eastal AJ
Edmonds NR
Erceg IJ
Fletcher JG
Gardner F
Gibson MGC
Grayson FW
Gunn BI
Hall L
Herd AC
Hopgood RH
Hunt IS
Jack K
Johannesson JK
Jordan SA
Knapstein RJ
Lomax TD
Malcolm GN
Martin PL
Maylor R
McKinnon AJ
McLaughlin JR
Myers D B
Ng KS
Norris RJ
Olivecrona LM
Plackett DV
Sharman W R
Stephenson RP
Strange G A
Tait CR
Tham EKS
Waddingham DM
Watkinson PJ
Weatherall IL
West WH
Whitney RS
Williamson AG
Wyatt G N
Yang DCM

THERMODYNAMICS

Ababio B
Brasell MR
Brienne SM
Brown M L
Cartner A

Cooney RP
Easteal AJ
Fan J Y
Fenby DV
Freeman CG
Harland PW
Hedwig GR
Henshaw G
Hume SM
Jack K
Kilmartin PA
Langdon AG
Leung KF
Malcolm GN
Matheson RA
McElroy PJ

McGrath KM
McKeown RH
McQuillan AJ
Mroczek EK
Myers D B
Parker EF
Peake BM
Rogers DE
Smedley SJ
Taylor MJ
Walsh RS
Watson ID
White RE
Williamson AG
Williamson BE
Wright GA

Devereux I
Doevendans J
Dolby R
Forss DA
Freitag W
French G
Friar MJ
Gainsford AR
Gawne KM
Gifford FV
Graham BWL
Granger DJ
Gregor JE
Guild JR
Gunn BI
Hawkes AD
Hill RJ
Holland PT
Hope SJ
Husbands J M
Indyk H
Johnson CB
Kan D R
Karl DP
Kerrigan JL
Komen FG
Lake RJ
Lauren DR
MacDonald CG
Malthus RS
Millar KR
Mitchell JW
Morcom AJ
Nokes CJ
Norris RJ
O'Brien GA
Ogilvie DJ
Olsen G M
Patel DB
Pearce EIF
Phillipps MW
Purchase NG
Pybus J
Robertson JM
Rowe TM
Sahasrabudhe N
Sewell JR
Sidwell DE
Simms RN
Sirwardena A
Smith CR
Smith MG
Smith TJ
Sutton BM
Taylor JA
Todd HJ
Town RM
Visser FR
Walsh RS
Watkinson JH
Wright CJ
Wright GRG
Young H

Biochemistry

Adams A
Anderson BF
Baker EN
Bathurst NO
Batt RD
Bell DJ
Boland MJ
Bradley MP
Calder PC
Cowan DA
Crow KE
Dacre JC
Daniel RM
Dobbs BR
Duxbury M
Emerson GW
Fan J Y
Harding DRK
Hill DF
Hubbard MJ
Kettle AJ
Leung KF
Loong P C
Malthus RS
Metcalf LJ
Myers D B
O'Donoghue EM
Old KB
Pearce EIF
Petersen GB
Petersen PM
Plowman JE
Pybus J
Richardson BC
Ross DJ
Stone MJ
Stubbs HJ
Tapper BA
Trotman CNA
Walker JRL
Waters JD
Wiggins PM
Winterbourn CC

Webb VM
Welch BJ
Williamson AG
Woodhams DJ

Chemical Manufacturing

Angus CW
Braithwaite AC
Brown WN
Charleston AG
Chew ACK
Cowles RJ
Earl WB
Freeman RJ
Gregory JA
Gumbley SJ
Horne ML
Hunter WM
Husheer GA
Johnson JC
Jordan SA
Kazakevics AAR
Kooy PC
Ng KS
Old KB
Page CT
Rands DB
Ruffell GE
Singh J A
Stonyer CLH
Tait CR
Thomas WA
Udy DJ

Clinical Biochemistry

Couch RAF
Dunckley JV
France JT
Kee HC
Knox BS
Maclean DM
Matingley-Cameron JM
Parker RE
Sies CW
Walker JA
Webster DR
Webster VJ

Computing

Beckingsale PG
Caughley BP
Comish BD
Drysedale AB
Dunn AR
Gainsford GJ
McConnell SR
McGavin DG
Penhale HR
Pritchard MW
Rogers DE
Skarsholt OH
Trounson ME
Waters JM
Young J C

Consulting

Aird RM
Ancombe P K
Aspell AC
Bailey PCA
Bailey RW
Barnett PR
Barrer RM
Barton AFM
Body DR
Bouwmeester MJ
Burnett KR
Cambridge AC
Cooke A
Dacre JC
Dawson PJ
Dennis RA
Duncan JR
Evans AA
Evans CA

NZIC MEMBERSHIP Occupations Listing

Administration

Allen KW
Ambler PK
Baber HL
Bibby DM
Boland MJ
Borren AM
Boulton LH
Brent GC
Brightwell RW
Butchard JA
Chew ACK
Cibulskis JA
Clarke NH
Cope DM
Corry NM
Crook F
Dawson PJ
Dolan LP
Erceg IJ
Esdaile AC
Evans AB
Fischer A
Gainsford GJ
Garland RP
Gilmour JA
Golding RM
Graham PG
Griffin DJ
Grinsted MJ
Hall RB
Harding DRK
Harrall ED
Hartshorn MP
Hulston JR
Hutchinson EG
Ingham PE
Jansen ML
Judd W P
Keeley GM
Kirk CM
Komen FG
Laverty R
Llewellyn DR
Love AJ
Lyon RB
MacKay IM
Mackenzie KJD
Macleod RJW
Manning TDR
Mayer GD
McKenzie LR
Melville A J
Moyle TN
Newth RP
Nolan SL
Peace SM
Petersen MJ
Phillipps MW
Reeve JE
Rosser MJ
Rubie HS
Seal KE

Sharman W R
Simpson WS
Smart DW
Stevenson CD
Swallow WH
Sweetman LJ
Syers JK
Tapsell QT
Urquhart JS
Waters TNM
Watson DJ
Watson ID
Whittle KR
Wilson AF
Wyatt G N
Young PNW

Agricultural Chemistry

Bathurst NO
Braithwaite AC
Chooi SY
Clark CJ
Dawson PJ
Dobbie RS
Dolby R
Erasmuson AF
Haines SR
Hawkes AD
Heng S
Holland PT
Johnson I
Lauren DR
Lodge N
Makin JL
Miles CO
Millar KR
Oliver KJ
Olsen G M
Perry NB
Reeve JE
Sherlock RR
Tapper BA
Watkinson JH
White MS

Analytical Chemistry

Ababio B
Alcorn NP
Anderson JA
Ashton F
Bailey PCA
Batchelor JP
Beresford GD
Bouwmeester MJ
Bryson WG
Calvert DJ
Campbell AD
Chooi SY
Clark PJC
Dawson BSW
Dawson PJ
De Mora SJ

Applied Chemistry

Braithwaite AC
Brightwell RW
Chooi SY
Duncan JF
Dunningham EA
Franich RA
Freitag W
Gainsford AR
Gainsford GJ
Graham BWL
Grinsted MJ
Hopgood RH
Hume SM
Ingham PE
Langdon AG
Matheson TW
McNeil SJ
Oats OJ
Shanks GF

Building materials

Cowell BJ
Duncan JR
Franich RA
Freeman RJ
Greenall BJ
Hamilton TW
Kennerley RA
Maylor R
O'Brien JP
Sharman W R
Sidwell DE
Smart DW
Tham EKS
Udy DJ
Yolland J R

Ceramics

Mackenzie KJD
Melling PJ
O'Brien JP
Seal KE
White GV

Chemical Engineering

Andrews J
Bell DJ
Charleston AG
Earl WB
Greenall BJ
Holderness M
Jenkins LA
Keey RB
Marshall KR
Marshall T
Miller CJ
Munster RJ
Peet NJ
Pollard JS
Rubie HS

Eyres L
Firman GJ
Gifford FV
Granger DJ
Gray MJ
Grayson FW
Gregor JE
Hanger WG
Harding DRK
Harvey CC
Higgins DJ
Hill RJ
Hills DA
Hooker RO
Hunt IS
Hunter WM
Johnston JH
Jones CD
Karl DP
Lever-Naylor P
Little GR
Lodge N
Lundon YM
Mattingley-Cameron JM
McConnon PA
Miller IJ
Nokes CJ
O'Brien GA
O'Brien JP
Reeve JE
Rogers DA
Rogers J
Russell WE
Ryburn G M
Selkirk RC
Shanahan R
Shaw DJ
Skarsholt OH
Stonyer CLH
Taylor AE
Theng BKG
Tse PG

Turner AA
Webley WS
Welch BJ
Wevers WF
Winter HW
Woodhams DJ
Wratislav A
Yolland J R

Crystallography

Anderson BF
Baker EN
Boniface SM
Clark GR
Cutfield JF
Gainsford GJ
Mackenzie KJD
Penfold BR
Rae AD
Robinson WT
Waters JM
Weatherburn DC
Williams PP

Dairy Research

Arcus AC
Boland MJ
Bond MA
Boston GD
Brunton WG
Cant PA
Christmas MJ
Collins SP
Creamer LK
Cresswell KJ
Dolby RM
Gray IK
Haggett TO
Harnett M
Haylock SJ
Humphrey RS

Husbands J M
Indyk H
Joerin MM
Keen AR
Knighton DR
Lawrence, RC
Lodge N
MacGibbon AKH
Marshall KR
McGillivray WA
Newstead DF
Oliver KJ
Plowman JE
Richardson BC
Richardson RK
Roeper J
Sanderson WB
Sargent JD
Seakins JM
Southward CR
Taylor MW
Thomas PW
Towler C
Tzikanovski Z
Visser FR
Walker NJ
Walker NW
Watkinson PJ
Wood JM
Woodhall MC
Woodhams DJ

Detergents & Bleaches

Ayling HS
Bouwmeester MJ
Broughton GW
Bryson WG
Hawkes PD
Knappstein RJ
Lomax TD
Macleod RJW

Papps M D
Rawdon PD
Rowden MW
Schmidt RO
Singh J A
Skidmore AH
Tapp NJ
Thomas WA

Environmental Chemistry

Anderson JA
Banks WJ
Barnett PR
Batchelor JP
Bathurst ETJ
Beaumont HM
Bingham AG
Brasell MR
Brockett G
Bryson WG
Burggraaf S
Caughley BP
Clarkson TS
Close ME
Cooper DE
Dawson PJ
De Mora SJ
Downes MT
Duke KJ
Duncan JR
Dyer DL
Evans CA
Fellows SK
Franich RA
Freeman MC
Gawne KM
Gordon GJ
Graham BWL
Gray MJ
Gray VR
Greenaway AM
Gregor JE

Haden DD
Hastie DR
Henshaw G
Hogan DJ
Holden R
Holland PT
Hunter KA
Johnson I
Judd M C
Komen FG
Laing KR
Lambden AE
Langdon AG
Lauren DR
Lyon GL
Martyn RJ
McKenzie GJ
Mercer CE
Millar KR
O'Brien GA
Ogilvie DJ
Pritchard NE
Quin BF
Richardson JB
Robertson JM
Rowe TM
Rubie HS
Russell JM
Sherlock RR
Smith CR
Smith DG
Smith TJ
Stacey RI
Sutcliffe E R
Tate KR
Taylor AE
Taylor MEU
Timperley MH
Town RM
Walsh RS
Waters JD
Webster JG

Buchi. Quality instruments for distillation, digestion and evaporation

Buchi has a world-wide reputation as a manufacturer of high quality laboratory apparatus and systems.

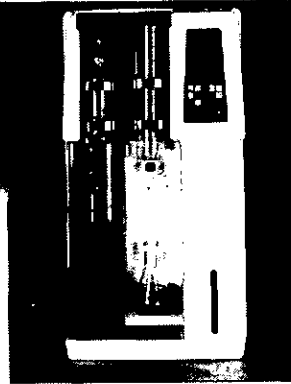
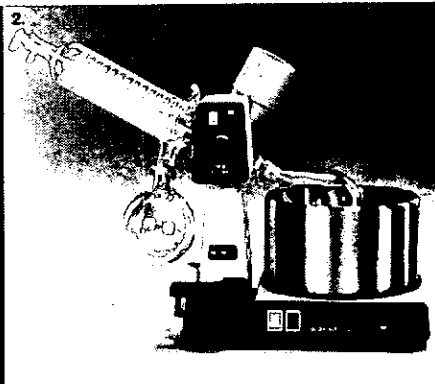
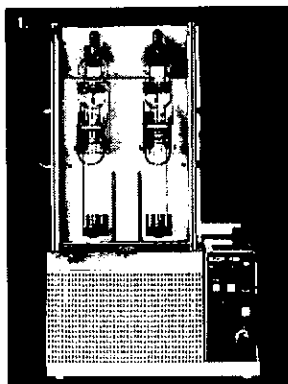
Buchi ROTOVAPORS® combine glass manipulation, electronics and mechanics to meet all the demands of the modern laboratory.

For the determination of nitrogen and fat Buchi offer an extensive range of systems.

Buchi extraction and hydrolysis units feature compatible fittings to minimize digestion time and ensure problem-free determination.

Buchi instruments for solvent evaporation, nitrogen and fat determination, preparative liquid chromatography and melting, boiling and dropping point analysis are available in New Zealand only from Watson Victor Ltd.

1. Rapid Digestion Unit 420
2. Rotovapor RE 111
3. Distillation Unit 323



With the variety of combinations available it is possible to achieve the perfect determination system for your laboratory.

For Kjeldahl analysis the possibilities extend from a manually operated unit right up to a fully automated system. For total fat determination



WATSON VICTOR
Your Assurance of Quality.

Auckland P.O. Box 1276.
Ph 579-3039 Fax 525-0951.

Wellington P.O. Box 1180.
Ph 857-699 Fax 844-651.

Christchurch P.O. Box 706.
Ph 669-282 Fax 662-537.

Dunedin P.O. Box 921.
Ph 4777-291 Fax 4778-720.

Welsh IK
White MS
Wilcock RJ
Will GM
Wright GRG
Yolland J R

Fertiliser

Andrew DH
Braithwaite AC
Crump RT
Eaton AC
Garthwaite HR
Goh KM
Groom PS
Harrison NR
Higgins DJ
Hume SJ
Jackson DW
Lawry RC
Oliver KJ
Provan WG
Selfe GR
Wallace RG
Watkinson JH
White MS
White RE
Winter DS

Food (non-Meat)

Bailey RW
Beaumont HM
Beishuizen JW
Bettany BL
Blakie DJ
Bowman NJ
Brunton WG
Buchanan H
Burns DJW
Campbell SJ
Chapman LP
Chappell PL
Cressey PJ
Demchenko Z
Dennis RA
Dick DA
Dingley G
Evans LP
Eyes L
Fenton DM
Hannah DJ
Harris W
Hartman L
Hewitt PL
Hogan DJ
Holloway WD
Hunter JC
Hunter WM
Husbands J M
Indyk H
Jacques PR
Johnson CB
Kenny JP
Lodge N
Love JL
Lyndon RM
McConnon PA
McCraw RH
Melton LD
Miller CJ
Mitchell TA
Morton ID
Nelson PE
Parker EF
Petersen MJ
Rankin HM
Robertson JM
Ryburn G M
Scrymgeour AN
Shorland FB
Stratton MK
Svoboda DM
Swallow WH
Tzikanovski Z
Van Gaalen WACT

Visser FR
Wallace GM
Webster G A
Wevers WF
Wilson KW
Wong RJ
Woo CP
Young PNW

Forensic

Alcorn NP
Alford S
Bedford KR
Beresford GD
Bettany BL
Clark PJC
Couch RAF
Cropp PL
Eggleston LM
Ferry DG
Gainsford AR
Gourdie TA
Heenan MP
Hentschel PR
Hurst F
Manning TDR
Nelson PE
Nolan SL
Robertson JM
Scott GR
Selkirk RC
Shanahan R
Sharman LE
Skarsholt OH
Sutcliffe E R
Sutherland GJ
Tan ST
Taylor MC
Vannoort RW
Winchester RV

Forest Products

Axon BW
Brasch DJ
Cowell BJ
Cummins NH
Deed TC
Duncan JF
Dunningham EA
Franich RA
Fullerton TJ
Hall RB
Hope SJ
Hunt IS
Leary GJ
Lewis AL
Maylor R
McDonald DF
McGrouther KG
Plackett DV
Rankin RJ
Smart DW
Suckling ID
Udy DJ
Yolland J R

Gas & Fuel

Duncan JF
Evans SM
Fellows SK
Gibson JR
Gray VR
Heng S
Love AJ
Martin AM
Matheson TW
Peet NJ
Turner AA
Whitney RS
Wilson GS

Geochemistry

Aldridge LP
Barnett PR
Carr RM

Close ME
Collier RJ
Collier SJ
Crump ME
De Mora SJ
Devereux I
Downes CJ
Giggenbach WF
Harvey CC
Hodder APW
Johnston JH
Lawrence MJF
Lyon GL
Mahon WA
McCabe WJ
Mroczek EK
O'Brien JP
Patterson JE
Rafferty WJ
Rafter TA
Rodgers KA
Rogers J
Seal KE
Short S A
Timperley MH
Weaver SD
Webster JG

Industrial Chemistry

Alchin JD
Angus CW
Bain PJS
Banks WJ
Blackett BN
Boulton LH
Bouwmeester MJ
Braithwaite AC
Brockett G
Brooker SA
Bryson WG
Burton NH
Charleston AG
Chew ACK
Christmas MJ
Collier RJ
Duncan JF
Dyer DL
Freitag W
Greenaway AM
Gunn BI
Hardie GM
Hawkes PD
Holderness M
Hunter WM
Indyk H
Keen RD
Kennerley RA
Leigh DJ
Leonard MM
Logan M B
Lynch GP
MacDonald CG
McLellan GD
McSweeney G
Melville A J
Miller JF
Morris PJ
Mucalo MR
Owers WR
Parsons BW
Patchett ML
Peacock CB
Robinson NP
Rubie HS
Ryburn G M
Salter DM
Shirer CA
Sidwell DE
Singh J A
Siriwardena A
Skipper JL
Smith CR
Smith TJ
Stonyer CLH
Tapp NJ
Wansbrough NC

Warren DR
White MS

Inorganic Chemistry

Bibby DM
Borren AM
Briggs PM
Brodie AM
Buckingham DA
Clark GR
Colby RE
Coll RK
Collier SJ
Curnow OJ
Deva MM
Dunningham EA
Evans SM
Farr PG
Fergusson JE
Gainsford AR
Gainsford GJ
Galloway N
Ginley EJ
Goeth ME
Grayson FW
Hanger WG
Kenny FM
Kerrigan JL
Lau HM
Lundie KL
Mok KF
Neeve GD
Niederer AF
O'Kane JM
Oats OJ
Pitham DC
Reed CA
Roper WR
Sahasrabudhe N
Schild FW
Shaw RA
Sheerin BE
Sims AJ
Siriwardena A
Smith CR
Thompson JC
Town RM
Waters JM
Watson AA
Weatherburn DC
Winter HW
Wong L
Yorke S C

Leather

Bailey AAT
Collins TJ
Curtis NF
Featherstone JD
Gemmill GD
Grant MC
Hanton LR
Harrison NR
Keeley GM
Mackay AM
Mackay KM
Mann BR
Milestone NB
Nelson DG
Odell AL
Page CT
Rodley GA
Simpson J
Wakeman JL

Lecturing-Technical

Institute

Causier JE
Fraser BRW
Freitag W
Gibson MGC
Grinsted MJ
Heyworth RM
Kreymborg RB
Ledger R

Madle DV
Maister SG
Morrison DA
Robinson PG
Schollum BW
Strode-Penny JK
Trevean MA
Whiting R
Whittle KR
Wilkins DJH

Lecturing-University

Adams JA
Ainscough EW
Allen RM
Ayers JS
Barber P
Barnes MF
Barrer RM
Barton AFM
Blackman JG
Blunt JW
Bowmaker GA
Brasch DJ
Brimble MA
Brittain JM
Brittain T
Brodie AM
Brothers PJ
Buckingham DA
Buisson DH
Burns GR
Burns JR
Calder PC
Cambie RC
Campbell AS
Carr MD
Carr RM
Claridge RF
Clark AG
Clark GR
Coll RK
Collins TJ
Cooney RP
Cosgrove MM
Cowan DA
Craig JT
Crawford KF
Curtis NF
Cutfield JF
Daniel RM
Davenport SJ
Davis BR
De Mora SJ
Earl WB
Easteal AJ
Ede RM
Emerson GW
Fawcett JP
Fenby DV
Fergusson JE
Ferrier RJ
France JT
Freeman CG
Grant PK
Green RAW
Greenaway AM
Grimmett MR
Grout A
Halton B
Hanton LR
Happer DAR
Harding DRK
Harland PW
Harrington DA
Hartman L
Hartshorn MP
Harvey WE
Hawke JC
Hedwig GR
Heyworth RM
Hodder APW
House DA
Husbands DR
Jameson P E
Jogia MK

Johnston JH
Keey RB
Kirk CM
Kirkman, JH
Kitto GB
Langdon AG
Lavery R
Le Quesne PW
Lee HK
Llewellyn DR
Long MA
Mackay KM
Maclagan RG
Main L
Matheson RA
McElroy PJ
McEwan MJ
McKee EVA
McKeown RH
McLennan DJ
McQuillan AJ
Melton LD
Metson JB
Mok KF
Morris PJ
Morton ID
Munro MHG
Myers D B
Nicholson BK
O'Connor CJ
Odell AL
Ong CC
Oo KC
Osborne GO
Packer JE
Parry DAD
Peake BM
Peet NJ
Penfold BR
Petersen GB
Phillips LF
Pope CG
Powell HKJ
Quickenden TI
Rae AD
Reed CA
Reeves RD
Rickard CEF
Robinson MF
Robinson WT
Rodgers KA
Rodley GA
Roper WR
Rumball SV
Rutledge PS
Shepherd MG
Sherlock RR
Shooter D
Siemon SR
Simpson J
Smedley SI
Smith JN
Smith MG
Smith RAJ
Steel PJ
Sullivan PA
Swindale LD
Syers JK
Tate WP
Taylor MJ
Tomlinson JW
Trotman CNA
Turner IR
Viitakangas LJ
Walker JRL
Wallace GM
Waters JM
Watson ID
Weatherall IL
Weatherburn DC
Weaver SD
Welch BJ
White GR
White RE
Whyman D
Wilkins AL

Williamson BE
Wilson MN
Woodgate PD
Wright GA
Wright GJ

Marketing

Ambler PK
Angus CW
Atkinson PH
Baxter RA
Cambridge AC
Dennis RA
Devereux I
Gunn NB
Hall L
Huber R
Jenkins LA
Keen RD
Kirk BL
Lal B
Lyon RB
Makin JL
McMath BD
Naim DK
Oliver AR
Paul IK
Smart DW
Vivian GW
Yang DCM

Meat Industry Research

Anscombe P K
Ashby KR
Brennan AL
Butchard JA
Campbell GG
Dansted E
Devine CE
Guthrie AK
Johnson CB
Keeley GM
Kingsley SM
Law NH
Nottingham PM
Reid DJ
Russell JM
Skipper JL
Stewart GM
Turner RC
Wallace RG
Wotherspoon JS
Young OA

Metallurgy

Boulton LH
Corry NM
Davey CL
Duncan JR
Gainsford AR
Gapper HR
Halliburton GJ
Hume GM
Marshall T
Morton ID
Niederer AF
Rands MB
Sidwell DE

Microbiology

Batchelor JP
Brightwell RW
Christian DF
Cowan DA
Grant WD
Keeley GM
Lambert GS
Lauren DR
Lim M
Loong P C
May AV
Nottingham PM
Ogilvie DJ
Richards NE

Sargent JD
Sissons CH
Taylor JA
Wallaart JC

Nutrition

Body DR
Freeman MC
Holloway WD
Hullett EW
Husbands J M
Knighton DR
Malthus RS
Millar KR
Pearce EIF
Ryburn G M
Stratton MK
Swallow WH
Tan RS
Taylor JA
Wevers WF

Organic Chemistry

Beresford GD
Blatner R
Blunt JW
Calvert DJ
Cambie RC
Collier WA
Coxon JM
Davis BR
Denny WA
Dent BR
Ede RM
Fan J Y
Ferrier RJ
Franich RA
Furieux RH
Halton B
Harding DRK
Hartshorn MP
Hemmingson JA
Herbert JM
Holloway WD
Holroyd SE
Johnson AL
Johnson CB
Keen RD
Kerrigan JL
Lauren DR
Le Quesne PW
McLennan DJ
Miles CO
Mitchell RE
Munro MHG
Olsen G M
Packer JE
Palmer BD
Perry NB
Petersen PM
Rewcastle GW
Robinson MF
Seakins JM
Sims AJ
Smith RAJ
Stevens EV
Stone MJ
Van Eyk SJ
Visser FR
Weatherall IL
Webby RF
Weston RJ
White EP
Wright GJ
Young H

Patent Administration

Birch EJ
Brimble MT
Brittain JM
Brooker EG
Coddington JM
Deacon NA
Duve RN
Gallagher RT

Grant PK
Hannah DJ
Harvey WE
Keen AR
Lane GA
Leary GJ
O'Donovan GM
Officer DL
Opie MC
Perrin DR
Porter LJ
Richards KE
Robinson NP
Russell GB
Rutledge PS
Seelye RN
Shaw GJ
Suckling ID
Sutherland GJ
Syddall TH
Woolhouse AD
Wright LJ
Yorke S C

Petroleum products

Ababio B
Blackett BN
Bluck RS
Burke SL
Burton NH
Chang NVR
Eade LM
Freitag W
Gerlach RF
Haden DD
Jackson BE
Jacobson DR
Keen RD
Love AJ
Oliver AR
Pinsky B
Watson DJ
Wilson GS

Pharmaceuticals & Cosmetics

Ayling HS
Baas JW
Bond MA
Bridle J H
Burns CM
Cambridge AC
Collier JM
Dempsey BJ
Denny WA
Francis MJ
Gibson JR
Gifford FV
Gray MJ
Johnson AL
Johnson JC
Ledger R
Loong P C
Maguire SM
McAnelly FP
McDonald H
McQueen RG
Moore AJ
Morrish PW
Old KB
Palmer BD
Papps M D
Pastelidis D
Perry NB
Quaye GW
Rodgers BE
Rushworth GE
Scoltock I
Stanley AA
Stone MJ
Stonyer CLH
Strange G A
Sutton BM
Tapp NJ
Town KG

Trainor TR
Turner RC
West WH

Pharmacology

Adams A
Alford S
Baker DJ
Blackman JG
Brimble MT
Dacre JC
Denny WA
Faster FN
Lavery R
McDonald GE
Miners JO
Ong MKS
Phelan EL
Rainsford KD
Reeve JE
Shanks GF

Physical Chemistry

Alford S
Brienne SM
Brimble MT
Brooksby PA
Buckingham DA
Clark AG
Cooney RP
Downes CJ
Easteal AJ
Fan J Y
French G
Harland PW
Harrington DA
Harvey HE
Hume SM
Kerrigan JL
Langdon AG
Leung KF
Maclagan RG
Malcolm GN
Matheson RA
McGrath KM
McKeown RH
Meinhold RH
Morrison DA
Mroczek EK
Nisbet TJ
Ozich DI
Packer JE
Rae AD
Rogers DE
Satherley J
Simpson RW
Tennant WC
Theng BKG
Tomlinson JW
Walker IK
Watson ID
Wilkins BJ
Williamson AG
Williamson BE
Wright GA

Polymer Chemistry

Aldridge LP
Betts AJ
Boyer KG
Calvert DJ
Charleston AG
Christmas MJ
Claridge RF
Easteal AJ
Featherstone JD
Fenby DV
Gumbley SJ
Gunn BI
Hunter KA
Janssen SJ
Lyndon RM
Maylor R
McElroy PJ
McEwan MJ

Milestone NB
Mucalo MR
Newman RH
Olivecrona LM
Peake BM
Phillips LF
Richards NE
Smedley SI
Sutton HC
Tait CR
Tham EKS
Viatos J
Waddingham DM
Walker IK
Weatherall IL
Williams PP

Power Station Chemistry

Baggen EF
Barclay JB
Betty SM
Edmonds NR
Lomax TD
McKinnon AJ
Mumford RN
Oats OJ
Pitham DC
Pritchard NE
Rubie HS
Stanley BG

Radiochemistry

Barnett PR
McAdam CJ
Williamson WS

Retired & Part-time

Bailey AAT
Barrack BG
Batt RD
Billinghurst MW
Blackie WJ
Body DR
Borthwick ES
Brown DG
Butler GW
Cawley RW
Dempsey VJ
Durham RA
Ellis AJ
Forrester AM
Furkert RJ
Gallaher PJ
Gardner F
Gray VR
Greenwood RM
Grigg JL
Hartley GS
Holden R
Horn AH
Howard BH
Hunt AH
Hunter M
Kitt W
Lester P
Lewin AH
Locker RH
Lundon YM
Malcolm ME
McCabe WJ
McKeown RH
Naish G
Nelson DF
Newth RP
Nordmark BA
Odell AL
Pattinson ME
Rafter TA
Robb AJD
Robb J
Roberts CC
Ronaldson JW
Roy RU
Sewell JR
Short S A

Stedman BM
Stone HM
Sutton HC
Suuring D
Swedlund BE
Swindale LD
Thom N G
Todd HJ
Turney TA
Watt JS
White EP
Whitehead NE
Wilkins CJ
Williamson AG
Wilson AD

Roading Materials

Adams AFR
Adams DE
Anderson CM
Armitage GC
Barnes F
Bartrum MP
Beath GB
Beck JR
Bloom H
Bollard EG
Boniface SM
Bruce LW
Carlisle VF
Charlton PL
Chin AP
Clare NT
Cone E
Coop IE
Cummins NH
Davies AM
Dick DA
Dolby RM
Dormer RA
Edwards GH
Elder WR
Frieberg AG
Gapper HR
Hebden WH
Hogg JS
Home PD
Hounsell ER
Hoy KF
Hutchinson RL
Jamieson ND
Jenkins LD
Johannesson JK
Lambert GS
Linzey JT
McCurdy AU
McKeegan WR
McNaught KJ
Miller RB
Moffat JF
Morice IM
Oakley HB
Oliver AP
Orchiston HD
Pollard JS
Rafter TA
Rands MB
Richardson GM
Robinson JR
Rushworth GE
Russell WE
Sew Hoy L
Shorland FB
Sinclair RM
Spratt TJ
Swanwick RM
Taylor RW
Thompson FB
Thomson HM
Thomson TA
Turner IR
Vivian GW
Walker TW
Wallace GM
White SW
Williams AL

Wilson TH
Wratislav A

Soil Chemistry

Adams JA
Banks WJ
Bosma GM
Campbell AS
Goh KM
O'Brien JP
Percival HJ
Ross DJ
Sherlock RR
Syers JK
Town RM
Watkinson JH
West WH
White RE

Spectrometry

Brienne SM
Brooksby PA
Calvert DJ
Franich RA
Healy WB
Holland PT
Jack K
Johnson I
Kirkman, JH
McGavin DG
McKeegan WR
McLellan GD
Miller RB
Penhale HR
Pritchard MW
Pybus J
Ronaldson JW
Sims AJ
Stone MJ
Tan ST
Todd HJ
Visser FR
Walker TW
Weaver SD
Will GM
Williamson BE
Wong H

Surface Coatings

Bayliss SP
Boyer KG
Brown HM
Childs WE
Christian DF
Dacombe-Bird PW
Dalzell KW
Dunningham EA
Ellen CM
Elliott MJ
Freeman RJ
Gommans LHP
Greenall BJ
Greig MS
Hackney T
Hall L
Halliwell RJ
Hintz CL
Johnston JH
Jordan SA
Lal B
Lomax TD
Maylor R
McCapra R
McCort JG
Nellalilingam S
Plackett DV
Robinson PF
Stephenson RP
Svoboda AE
Tait CR
Viatos J
Wagenvoort M
Whitfield T

Teaching-Secondary

Adcock MA
Baird WN
Beadle PG
Billcliff JS
Bull L
Butcher JA
Butchers JB
Candy BJ
Cheeseman TP
Clark MDT
Cockburn BL
Coldham JK
Cronshaw DR
Cross DJ
Denne AM
Denton GM
Dicker GL
Douch EJJ
Douglas JG
Dowrick NC
Eames AR
Fletcher ECG
Fletcher KP
Furness AR
Gilmore OL
Green JC
Grigor JA
Groves AG
Hartle KRS
Hassall BE
Hastrop JH
Hintz FB
Hitchings TR
Howarth DT
Humphreys RE
Hurrell C O
Isdale DH
Jackson BL
Kay GA
Kilmartin PA
Lockhart KR
Mahoney MF
Martin JW
Metcalf LJ
Mills JR
Morris GC
Morris PM
Morton AS
Murdoch JD
O'Keefe RM
O'Mahony R S
Opie MC
Peddie WS
Ralfe TC
Roberts KG
Rosser MJ
Russell LE
Seadon JK
Stacey RI
Sweetman LJ
Tapper RY
Tapsell QT
Taylor MJ
Thomas SD
Turner MD
Ussher JA
Weavers DG
Wheatcroft AJ
Wignall APD
Williams MP
Winter HW
Wooff AH

Teaching-Tertiary

Barker MA
Bowles JC
Buckingham DA
Caughley BP
Causier JE
Colebrook LD
Cook DF
Cosgrove MM
Coxon JM
Cretney JR

Earl WB
Edmonds NR
Fischer A
Henshaw G
Herd AC
Lewthwaite DE
Miller HM
Milligan JR
Naish G
O'Donovan GM
Orchiston HD
Packer JE
Shaw P
Smith RAJ
Strode-Penny JK
Swedlund BE
Taylor MJ
Van Amelsfort A H
Watson ID
Welsh IK
Wikaira JL
Wilkins BJ
Wilkins DJH
Williamson BE

Textile Chemistry

Bryson WG
Drysdale AB
Edwards GD
Hackney T
Hoare JL
Ingham PE
Jamieson RG
Lake PJ
Leonard MM
McLaughlin JR
McNeil SJ
Page CT
Peake BM
Phillips LF
Simpson AS
Watson AA
Weatherall IL

Theoretical Chemistry

Chapman LP
Coxon JM
Hutchinson RL
MacLagan RG
McKinnon AJ
Rankin DA
Tennant WC
Thomson HM

Toxicology

Barnett PR
Baxter KJ
Chang HM
Dacre JC
Evans CA
Fellows SK
Freeman MC
Harland CW
Hullett EW
Janata WR
Jenkins LD
McKenzie GJ
Miners JO
Newman C M
Nolan SL
Reeve JE
Scott GR
Tan ST
Temple WA
Waters JD
Williamson WS

Water

Goldsmith J
Ogilvie LJ

NZIC MEMBERSHIP

Main Alphabetical Listing

- ABABIO, Ben**, BSc(Hons), Dept of Chem & Process Eng, University Of Canterbury, Christchurch (Postgraduate Student), A'91
- ABELL, Andrew David**, BSc(Hons) PhD(Adelaide), Chemistry Dept, University Of Canterbury, Christchurch (Lecturer), M'87
- ADAMS, Adrienne**, BSc(Hons)(Well) PhD(Melb), C/- Prof L P G Wakelin, St Luke's Hosp Highfield Rd, Rathgar Dublin 6 Ireland (Temporary Retirement), M'86
- ADAMS, Arthur Francis Reginald**, MSc(NZ), 10 Greers Road, Christchurch (Retired), F'64 M'39
- ADAMS, Dennis Beaumont**, BSc ANZIM, 85 Ngaio Road, Waikanae (Retired), M'51
- ADAMS, Dudley Erne**, MSc, 9 Galatea Terrace, Heme Bay, Auckland (Retired), M'35
- ADAMS, John Arthur**, BSc(Hons) PhD(Cant), Dept Of Soil Science, Lincoln University, Canterbury (Senior Lecturer), M'72
- ADCOCK, Margery Ada**, BSc, Whangarei Girls High School, PO Box 5056, Whangarei (HOD Science), M'77
- AGGETT, Annemarie**, 10 Merchant Avenue, Te Atatu South, Auckland, S'89
- AINSCOUGH, Eric William**, BSc(Hons) PhD(Q'ld), Chem/Biochem Dept, Massey Univ, Private Bag, Palmerston North (Associate Professor), M'72
- AIRD, Ronald Murray**, BE(Chem) BSc FICHEM, Ron M Aird & Associates, PO Box 1798, Palmerston North (Principal), M'70
- ALBERTSON, Stephen John**, BSc, C/- Waitaki International, PO Box 1, Maitaia (Development Technologist), M'88
- ALCHIN, John David**, MSc(NZ), Portals Water Terrace (NZ) Ltd, PO Box 13-558, Auckland (Chief Chemist), M'63
- ALCHIN, William Denis**, BSc, 1220 Victoria Street, Hamilton (Retired), M'81
- ALCORN, Norman Patrick**, MSc(NZ) ARSC, 67 Parklands Drive, Huntsbury, Christchurch (Retired), M'39
- ALDRIDGE, Laurence Phillip**, BSc(Hons) PhD(Otago), DSIR Chemistry, Private Bag, Petone (Scientist), M'72
- ALEXANDER, Sharelle**, Chem Dept, Univ of Auckland, Private Bag, Auckland (PhD Student), S'89
- ALFORD, Susan Frances**, NZCS BSc MNZFST, DSIR Chemistry, PO Box 2224, Auckland (Student), G'88
- ALLBROOK, Rosemary Janet**, BA MSc(Waikato), School Of Science, Univ of Waikato, Private Bag, Hamilton (Lecturer (part-time)), M'86
- ALLEN, Kenneth William**, BSc, Department Of Health, PO Box 848, Dunedin (Reg Air Pollution Officer), M'81
- ALLEN, Robert Maurice**, BE(Chem)(Hons) PhD(Cant) FICHEM FIMC, Dept Of Chem & Process Eng, Canterbury University, Christchurch (Senior Lecturer), M'68
- AMBLER, Peter Kenneth**, MSc(Auck), Comalco NZ Ltd, Private Bag 40, Panmure (Senior Marketing Rep), M'77
- AMBRIDGE, Scott**, 58 Carlton Street, Hillsborough, Auckland, S'89
- ANDERSON, Bryan Frederick**, PhD(Auck), Chem/Biochem Dept, Massey Univ, Private Bag, Palmerston North (Senior Research Officer), M'88
- ANDERSON, Colin McDonald**, BSc BA(Admin)(CCAE) MSc(Anu), 5 Champ Place, Curtin Act, Australia (Retired), M'55
- ANDERSON, James Anthony**, BA BSc DipEnvAgSci MAppSci, Works Directorate, PN City Council Private Bag, Palmerston North (Head of Laboratory Services), M'72
- ANDREW, David Henry**, BSc, 51 Cobham Drive, Morrinsville (Retired), M'62
- ANDREWS, Fleur**, C/- Chemistry Department, Univ Of Otago PO Box 56, Dunedin, S'90
- ANDREWS, James**, BE(Chem), Skellerup Industrial Ltd, PO Box 19-555, Woolston, Christchurch (Project Manager), M'65
- ANGUS, Colin William**, BSc, Polychem Marketing Limited, PO Box 9141, Wellington (Manager), M'64
- ANSCOMBE, Phyllis Kay**, NZCS, Lopdell House, Titirangi, Auckland 7 (Consultant, Hazardous Material), T'85
- ANSLEY, Desmond Reginald**, BSc AAIMM ANZIM, 357 East Coast Road, Mairangi Bay, Auckland (Retired), M'59
- ARCUS, Alexander Colvin**, MSc(NZ) PhD(Otago), 72 Abberley Crescent, Christchurch (Laboratory Manager), F'78
- ARMITAGE, Gaye Coila**, MSc(Massey) DipNZLS, 33 Maitland Ave, Stoke, Nelson (Retired), M'72
- ARNOLD, Leslie John**, BSc, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (MSc Student), G'86
- ASHBY, Kelvin Russell**, NZCS, Alliance Group Kaiapoi, PO Box 104, Kaiapoi (Chief Chemist), A'86
- ASHTON, Frank**, LRIC, Auckland Regional Authority, Private Bag, Auckland (Head Scientist (Water)), M'74
- ASPELL, Allan Charles**, MSc(Hons) PhD(Auck), Allan Aspell & Associates Ltd, 34 Constellation Dr, Mairangi Bay, Auckland (Public Analyst, Consultant), M'80
- ATKINSON, Peter Harvey**, MSc(Auck) DipMgt, 15 Learmonth Avenue, Birkenhead, Auckland (Business Development Manager), M'76
- AXON, Barry William**, MSc(Hons) PhD(Auck), Dominion Breweries, PO Box 22-043, Auckland (Research Chemist), M'82
- AYERS, John Stephen**, BSc(Hons) PhD(Cant), Chem/Biochem Dept, Massey Univ, Private Bag, Palmerston North (Associate Professor), M'72
- AYLING, Herbert Sydney**, MSc(NZ), 29 Shortt Avenue, Mangere Bridge, Auckland (Retired), M'46
- BAAS, Joan Winifred**, BSc DPhil(Waikato), 8 Versailles Street, Karori, Wellington (Regulatory Affairs, Pharm), M'87
- BABER, Hugh Lindo**, MSc(Hons)(Well) DPhil(Waik), Department Of Health, PO Box 5013, Wellington (Manager Health Research Serv), M'72
- BAGGEN, Eric Frank**, BA BSc, Peterson Chemicals Ltd, 637 Rosebank Rd Avondale, Auckland 7 (Chief Adhesive Chemist), M'85
- BAILEY, Andrew Arnold Theodore**, MSc(Birm), 279 Bleakhouse Rd, Howick, Auckland (Retired), M'71
- BAILEY, John Michael**, BSc(Hons)(Wales) DipAgriSc(Cant), South Pacific Commission, BP D5 Noumea, Cedox, New Caledonia, M'74
- BAILEY, Peter Charles Ash**, MSc PhD(Auck) BSc, Flinders Cook Ltd, Technical Services, PO Box 437, Auckland (Marketing Director), M'72
- BAILEY, Raymond Wellesley**, MSc(NZ) PhD DSc(Birm) FRSNZ, 10 Phoenix Avenue, Palmerston North (Retired; Consultant), F'62 M'46
- BAIN, Heather Bronwyn**, 27 Park Road, Palmerston North, S'89
- BAIN, Peter James Stratford**, MSc(Wales) MRSC, DSIR Industrial Development, PO Box 31-310, Lower Hutt (Scientist), M'76
- BAIRD, Walter Norman**, BSc Dip Ind Chem, 35 Clifford Ave, Christchurch (Head Of Science Dept), F'78 M'63
- BAKER, Debra Jane**, BSc ARACI, Delta West Ltd, Manning, Western Australia (Works Chemist), M'89
- BAKER, Edward Neill**, MSc PhD(Auck) FRSNZ BSc, Dept Of Chem/Biochem, Massey University, Palmerston North (Professor), F'84 M'71
- BAKER, Lewis Charles**, MSc(NZ), 26 Claremont Street, Dunedin (Retired), F'67 M'46
- BAKER, Richard Thomas**, BSc(Hons)(Notts) PhD(Cant), Plant Protection Centre MAF, Lynfield Agric Cntr PO Box 41, Auckland (Scientist (Entomology)), M'66
- BANDARAGE, B U K**, C/- Chemistry Dept, Otago University, PO Box 56, Otago, S'90
- BANKS, Warren John**, NZCS, Chemical Cleaning Ltd, Private Bag, Tauranga (Technical Manager), M'89
- BARBER, Peter**, BSc(Hons) PhD(Wales) LPI MCIC MRSC CChem, Textile Science, Univ Of Otago, PO Box 56, Dunedin (Senior Lecturer), M'71
- BARCLAY, John Bernard**, BSc, A C Hatrick (NZ) Ltd, Auckland (Factory Manager), M'58
- BARKER, Miles Anthony**, MSc(Auck) DipEd(Massey) AdvDipTch DPhil(Waik), School of Education, Univ of Waikato, Private Bag, Hamilton (Senior Lecturer), M'83
- BARNES, Fred**, MSc(NZ), 59 Woodbank Road, Hanmer Springs (Retired), F'62 M'55
- BARNES, Maurice Frederick**, BSc(Hons) PhD(Bristol), Biochemistry Department, Lincoln College, Canterbury (Senior Lecturer), M'75
- BARNETT, Peter Rodney**, BSc(Hons) MSc(Auck), KRTA Limited, PO Box 9806, Newmarket, Auckland (Snr Geotechnical Advisor), M'79
- BARRACK, Bruce Graburn**, BSc DipBusAdmin, 31 Swan Crescent, Pakuranga, Auckland (Company Director), F'75 M'57
- BARRER, Richard Maling**, DSc ScD FRS HonFRSNZ HonDSc(BradAber) HonARCS, Imp Coll Of Sci, Tech & Medic, Univ of London, SW7 2AY England (Emeritus Prof & Snr Res Fellow), HonF'87
- BARRIS, Glen Clifton**, BSc, Chem Dept, Univ of Waikato, Private Bag, Hamilton (MSc Student), G'85
- BARTON, Allan Francis Murray**, MSc(Hons) PhD(Auck) FRACI BSc, School Of Math & Phys Science, Murdoch Univ, Murdoch 6150, Western Australia (Associate Professor), F'72 M'63
- BARTON, Richard Hadlow**, MSc(Hons) BA MA(Hons) AdvCertRadiochem, Chemistry Department, Univ Of Auckland, Private Bag, Auckland (Self Employed), M'88
- BARTRUM, Margaret Patricia**, MSc(NZ), 7 Rewiti Street, Takapuna, Auckland (Retired), M'41
- BATCHELOR, Jeremy Paul**, NZCS, NZ Steel Ltd, Private Bag, Auckland (Environmental Chemist), M'89
- BATCHELORS, Rhys**, C/- Chemistry Dept, University Of Otago, Otago, S'90
- BATHURST, Ernest Thomas John**, BSc(Hons) PhD (Cant), DSIR Chemistry, PO Box 29-181, Christchurch (Scientist), M'73
- BATHURST, Noel Onslow**, MSc(NZ), 94 Napier Road, Palmerston North (Retired), M'45
- BATT, Richard Dean**, MBE MSc PhD(Otago) MA DPhil(Oxon) FRSC FRSNZ, 15 Stewart Crescent, Palmerston North (Emeritus - Prof of Biochem), HonF'88 F'62

- BAXTER, Jennifer Anne**, BSc, 1 Church Hill Road, Green Island, Dunedin (Chemist, Head Chromatography), M'87
- BAXTER, Kenneth James**, BSc NZCS, NC Catchment Board, PO Box 788, Christchurch (Investigating Officer), T'82
- BAXTER, Roger Arthur**, BSc MBA, Duroid Ltd, Private Bag 22, Penrose, Auckland (Marketing Manager), M'73
- BAYLISS, Stuart Patrick**, BSc, Flat 8, 34 Rossiter Avenue, Lower Hutt (Chemist), M'60
- BEADLE, Peter Gordon**, BSc, 4 Rock Isle Road, Torbay, Auckland (Teacher), M'80
- BEATH, George Bentley**, KCM(Kedah) JP MA DipEd DipTchg(Adv) AJED(Lond), Scott Road, No 4 RD, Whangarei (Retired), M'33
- BEATON, Iain James**, NZCS BSc(Chem)(Cant), 7 Tonbridge Mews, Shrewsbury Street, Christchurch (Production Supervisor/Chemist), M'91
- BEATSON, Ian David**, MSc(Well), Chemby Industries Ltd, PO Box 5641, Auckland (Chief Executive), M'65
- BEAUMONT, Helen Mary**, BSc(Hons)(Massey), DSIR Chemistry, Private Bag, Petone (Scientist), M'82
- BECK, John Richard**, BSc ANZIM DipIndmanagement, 28 Vine Street, St Marys Bay, Auckland (Retired), F'78 M'50
- BECKINGSALE, Peter Gerard**, MSc(Auck), Avanti Business Systems Ltd, PO Box 99-347 Newmarket, Auckland (Software Consultant), M'79
- BEDFORD, Keith Richard**, MSc PhD(Auck), DSIR Chemistry, PO Box 2224, Auckland (Scientist), M'75
- BEISHUIZEN, John Willem**, BSc SST MNZIFST DipSch for LugarTech, Food-Tech Ingredients Ltd, Private Bag, Manukau City (General Manager), M'80
- BELCHER, Warwick J**, 719 Great North Road, Grey Lynn, Auckland (MSc Student)
- BELL, Donald John**, BSc BE(Chem)(Hons) PhD(Lond), Process Developments Ltd, PO Box 38-501, Petone (Director), M'78
- BENDALL, Justin**, 16 Northboro Road, Takapuna, Auckland (Student), S'89
- BERESFORD, Geoffrey Derrick**, MSc(Auck) DPhil(Waikato) DipBusAdmin, C/- DSIR Chemistry, PO Box 2224, Auckland (Scientist, Official Racing Ana), M'74
- BEST, Philip Graham**, BSc, Dept Of Statistics, Private Bag, Wellington (Marketing Manager), F'88 M'79
- BETTANY, Bruce Lindsay**, NZCS MSc(Hons)(Auck), NECAL Dept Of Health, 2 Edenvale Road, Mt Eden, Auckland (Scientist), M'82
- BETTS, Anthony John**, MSc(Hons) PhD(Auck), Industrial Develop Auckland, DSIR, Private Bag, Auckland (Scientist), M'82
- BETTY, Stewart Morris**, BSc Dip Ind Chem, Skellerup Rubber Manufact Ltd, PO Box 19-555, Christchurch (Managing Director), F'68 M'52
- BHULA, Rajumati**, BSc(Hons)(Well), Dept Of Inorganic Chemistry, University Of Oxford, United Kingdom (PhD Student), M'87
- BIBBY, David Michael**, BTech(Hons) PhD(Loughborough), DSIR Chemistry, Private Bag, Petone (Group Manager), F'91 M'76
- BILLCLIFF, John Shaw**, BSc(Hons)(Otago), Otago Boys' High School, Dunedin (Head Of Science), F'84 M'76
- BILLINGHURST, Mervyn Warren**, MSc(Auck) PhD(McMaster), Dept Of Nuclear Medicine, Health Sci Cent, Winnipeg, Manitoba, Canada (Director Of Radiopharmacy), M'68
- BINGHAM, Alistair Gavin**, BSc(Hons) PhD(Massey), DSIR Chemistry, NECAL Lab, 17 Kelly St, Mt Eden, Auckland (Scientist), M'87
- BIRCH, Edward John**, NZCS BSc(Hons) PhD(Massey), Dept Of Consumer Sciences, Univ of Otago, PO Box 56, Dunedin (Senior Lecturer), M'77
- BLACKETT, Barry Neville**, BSc(Hons) PhD(Cant), BPOil (NZ) Ltd, PO Box 892, Wellington (Technical Services Manager), M'83
- BLACKIE, William John**, MSc FRSC CChem, Flat 2, 47 Memorial Avenue, Fendalton, Christchurch (Retired), F'35 M'33
- BLACKMAN, John Gary**, MSc PhD(NZ), Dept Of Pharmacology, Medical School, Otago Univ, PO Box 913, Dunedin (Associate Professor), F'77 M'56
- BLAIKE, Frances Helen**, Levin Hort Research Centre, Private Bag, Levin, S'89
- BLAKIE, Donald James**, NZCS, Cadbury Confectionery Ltd, PO Box 890, Dunedin (Quality Assurance Supervisor), M'87
- BLAITNER, Nicole**, Biochem Dept, Vict University, PO Box 600, Wellington (Student), S'88
- BLAITNER, Regine**, DipChem(Switzerland) PhD(Well), DSIR Chemistry, Private Bag, Petone (Scientist), M'83
- BLAZEY, Neil David**, BSc(Hons)(Well), Protein Tech Inc, 3629 Westwind, Boulevard, Santa Rosa, CA95403, United States Of America (Chief Chemist), M'84
- BLINCOE, Shane Nicholas**, 34 Newmark Street, Bishopdale, Christchurch, S'91
- BLOOM, Harry**, PhD(Lond) DSc(Melb) DIC, 15 Quom Street, Sandy Bay, Tasmania, Australia 7005 (Emeritus Professor), F'60 M'48
- BLOOMFIELD, Villiam**, 51 Luke Street, Otahuhu, Auckland (Student), S'89
- BLUCK, Ross Steele**, MSc, Mobil Oil NZ Ltd, PO Box 2497, Wellington (Technical Manager), M'63
- BLUNT, John Wilson**, BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, Christchurch (Reader), F'79 M'70
- BODDY, Ian Kenneth**, MSc PhD(Auck), University Chemical Lab, Cambridge Univ Lensfield, Cambridge CB2 1EW Uk (Post-Doctoral Fellow), M'86
- BODY, Denis Roger**, MSc(NZ), 63 Wirikiwhi Crescent, Palmerston North (Consultant), F'87 M'63
- BOLAND, Michael John**, BSc(Hons) PhD DipMgt, NZ Dairy Research Institute, Private Bag, Palmerston North, M'89
- BOLLARD, Edward George**, CBE BSc PhD(Cant) DSc(HonCausa)(Auck) FRSNZ, 22 Dunkerron Avenue, Epsom, Auckland (Retired), HonF'82 M'53
- BOND, Michael Anthony**, MSc(Hons)(Well) BBS(Massey), NZ Dairy Board, PO Box 417, Wellington (Development Manager), F'81 M'66
- BONIFACE, Suzanne Margaret**, MSc PhD(Auck), 6 Halsey Drive, Lynfield, Auckland (Housewife), M'77
- BOOTH, John Herbert**, NZCS NZIM, Cadbury Schweppes Hudson Ltd, PO Box 890, Dunedin (Production Manager), A'84
- BORREN, Albert Marinus**, Chem Doctorandus(Utrecht), Borren Metal Forming Ltd, 8 Sheffield Street, Paraparaumu (Retired), M'63
- BORTHWICK, Edwin Sloan**, MSc(NZ) CChem MRSC, 11 Given Street, Havelock North, Hawkes Bay (Retired), M'36
- BOSMA, Grant Marcellus**, BSc, Labtech Service Ltd, Private Bag, New Plymouth (Laboratory Manager), M'86
- BOSTON, Grant Douglas**, BSc(Hons)(Cant), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Officer), M'87
- BOULTON, Leslie Howard**, MSc(Hons)(Auck) MICorr MRSc/CChem, DSIR Industrial Devel (Auck), PO Box 2225, Auckland (Project Manager (Corrosion)), F'77
- BOURKE, Bernard John**, BSc Post-Grad DipSci(Otago), Trigon Engineering Ltd, Private Bag, Hamilton (General Manager), M'74
- BOUWMEESTER, Michael John**, NZCS, W Grayson & Associates Ltd, PO Box 12-545, Penrose, Auckland (Group Manager), M'88
- BOWLES, John Cameron**, MSc(NZ) MedAdmin(Aust) BSc MCIT, Act Institute Of Tafe, PO Box 826, Canberra Act 2601, Australia (Product Manager (Transport)), M'72
- BOWMAKER, Graham Arthur**, BSc(Hons) PhD(Sydney) ARACI, Chem Dept, Univ of Auckland, Private Bag, Auckland (Associate Professor), F'82 M'70
- BOWMAN, Nigel John**, MSc(Cant), Fermentation Industries, PO Box 2945, Christchurch (Plant Manager), M'85
- BOYD, Peter David William**, BSc(Hons)(Tas) PhD(Monash), Chem Dept, Auckland University, Private Bag, Auckland (Senior Lecturer), F'85 M'79
- BOYER, Keith Graeme**, MSc(Auck), Epiglass (NZ) Ltd, Private Bag, Rosebank, Auckland (Chief Chemist), M'76
- BOYES, Glenn Martin**, NZCS, Chemistry Department, Auckland Univ, Private Bag, Auckland (Technician), A'83
- BRADLEY, Mark Philip**, BSc PgdipSci PhD(Otago), CSIRO Div Wildlife & Ecology, PO Box 84, Lyneham, Canberra Act 2602 Australia (Senior Research Scientist), M'83
- BRAGGER, Judith Mary**, 5 Ashbury Avenue, Hamilton, M'89
- BRAITHWAITE, Andrew Castley**, PhD(NZ) BSc MSc, Chemistry Divn DSIR, PO Box 2224, Auckland (Industrial Chemist), M'87
- BRASCH, Donald James**, MSc(NZ) PhD(Queens), Chemistry Dept, Otago Univ, PO Box 56, Dunedin (Associate Professor), F'77 M'59
- BRASELL, Douglas Frank**, BSc, Dulmison Inc, 1725 Purcell Rd, Lawrenceville, Georgia 30243, United States of America (President), M'78
- BRASELL, Maurice Robin**, MSc(Cant) DipBusAdmin DipSocSci(Econ), Electricorp Production, PO Box 1019, Wellington (Env Advisor), M'80
- BREASTRUM, Timothy**, 173b Fergusson Street, Palmerston North, S'89
- BRENNAN, Alan Lawrence**, NZCS BSc, Chemistry Dept, Univ of Waikato, Private Bag, Hamilton (Snr Technical Officer), A'80
- BRENT, Gary Colin**, MSc(Auck), Wash Systems Ltd, PO Box 21-342, Henderson, Auckland (Managing Director), M'79
- BRIDLE, Janet Hazel**, BSc(Hons), Glaxo NZ, Private Bag, Palmerston North (Development Analyst), G'90
- BRIENNE, Stephane Henri**, MSc(Chem), State Highway 2, RD 2, Helensville, Auckland (Assistant Lecturer), G'87
- BRIGGS, Paul Murray**, NZCS, Pacific Steel Ltd, Favona Rd, Otahuhu Auckland (Chemist), M'87
- BRIGHTWELL, R W**, BSc, Cent Lab, Lion Breweries Ltd, PO Box 23, Auckland (Central Laboratory Manager)
- BRIMBLE, Margaret Anne**, MSc(Auck) PhD(Sthmp) GradRSC, Chemistry Dept, Massey University, Private Bag, Palmerston North (Lecturer In Organic Chemistry), M'86
- BRIMBLE, Mark Timothy**, MSc PhD(Auck), Glaxo (NZ) Ltd, Private Bag, Palmerston North (Development Analyst), M'87
- BRITAIN, Judith Mary**, BSc(Hons) PhD(East Anglia), Chemistry Dept, Univ of Auckland, Private Bag, Auckland (Tutor), M'79
- BRITAIN, Thomas**, BSc(Hons) PhD(East Anglia) FRSC CChem, Dept Of Biochemistry, Univ of Auckland, Private Bag, Auckland (Associate Professor), F'84 M'79

- BROCKETT, Gary**, BSc, Allens United Waste Disposals, PO Box 58-032, Auckland (Technical Manager), M'83
- BRODIE, Andrew Martin**, BSc(Hons) PhD(Cant), Dept Of Chem/Biochem, Massey University, Palmerston North (Associate Professor), F'80 M'71
- BROOKER, Edgar George**, MSc PhD(NZ), 102 South Road, New Plymouth (Retired), F'85 M'48
- BROOKER, Sally Anne**, BSc (Hons)(Cant), Dept of Chemistry, Otago Univ, PO Box 56, Dunedin (PhD Student), G'87
- BROOKSBY, Paula Ann**, BSc PGDipSci, Chemistry Dept Univ Of Otago, PO Box 56, Dunedin (PhD Student), A'89
- BROTHERS, Penelope Jane**, MSc(Auck) PhD(Stanford) BSc, Chem Dept, Univ of Auckland, Private Bag, Auckland (Lecturer), M'87
- BROUGHTON, George Wilfred**, BSc FNZIM, 35 Murray Street, Dunedin (Retired), F'81 M'46
- BROWN, Desmond Goble**, MSc(NZ), 1/310 Bucklands Beach Road, Bucklands Beach, Auckland, F'83 M'57
- BROWN, Helen Margaret**, MSc(Cant), Building Res Assn Of NZ, Private Bag, Porirua (Res Scientist), G'86
- BROWN, Ian William Murray**, MSc PhD(Well), DSIR Chemistry, Private Bag, Petone (Scientist), M'79
- BROWN, Mark Langtry**, BSc MSc, C/- Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (PhD Student), S'91
- BROWN, Mark Alan**, BSc(Hons), C/- School Of Biological Sci, Vict University, PO Box 600, Wellington (Student PhD), A'89
- BROWN, Warren Noel**, BSc, Farmers' Fertiliser Ltd, PO Box 105, Morrinsville (Production Supervisor), M'80
- BRUCE, Leonard Wainwright**, BSc, 116 Korokoro Road, Petone (Retired), M'51
- BRUNTON, Wayne George**, BSc DipBusAdmin MIFST AMNZIM, Pastoral Foods Ltd, PO Box 162, Eltham, New Plymouth (General Manager), M'83
- BRYSON, Warren Glenn**, BSc(Hons) MSc(Dist) PhD(Otago), C/- WRONZ, Private Bag, Christchurch (Senior Scientist), M'77
- BUCHANAN, Hilaire**, BSc(Hons)(Otago) MNZIFST, Cadbury Confectionery Ltd, 280 Cumberland Street, Dunedin (Development Officer), M'82
- BUCKINGHAM, David Anson**, MSc(NZ) PhD(Anu) FRACI FRSNZ, Chemistry Dept, Otago University, PO Box 56, Dunedin (Professor), F'78
- BUISSON, David Huon**, MSc(Hons) PhD(Auck) SM(Mgmt)(Mit) BSc, Consumer & Applied Sciences, University Of Otago, PO Box 56, Dunedin (Professor/Chairman), F'81 M'71
- BULL, Lynne**, BSc, Avonside Girls' High School, Christchurch (Teacher), M'77
- BURGGRAAF, Shane**, BSc DipTeach, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (MSc Student), S'91
- BURKE, Shane Lloyd**, BSc, SGS NZ Ltd, PO Box 657, New Plymouth (Chemist Surveyor), G'88
- BURNETT, Kenneth Robert**, BAgSci(DairyTech) AFNZIM, PO Box 6495, Wellesley Street, Auckland (Consultant), F'77 M'59
- BURNS, Christine Mary**, NZCS, 65 Goodall Street, Hillsborough, Auckland (Chemist), S'89
- BURNS, Donald Jeffrey Waugh**, BSc(Hons)(Cant) PhD(Auck), DSIR Fruit and Trees, Private Bag, Auckland (Group Manager Science), F'88 M'79
- BURNS, Gary Robert**, MSc PhD(Well), Chemistry Dept, Victoria Univ, PO Box 600, Wellington (Reader), M'62
- BURNS, Janet Raby**, MSc(Hons) PhD(Well) DipEd BSc, Education Department, Massey University, Palmerston North (Lecturer), M'81
- BURNS, Neil George**, MSc(Well), 93 Kahu Rd, Paremata (Technical Director), M'66
- BURTON, Neil Harvey**, NZCS NZOQA CERT, 49 Maratuhu Street, New Plymouth (Production Chemist), T'85
- BUTCHARD, Joseph Anthony**, MSc(Cant), Canterbury Frozen Meat Co Ltd, PO Box 30, Ashburton (Plant Manager), F'86 M'72
- BUTCHER, Jennifer Ann**, BA, 16 Wallace Street, Heme Bay, Auckland (Secondary Teacher), M'87
- BUTCHERS, John Barnard**, MSc(NZ), 15 Onehuka Road, Lower Hutt (Retired), F'79
- BUTLER, Catherine**, C/- Chemistry Department, Univ Of Auck, Private Bag, Auckland, S'90
- BUTLER, Graham Wesley**, MSc(Auck) Fildr(Lund) FRSNZ FNZIAS QSO FNZIAGSci, 58 Churton Drive, Wellington (Retired), F'63 M'54
- CALDER, Philip Charles**, BSc(Hons)(Massey) PhD(Auck), Biochem Dept, Univ Of Oxford, South Parks Rd, Oxford, OX1 3QU United Kingdom (Nuffield Med Res Fellow), M'86
- CALVERT, David John**, NZCS, Chemistry Department, Univ Of Auckland, Private Bag, Auckland (Technician), M'83
- CAMBIE, Richard Conrad**, MSc PhD(NZ) DPhil(Oxon) DSc(Auck) FRSNZ, Chemistry Department, Auckland Univ, Private Bag, Auckland (Professor Of Organic Chemistry), F'64 M'57
- CAMBRIDGE, Allan Charles**, BSc BPharm MPS MRPharmSoc, 68 St Agnells Lane, Hemel Hempstead Herts, HP2 7AY England (Senior Management Consultant)
- CAMPBELL, Arthur Derek**, MSc PhD(NZ) OBE, 4 Dudley Place, Dunedin (Retired), HonF'88 F'62
- CAMPBELL, Alistair Shand**, MSc(Hons)(NZ) PhD(Cant), Lincoln University, PO Box 52, Canterbury (Reader In Soil Science), F'78
- CAMPBELL, Dianne Raewyn**, BSc, Otago Regional Council, Private Bag, Dunedin (Laboratory Officer), M'82
- CAMPBELL, Graeme George**, BSc, Shell Chemicals NZ Ltd, PO Box 2091, Wellington (Trading Manager), M'83
- CAMPBELL, Leslie Allan**, DipPharm, Hi-Tech Detergents Ltd, 4-7 Kells Place, Frankton (Director - Self Employed), M'91
- CAMPBELL, Stuart James**, BSc MSc(Hons)(Auck), Dominion Breweries Waitemata, PO Box 22-010 Otahuhu, Auckland (Group Chemist), G'85
- CANDY, Bruce James**, MSc(NZ), Massey High School, Private Bag, Massey, Auckland (Head Of Science Dept), M'60
- CANT, Philip Arthur Euan**, BSc(Hons) PhD(Cant), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Officer), M'74
- CARADUS, Mary Claire**, BSc, 172 Waiwhetu Road, Lower Hutt (Retired), M'79
- CARLISLE, Valerie Frances**, MSc PhD(Auck), 9 Helvetia Drive, Browns Bay, Auckland (Retired), M'74
- CARR, Malcolm David**, MSc(Well) PhD(Lond), Chemistry Dept, Univ Of Waikato, Private Bag, Hamilton (Associate Professor), F'82 M'64
- CARR, Robert Melville**, MSc PhD(NZ) DIC, Chemistry Dept, Otago University, PO Box 56, Dunedin (Senior Lecturer), F'77 M'59
- CARROLL, Neil Stephen**, BSc(Hons)(Well), Dept Of Pharmacy, CIT, Private Bag, Trentham PO (Tutor), M'82
- CARTER, Sally**, 12 Mt Pleasant Road, Mt Eden, Auckland (Student), S'89
- CARTNER, Antony**, PhD, Chem Dept, Waikato Univ, Private Bag, Hamilton (Lecturer)
- CASH, Suzanne**, 15 Waterloo Crescent, Palmerston North, S'90
- CAUGHLEY, Brian Peter**, MSc(Hons)(Well), Wellington Polytechnic, PO Box 756, Wellington (Senior Lecturer), M'75
- CAUSER, Joy Elizabeth**, MSc(Well) DipTchg, Christchurch Polytechnic, PO Box 22-095, Christchurch 1 (Tutor), M'88
- CAVANAUGH, Mark Andrew**, NZCS(Chem), 2/24 Blaxland Road, Bellevue Hill NSW 2023, Australia (Chemistry Technician), M'89
- CAWLEY, Robert William**, MSc(NZ), 71 Wiggins Street, Sumner, Christchurch (Retired), F'64 M'49
- CHANG, Hi Mui**, MSc(Otago), Univ of Alberta, Edmonton, Alberta (Research Assistant), M'81
- CHANG, Nyuk Vun Ronald**, MSc(Otago), 11523-51 Avenue, Edmonton Alberta, Canada (Petroleum Engineer), M'81
- CHAPMAN, Lewis Peter James**, MSc(NZ) DBA, 54 Bedford Street, Wellington (Retired), M'48
- CHAPPELL, Peter Lyndsey**, MSc(NZ) FNZIFST, Kuaotunu, RD 2, Whitianga (Retired), M'51
- CHARLESTON, Alan Gordon**, NZCS Cop(Min) NZDipSci, NZ Fibreglass, PO Box 12069 Penrose, Auckland (Plant Chemist), M'80
- CHARLTON, Philip Lewis Raymond**, BSc, 29 Beach Road, Suva, Fiji (Retired), M'39
- CHEESEMAN, Trevor Percival**, MSc PhD(Auck) BD(Lond) AKC, King's College, PO Box 22-012, Otahuhu (School Chaplain), M'62
- CHETTLEBURGH, V J**, Assistant Registrar, Massey University, Palmerston North
- CHEW, Andrew Chee Kong**, MSc, Atherton Chemicals Pty Ltd, PO Box 387 Fairfield NSW, 2165 Australia (Managing Director), M'77
- CHILDS, William Edward**, BSc, Dulux New Zealand Ltd, PO Box 31048, Lower Hutt (Technical Manager), M'50
- CHIN, Anthony Paul**, BSc, Emoleum Neuchatel Ind Ltd, PO Box 12-062 Penrose, Auckland (Sales Chemist), M'86
- CHIN, Phillip**, Biotechnology Divn DSIR, Private Bag, Palmerston North (Technician)
- CHOOI, Siew Yuen**, BSc(Hons) PhD(Otago) DipEd AMIC, Guthrie Research Chemara, PO Box 28, Jalan Sungei Ujong, Seremban, Malaysia (Senior Manager), M'69
- CHOONG, Yee Soon**, MSc PhD(Otago) FICA, Pathology Dept, Medical School, Univ of Auckland, Private Bag, Auckland (Research Fellow), M'73
- CHRISTIAN, David Frank**, MSc PhD(Auck), International Paint, 18 Hanover Sq London, W1A 1AD United Kingdom (Market Mngr Coil Coatings), M'76
- CHRISTMAS, Michael John**, MSc(Cant), Skellerup Polymer Products, PO Box 19-555, Christchurch (Technical Manager), M'84
- CHUAH, Poay Huang**, 25 Brodie Street, Upper Riccarton, Christchurch, S'91
- CIBULSKIS, Jurgis Arimantas**, BSc ANZIM DipIndAdmin, Chemby Vinyl, PO Box 12-741, Penrose, Auckland (Manufacturing Manager), M'67
- CLARE, Norman Trevor**, MSc(NZ), 24 Hillsborough Terrace, Hamilton (Retired), F'47 M'35

- CLARIDGE, Rodney Francis Carre**, BA(Cant) MSc(NZ) PhD(Cant), Chemistry Dept, Canterbury Univ, Private Bag, Christchurch (Reader), F76 M'69
- CLARK, Alan Geoffrey**, MSc PhD(Well), Biochemistry Department, Victoria Univ, PO Box 600, Wellington (Reader), F'80 M'72
- CLARK, Bruce Michael**, MSc(Cant), Chemistry Department, Canterbury Univ, Private Bag, Christchurch (Technician), G'87
- CLARK, Christopher John**, MSc(Auck) PhD(Cornell), Ruakura Agric Res Centre, Private Bag, Hamilton (Scientist), M'75
- CLARK, George Raymond**, MSc PhD(Auck), Chemistry Department, Auckland Univ, Private Bag, Auckland (Associate Professor), F'82 M'74
- CLARK, Ian Rex**, NZCS, NZ Refining Co, PO Box 44, Whangarei (Head Of Laboratory), A'79
- CLARK, Jack**, 33 Kaikoura St, Maupuia, Wellington 3 (Retired)
- CLARK, Lorain**, 3 Millard Street, Hillsborough, Auckland, S'90
- CLARK, Michael Denis Thomas**, ATSC BSc ANZIM DipTchg, Chch Boys' High School, Straven Rd, Christchurch 1 (Teacher), A'83
- CLARK, Percival James Comfort**, MSc(NZ), 57 Ranui Terrace, Linden, Wellington (Retired), HonF'81 F'61
- CLARKE, Neil Harvey**, BFoodTech(Massey) MS(Utah) PhD(Massey), Pacific ENZymes Ltd, PO Box 1496, Hamilton (Chief Executive), M'74
- CLARKSON, Thomas Stephen**, MSc PhD(Well), NZ Meteorological Service, PO Box 722, Wellington (Manager Atmospheric Physics), M'69
- CLINTON, Owen Edward**, -, 170 Bankwood Road, Fairfield, Hamilton (Retired), M'76
- CLOSE, Murray Edwin**, BSc(Hons)(Cant) MEnvSci, DSIR Geology & Geophysics, PO Box 29-181, Christchurch (Scientist), M'82
- COCKBURN, Bruce Lindsey**, MSc(NZ), Rongotai College, PO Box 14-063, Wellington (HOD Science), F'77 M'58
- CODDINGTON, Jan Marie**, BSc(Hons) PhD(Monash), Chemistry Dept, University Of Auckland, P B Auckland (Lecturer), M'87
- COLBY, Robin Ellis**, BSc, PO Box 683, Queenstown (Retired), M'69
- COLDHAM, Jennifer Kathleen Joan**, MSc(Hons)(Auck), Onehunga High School, Pleasant St, Onehunga Auckland (SecSchool Teacher), G'83
- COLEBROOK, Lawrence David**, MSc PhD(NZ), Chem Dept Concordia Univ, 1455 De Maisonneuve Blvd West, Montreal Canada H3G 1M8 (Professor), M'59
- COLL, Richard Kevin**, BSc PhD(Cant), Sch Of Pure & Applied Sciences, Univ Of South Pacific, Suva, Fiji (Lecturer), M'83
- COLLIER, James Bruce**, BSc, NZ Cement Holdings Ltd, PO Box 13035, Green Island, Dunedin (Production Chemist), M'81
- COLLIER, Janet Mary**, BSc(Hons)(Well), Dept of Chemistry, Univ of West Aust, Nedlands, Perth, Australia (Analytical Chemist), M'89
- COLLIER, Robert John**, BSc(Hons)(Well), Dept of Chemistry, Univ of West Aust, Nedlands, Perth, Australia (PhD Student), G'87
- COLLIER, Susan Jane**, BSc(Hons), Chem Dept, Victoria University, PO Box 600, Wellington (Student), S'88
- COLLIER, Wendy Ann**, BSc(Hons)(Well), Grasslands Divn DSIR, Private Bag, Palmerston North (Science Technician), G'87
- COLLINGS, Alan**, Zenith Technology Corp Ltd, 156 Frederick Street, Dunedin, M'89
- COLLINGWOOD, Trevor Neale**, MSc(Waikato), Biology Department, Univ Of Waikato, Private Bag, Hamilton (DPhil Student), G'85
- COLLINS, Mel**, NZCS Equivalent (TC As Lab Technician), Tablet Manufacturers, Private Bag, Takapuna, Auckland (Analytical Chemist), M'90
- COLLINS, Susan Patricia**, BSc BE(Chem & Mats), Chemical & Materials Dept, Auckland Univ, Private Bag, Auckland (Technical Officer), G'89
- COLLINS, Terrence James**, MSc(Hons) PhD(Auck), Chem Dept Carnegie Mellon, University Pittsburgh PA, 15213 United States of America (Asst Professor Of Chemistry), M'79
- CONE, Edgar**, MSc(Lond) DIC ARCS, 57 The Drive, Tawa, Wellington (Retired), M'39
- CONNOR, Paul**, C/- Chemistry Department, Otago Univ, PO Box 56, Otago, S'90
- COOK, Donald Ferguson**, MSc PhD(Well), Tairāwhiti Polytechnic, PO Box 640, Gisborne (HOD Technical), M'69
- COOKE, Alan**, BSc LRSC, Cawthron Institute, Private Bag, Nelson (Consultant/Contractor), F'77 M'70
- COONEY, Ralph Paul**, BSc(Hons) PhD(Q'land) FRACI, Chem Dept, Univ of Auckland, Private Bag, Auckland (Professor), F'86
- COONEY, Terry**, BSc MSc PhD Biochemistry, C/- Analytical Services Ltd, Private Bag, Cambridge (Chief Analyst), M'90
- COOP, Ian Edward**, MSc(NZ) DPhil(Oxon), 4 Rd, Christchurch (Retired), F'60
- COOPER, David Edward**, MSc(NZ), PO Box 62, Mangawhai, Northland (Consulting Environ Chemist), F'79 M'56
- COPE, Barry Charles**, BSc(Zoo) MSc Cop, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (PhD Student), S'91
- COPE, David McDonald**, MSc(Waikato) PhD(Auck) BSc, 3 Ashdown Way, Silverstream, Upper Hutt (Policy Analyst), M'79
- COPESTONE, John Charles**, NZCS, Petrochem, PO Box 439, Hawera (Chief Chemist), A'87
- CORBETT, Robert Edward**, MSc(NZ) PhD(Camb) FRSNZ, 106 Taipari Street, Maungatapu, Tauranga (Emeritus Professor), HonF'83 F'60
- CORNISH, Barry Donald**, PhD(Well), ISSU, Dept of Justice, Bowen Street, Wellington (System Controller), M'84
- CORRY, Norman Malcolm**, BSc(Chem), 1 Richard Avenue, Bucklands Beach, Auckland (Technical Services Manager)
- COSGROVE, Mark McElroy**, MSc DipEdAdmin(Well) BSc(Cant) DPhil(Waik), Univ Of Tech Sydney, PO Box 123 Broadway, New South Wales 2007 (Associate Professor), F'85 M'64
- COUCH, Ronald Alexander Pyfe**, MSc PhD(Auck), Toxicol Lab, Clinical Chem, Main Bldg, Auck Hospital, Private Bag, Auckland (Toxicologist), M'69
- COWAN, Donald Arthur**, MSc DPhil(Waikato) BSc, Dept Of Biochemistry, Univ College London, Gower St, London WC1E 6BT UK (Lecturer), M'82
- COWELL, Bernard James**, NZCS MSc(Auck) BSc, Triboard Division, Juken Nissho Ltd, Kaitaia (Chief Chemist), M'88
- COWIE, Maureen Grace**, BSc, 31 Hamilton Avenue, Christchurch (Retired), M'83
- COWLES, Richard John**, MSc(Cant), DowElanco(NZ) Ltd, Private Bag, New Plymouth (Scientific Officer), M'77
- COWPERTHWAIT, Thomas Colin**, Holt Lloyd Ltd, PO Box 11-049 Ellerslie, Auckland (Company Chemist), M'69
- COXON, James Morriss**, MSc PhD(Cant) BSc FRSNZ, Chemistry Department, University Of Canterbury, Christchurch (Reader), F'78 M'67
- CRAIG, John Thorburn**, BSc PhD(Edin), 3 Goddard Grove, Churton Park, Wellington (Senior Lecturer), F'74 M'63
- CRAWFORD, Karl Francis Michael**, BSc Post-Grad Dip Chem(Otago), Unilever (NZ) Ltd, Private Bag, Petone (Laboratory Supervisor), M'88
- CREAMER, Lawrence Kenneth**, MSc PhD(Cant), NZ Dairy Research Inst, Private Bag, Palmerston North (Senior Chemist), F'74 M'61
- CRÉSSEY, Peter John**, BSc(Hons)(Cant), Wheat Research Institute, PO Box 29-182, Christchurch 4 (Scientist), M'86
- CRESSWELL, Kevin John**, MSc(Auck), Bay Milk Products, Private Bag, Edgcombe (Laboratory Manager), M'82
- CRESSWELL, Roger**, C/- Chem/Biochem Dept, Massey Univ Private Bag, Palmerston North, S'90
- CRETNEY, John Robert**, BSc(Hons) PhD(Cant), Nelson Polytechnic, Private Bag, Nelson (Deputy Principal), F'83 M'73
- CRONSHAW, David Robert**, BSc Dip Tchg, Ministry Of Forestry, Private Bag, Rotorua (Asst Teacher), M'90
- CROOK, Fred**, BSc(Hons)(Manch), Morrison Printing Inks, Box 1767, Auckland (Technical Manager), M'85
- CROPP, Peter Laurence**, MSc PhD(Well), DSIR Chemistry, PO Box 29-181, Christchurch (Scientist), M'71
- CROSS, Donald John**, BSc, Pleasant Point High School, Halstead Road Pleasant Point, South Canterbury (HOD Science), M'75
- CROSS, Daryl J T**, 1/4 Wairiki Rd, Balmoral, Auckland (Student), S'89
- CROW, Kathryn Elizabeth**, BSc(Hons) PhD(Massey), Dept Of Chem/Biochem, Massey University, Palmerston North (Senior Research Officer), M'75
- CRUMP, Michael Edward**, NZCS, Geothermal Research Centre, DSIR Wairakei, Private Bag, Taupo (Technical Officer), M'89
- CRUMP, Richard Thomas**, LRSC, 19 Porto Bello Place, Torbay, Auckland (Technical Manager), M'80
- CULBERT, Shayne**, C/- Chemistry Dept, Otago University, Otago, S'90
- CUMMINS, Nigel Herbert Overton**, BSc, 47 Mt View Drive, Rotorua (Retired), M'73
- CUNNINGHAM, Christopher William**, National Mutual Building, 70 The Terrace Poutapeta 3943, Wellington, M'89
- CURNOW, Owen John**, BSc(Tech) MSc(Wai) PhD(Mich), Dept of Chemistry, Dartmouth College, NH03755, United States of America (Research Associate), M'91
- CURTIS, Linda Susan**, Unilver, Private Bag, Petone, S'87
- CURTIS, Neil Ferguson**, MSc PhD(NZ), Chemistry Dept, Victoria Univ, PO Box 56, Wellington (Professor), F'78 M'65
- CUTFIELD, John Franklin**, MSc PhD(Auck), C/- Biochemistry Dept, Otago University PO Box 56, Dunedin (Senior Lecturer), F'86 M'69
- CUTHBERTSON, Alison Macauley**, MSc(Waikato), School Of Science, Univ Of Waikato, Private Bag, Hamilton (DPhil Student), M'87
- CUTTEN, Anthony Eliot Cargill**, MSc(Cant) PhD(Anu), Sandos Pharma Ltd, PO Box 56-055 Dominion Rd, Auckland 4 (Pre-Marketing Manager), M'72
- DACOMBE-BIRD, Paul William**, BSc(Hons)(Biochem)(Well), Dulux Divn Of ICI NZ Ltd, PO Box 30-749, Lower Hutt (Quality Control Supervisor), M'84
- DACRE, Jack Craven**, BSc MSc(NZ) PhD DSc(Lond) FATS, 7209 East Sundown Court, Frederick Maryland, 21702-2950 USA (Consultant Toxicologist), F'58 M'45
- DALZELL, Kerry Wayne**, MSc(Cant) FTSC, Levene Paint Manufacturing Ltd, PO Box 61-131, Otara, Auckland (Technical Manager), M'73
- DANIEL, Roy McIver**, BSc(Hons) PhD(Leicester), School Of Science, Waikato Univ, Private Bag, Hamilton (Professor/Dean of Science), F'82 M'76

- DANIELL, Richard**, Welcome NZ Ltd, PO Box 22-258, Otahuhu, Auckland (Student), S'89
- DANSTED, Erik**, BSc(Hons) PhD(Cant), Dow Chemical NZ Ltd, PO Box 8513 Symonds St, Auckland (Marketing Manager), M'68
- DASENT, Wilfred Effingham**, MSc(NZ), 19 Nottingham St, Karori, Wellington (Retired), F'71 M'51
- DAVENPORT, Sally Jane**, BSc(Hons) PhD, Chem Dept, Victoria University, PO Box 600, Wellington (Lecturer, Sci, Tech & Managemt), M'86
- DAVEY, Colin Lester**, MSc(Otago) PhD(Cant), 9 Claude St, Hamilton (Retired), HonF'88 F'73
- DAVIDSON, Michael Thomas**, NZCS, Superintendant Ardmere Water, Treatment Stat PO Box 83, Clevedon South Auckland (Works Chemist), M'88
- DAVIES, Alma Margaret**, MSc(NZ), 61 Essex Street, New Plymouth (Retired), M'64
- DAVIES, Edwin Braithwaite**, MSc(NZ) PhD(Aberd) ARSC, 104 Mahoe Street, Hamilton (Retired), HonF'81 F'52
- DAVIS, Brian Reeve**, DSc(Auck) PhD(NZ) DPhil(Oxon), Chem Dept, Auckland University, Private Bag, Auckland (Professor), F'67 M'55
- DAVIS, Howard Haupai Joseph**, BSc, 3/19 Ellerslie Park Rd, Ellerslie, Auckland (Metal Analyst), M'89
- DAWSON, Bernard**, Forest Research Institute, Private Bag, Rotorua, M'90
- DAWSON, Peter John Leslie**, BSc, Dawson Laboratories Ltd, PO Box 178, Hamilton (Laboratory Manager), M'68
- DAY, Catherine**, Chem/Biochem Dept, Massey Univ Private Bag, Palmerston North, S'90
- DAY, Grant James**, Lab Chemist, Cant Frozen Meat, PO Box 2, Belfast, Christchurch 8020, A'90
- DE BOER, Michelle Ann**, 382 Leith Street, Dunedin, S'89
- DE MORA, Stephen John**, BSc(Wales) PhD(UBC) MRSC CChem, Dept Of Chem, Univ of Auckland, Private Bag, Auckland (Senior Lecturer), F'90 M'84
- DE RAADT, Anna**, BSc BSc(Hons)(Well), 23 Te Pari Pari Rd, Pukerua Bay, Wellington (PhD Student), G'85
- DEACON, Nicola Ann**, BSc, Forest Research Institute, Private Bag, Rotorua (Science Technician), G'87
- DEED, Terence Charles**, BSc, NZFP Pulp & Paper Ltd, Private Bag, Tokoroa (Chemist), G'86
- DEMCHENKO, Zosim**, Ing Chemist Applied Sc(Kharkov), 16 Samoa Street, Kilbirnie, Wellington (Retired), M'53
- DEMCHENKO, Zinaida**, Ingchemist(Kharkov), 16 Samoa Street, Kilbirnie, Wellington (Retired), M'53
- DEMEKE, Getahun**, BSc DipEng(Anal & Envir), Chemistry Laboratory, NZ Steel Ltd, Private Bag, Auckland (MSc Student), G'86
- DEMPSEY, Basil John**, -, 18 Picton Street, Papatoetoe (Executive Director), M'63
- DEMPSEY, Victor Joseph**, BSc, Artec Abrasives, PO Box 100-646, Auckland (Technical Manager), M'85
- DENNE, Agnes Mary**, BSc(Hons) DipTchg(Lond) DipEd(Manc), 19 Crawford Green, Miramar, Wellington (Retired), M'75
- DENNIS, Rodney Arthur**, BAgSci(Dairy Tech), Intl Dairy Consultants Ltd, 24 Milton Road, Orewa (Consultant), M'57
- DENNY, William Alexander**, MSc PhD DSc(Auck) FRSNZ, Cancer Research Lab, Auckland Univ, Private Bag, Auckland (Director, Cancer Research Lab), F'81
- DENT, Barry Roy**, BSc(Hons) PhD(Well), DSIR Chemistry, Private Bag, Petone (Scientist), M'85
- DENTON, Gerard Martin**, BSc, St John's College, PO Box 4008, Hastings (Teacher), M'82
- DEVA, Manher Magani**, MSc Dipsci(Otago), BJN Holdings, Rosebank Rd, Avondale, Auckland (Industrial Chemist), M'86
- DEVERALL, Terence Harold**, 20 South Street, Tawa, S'89
- DEVEREUX, Ian**, MSc(NZ) PhD(Well) AMAusIMM, Rocklabs, PO Box 18142, Glen Innes, Auckland (Managing Director), F'74 M'64
- DEVINE, Carrick Erskine**, MSc(Cant) PhD(Otago), Meat Indus Res Inst Of NZ, PO Box 617, Hamilton (Section Head), F'82 M'65
- DICK, David Andrew**, MSc, 40 Gladstone Road, Dunedin (Retired), M'32
- DICKER, Gordon Leslie**, BSc DipTch, Waimea College, Salisbury Road, Richmond, Nelson (HOD Outdoor Education), M'80
- DICKON, Michael**, BSc(Chem), 34 Thompson Street, Wellington (Student), S'89
- DINGLEY, George**, MSc(NZ), 7 Korokino Road, One Tree Hill, Auckland (Retired), M'40
- DOBBIE, Robert Shedden**, NZCS, 12 Rewa Road, Mt Eden, Auckland (Horticultural Advisor), M'83
- DOBBS, Bruce Richard**, BSc(Chem)(Cant) PhD(Otago) MSc(Biochem)(Lincoln), Surgery Dept Chch Sch Of Med, Christchurch Hospital, Christchurch (Scientific Officer), M'87
- DOEVENDANS, Jannie**, NZCS Chem, PO Box 282, Waiuku, South Auckland, S'90
- DOLAN, Laurence Patrick**, MSc(Hons)(Cant) DipNatRes, Biochemistry Dept, Public Hospital, Private Bag, Christchurch (Soild Waste Planner), M'88
- DOLBY, Rex**, BSc(Hons) PhD(Otago), Invermay Agric Res Centre, Private Bag, Mosgiel (Development Manager), M'73
- DOLBY, Richard Malcolm**, MSc(NZ) PhD(Lond), 136 Te Awe Awe Street, Palmerston North (Retired), F'63 M'48
- DONALDSON, Lisa**, Chemistry Department, Victoria Univ, PO Box 600, WELLINGTON, M'91
- DORMER, Robyn Alethea**, MSc PhD(Auck), 18 Maungakiekie Avenue, Greenlane, Auckland (Part-time), M'73
- DOROFAEFF, Francis Desmond**, BSc, 42 Mahoe Street, Hamilton (Retired), M'47
- DOUCH, Elizabeth Jane Jack**, BSc(Hons)(Well), Wellington Girls' College, Pipitea St, Thorndon, Wellington (Teacher), M'86
- DOUGLAS, Jocelyn Grace**, BSc(Hons)(Otago) DipEd, Christchurch Polytechnic, PO Box 22-095, Christchurch (Assistant Teacher), M'73
- DOWNES, Colin James**, BSc(Hons) PhD(Otago), DSIR Chemistry, Private Bag, Petone (Scientist), M'64
- DOWNES, Malcolm Tredinnick**, NZCS, DSIR Marine & Freshwater Sci, PO Box 415, Taupo (Scientist), M'77
- DOWRICK, Noel Campbell**, BSc DipEdStud DipTchg, Correspondence School, Private Bag, Wellington (Senior Chemistry Teacher), M'84
- DRIESSEN, Joseph Oscar**, 3 Boydfield Street, Wanganui, M'90
- DRYSDALE, Alexander Broadrick**, NZCS DipAg, Snowy Peak Ltd, 2/10 Sheffield Cresc, Christchurch (Director), A'81
- DUDDING, S**, 719 Great North Road, Grey Lynn, Auckland (Msc Student)
- DUFFY, Noel William**, Otago Branch, PO Box 56, Dunedin, S'89
- DUKE, Kevin James**, NZCS(Chem), NZ Aluminium Smelters Ltd, Private Bag, Invercargill (Environmental Specialist), M'78
- DUNBAR, Fraser, C/-** Chemistry Dept, University Of Otago, PO Box 56 Otago, S'90
- DUNCAN, James Francis**, OBE MSc(Mel) MA DPhil DSc(Oxon) MRSC FRACI FRSNZ, COMTECH, PO Box 10-704, Wellington (Emeritus Professor), HonF'87 F'62
- DUNCAN, John Roderick**, MSc(Hons)(Chem) PhD(Auck) FICorr, Building Research Assn, Private Bag, Porirua (Manager, Building Indus Res), F'88 M'73
- DUNCKLEY, James Vivian**, BSc FAACB, PO Box 13, Palmerston, Otago (Retired), M'51
- DUNN, Anthony Russell**, BSc CBC, Chch Polytechnic, Madras St, Christchurch 1, G'83
- DUNNINGHAM, Elizabeth Ann**, BSc(Chem) MSc(Hons)(Chem)(Cant), Forest Research Institute, Private Bag 3020, Rotorua (Scientist), G'89
- DURHAM, Reginald Alexander**, MSc(Hons), 24 Kenny Road, Remuera, Auckland (Retired), F'85 M'48
- DUVE, Ram Narendra**, MSc PhD(Auck), Chemistry Laboratories, Koronivia Research Station, Nausori Fiji (Government Analyst), M'74
- DUXBURY, Mark**, MSc(Hons)(Auck), Auckland Univ Medical School, Greenlane Hosptl, Private Bag, Auckland (Research Technician), G'86
- DYER, Donald Leslie**, MSc(Auck), C/- Rohm & Haas (NZ) Ltd, PO Box 22-220 Otahuhu, Auckland (Safety, Health & Envir Manager)
- EADE, Lloyd Mons**, MSc(Cant), Shell Oil (NZ) Ltd, PO Box 38227, Petone (Chemist), M'85
- EAMES, Alexander Richard**, MA(Hons)(Oxon), Hamilton Boys' High School, Private Bag, Hamilton (Head Of Science), M'75
- EARL, William Brian**, BSc BE(Chem)(Hons)(NZ) PhD(Cant) FICHEM FIPENZ, Dept Of Chemical Engineering, University Of Canterbury, Christchurch (Associate Professor, HOD), F'70 M'62
- EASTEAL, Allan James**, MSc(Auck) PhD(Tasmania), Chem Dept, Univ of Auckland, Private Bag, Auckland (Senior Lecturer), M'66
- EATON, Antony Clifford**, NZCS, Chemistry Division DSIR, PO Box 2224, Auckland (Technician), A'85
- EDDY, Aaron Kyle**, BSc VICT, 82 Todman St, Brooklyn, Wellington, S'88
- EDE, Rick Michael**, MSc(Hons), PhD DipPhil, C/- Chemistry Department, Univ Of Waikato Private Bag, Hamilton (Lecturer (Organic)), M'90
- EDMONDS, Michael**, 70 Benmore Avenue, Palmerston North, S'91
- EDMONDS, Neil Raymond**, MSc(Auck), Auckland Technical Institute, Private Bag, Auckland (Snr Lecturer), M'73
- EDWARDS, George David**, BSc(Hons)(Otago), Donaghy's Industries, PO Box 15-007 Aranui, Christchurch 7 (Technical Manager), M'66
- EDWARDS, Gerald Harry**, BSc(Hons)(Lond) FRSH FRSC, 6 Kanawa St, Waikanae (Retired), F'67
- EGGLESTON, Lynette Mary**, BSc(Hons)(Cant), DSIR Chemistry, PO Box 29-181, Christchurch (Scientist), M'85
- ELDER, William Ross**, MSc(NZ), 328 Centaurus Road, Christchurch (Retired), M'44
- ELLEN, Christopher Maurice**, MSc(Well) ATSC, Mirostone (NZ) Ltd, PO Box 38-194, Petone (Chemist), M'66
- ELLIOTT, Malcolm John**, MSc(NZ), 12 Barsi Grove, Lower Hutt (Retired), M'63
- ELLIS, Albert James**, MSc PhD(NZ) FRSNZ OBE, 775 High Street, Lower Hutt (Director-General DSIR, Retired), F'62 M'54

- ELLISON, Dorothy Jean**, MSc(NZ) MSc(MacQuarie) ARACI MACE, Unit 313 Northaven Village, 1332 Pacific Highway, Turramurra 2074 Australia (Retired), M'32
- EMERSON, George West**, MSc(NZ) PhD(Otago), Biochemistry Dept, Otago University, Box 56 Dunedin (Senior Lecturer), F'80 M'64
- EMERY, Diane**, Chemistry Dept, Auckland Univ, Private Bag, Auckland (Student), S'87
- ENTWISTLE, Evelyn Ruth**, BA(Hons) MA(Otago) BSc(Hons) PhD(StAndrews), 9 Danube Street, Dunedin (Retired), F'81 M'62
- ERASMUSON, Anton Francis**, MSc PhD(Well), Wallaceville Animal Res Cent, PO Box 40-063, Upper Hutt (Analytical Chemist), M'76
- ERCEG, Ivan Joseph**, MSc(Auck), NZ Starch Products Ltd, Box 13-024, Auckland (General Manager), M'70
- ESDAILE, Adrian Charles**, NZCS, Multichem Laboratories Ltd, Private Bag, Takapuna, Auckland (Manager), A'79
- EVANS, Albert Arthur**, BSc BE(Chem)(Hons) PhD(Cant), 8 Silverstream Road, Crofton Downs, Wellington (Consulting Engineer), M'64
- EVANS, Alan Bruce**, BSc ANZIM, Lentheric Momy Cyclax NZ, Main Rd, Tawa, Wellington (Director), M'71
- EVANS, Christopher Anthony**, MSc PhD(Auck), 18 Alison Road, Attadale 6156, Western Australia (Chief Chemist), M'87
- EVANS, Leslie Poynton**, BSc, Montana Wines Ltd, 333 Apirana Ave, Glen Innes, Auckland (Plant Manager), M'69
- EVANS, Susan Mary**, BSc DipTchg DipSc(Otago), Standard Optical Company, PO Box 258, Wellington (Computer Manager), M'85
- EYRES, Laurence**, BSc(Hons) PhD UMIST, Eyres Commercial Group, PO Box 18-098 Glen Innes, Auckland (Director), F'81 M'72
- FAN, Jun Yao, C/-** Chemistry Department, Uni Of Auck Private Bag, Auckland (PhD Student), S'89
- FARR, Paul George**, NZCS, Quik Stik International Ltd, PO Box 76-221, Manukau City (Devel Manager), M'84
- FASTIER, Frederick Noel**, MA(Otago) MSc DSc(NZ) DPhil(Oxon) FRSC HonMPS(NZ), 24 Charlotte Street, Roslyn, Dunedin (Emeritus Prof of Pharmacology), F'61 M'52
- FAWCETT, John Paul**, BSc ARCS PhD(Lond), School Of Pharmacy, Otago University, PO Box 56, Dunedin (Lecturer), M'77
- FEATHERSTONE, John Douglas Bernard**, BSc MSc(Pharm)(Manc) PhD(Well), Oral Biol Eastman Dent Cent, 625 Elmwood Ave Rochester, NY 14620 USA (Dept Chairman & Snr Scientist), F'79 M'67
- FELL, Patrick**, 53 Flay Crescent, Burnside, Christchurch, S'90
- FELLOWS, Sydney Kevin**, MSc PhD(Well), Chemistry Division DSIR, Private Bag, Petone (Scientist), M'71
- FENBY, David Vernon**, BSc(Hons)(Otago) PhD(Ucla), Chemistry Dept, Otago University, Box 56, Dunedin (Associate Professor), F'84 M'68
- FENEMOR, Dallas Ross**, MSc(Cant) PhD(Massey), Chemistry Division DSIR, Private Bag, Petone (Scientist-Chemist), M'82
- FENTON, Diana Marie**, MSc(Auck), Abels Ltd, Private Bag Newmarket, Auckland (R & D Manager), M'84
- FERGUSON, Jack Eric**, MSc(NZ) PhD(Lond) FRSNZ, Chemistry Department, University Of Canterbury, Christchurch (Reader), F'73 M'60
- FERRIER, Robert John**, PhD(Edin) DSc(Lond) FRSNZ, Chemistry Dept, Victoria University Of Wgtn (Professor Of Organic Chemistry), F'72
- FERRY, Donald George**, MSc PhD(Otago), Toxicology Res Unit, Otago Medical School, Box 913, Dunedin (Research Officer), M'69
- FIRMAN, Geoffrey John**, BSc, Pineview Laboratory, Kawerau (Analyst), M'77
- FISCHER, Alfred**, MSc PhD(NZ) BSc, Dept Of Chemistry, Univ Of Victoria, Victoria, Bc, Canada V8w 2y2 (Professor Of Chemistry), F'65 M'55
- FITZGERALD, Joan**, MSc, 58 Cook Street, Hamilton (Student), S'90
- FLEMING, Fraser Fergusson**, BSc(Hons)(Massey), Univ Of Bc Dept Of Chemistry, 2036 Main Mall Vancouver Bc, Canada V6t 1y6, G'87
- FLEMING, Gregory**, 1252 New North Road, Auckland, S'89
- FLETCHER, Edwin Charles Geard**, DipTchy, Woodford House, Havelock North (Teacher/Chaplin), M'76
- FLETCHER, John Gavin**, MSc, 43a Upland Road, Remuera, Auckland (Company Director), F'73 M'65
- FLETCHER, Kathleen Patricia**, BSc DipTchg ATCL, Central Hawkes Bay College, PO Box 482, Waipukurau (HOD Science), M'81
- FLETCHER, Ross Alan**, NZCS DipSci, Chemistry Divn DSIR, Private Bag, Petone (Technical Officer), A'88
- FORMAN, William**, Chemistry Dept, University Of Auckland, P B Auckland (Student), S'87
- FORRESTER, Alan McCallum**, BSc, Waitaki International Ltd, Waterloo Rd, Islington, Christchurch (Retired), M'53
- FORSS, David Austin**, MSc DApplSc FRACI FNZIFST, 9b Richardson St, St Kilda, Dunedin (Scientist), F'74
- FORSTER, Lynne Irene**, BSc, Telarc, 19 Mauranui Ave, Remuera, Auckland (Programme Manager), M'85
- FOWLER, John Leonard**, NZCS, Analabs, Unit M, 657 Great South Rd, Penrose Auckland (Technician), T'83
- FRANCE, John Terence**, MSc PhD(Auck) FAACB, Postgrad School O & G, National Women's Hospital, Claude Rd, Auckland (Associate Professor), F'86 M'61
- FRANCIS, Malcolm John**, BSc DipSci PhD(Otago), PO Box 1479, Palmerston North (Marketing Manager), M'75
- FRANICH, Robert Arthur**, MSc PhD(Auck) BSc DipPerfumey (IFEAT, Land), Forest Research Institute, Private Bag, Rotorua (Scientist), F'87 M'75
- FRASER, Bruce Robert Victor**, BSc, Auckland Technical Institute, Private Bag, Auckland (Lecturer), M'83
- FREEMAN, Colin George**, BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, Christchurch (Reader & Head Of Department), F'81 M'65
- FREEMAN, Michael Conrad**, BSc(Hons)(Warwick) PhD(Massey), Canterbury Regional Council, PO Box 345, Christchurch (Scientist), M'86
- FREEMAN, Roy John**, BSc, Sika (NZ) Ltd, PO Box 71-001 Rosebank, Auckland (Company Chemist), M'84
- FREITAG, Susan Anne**, BSc(Hons)(Well), MW & D Central Labs, PO Box 30-845, Lower Hutt (Scientist), G'83
- FREITAG, Walter**, MSc(Hons)(NZ), 28 Moana Road, Days Bay, Eastbourne (Retired), F'73 M'61
- FRENCH, George**, HNC RSC, NZ Aluminium Smelters Ltd, Private Bag, Invercargill (Materials Specialist), F'88 M'76
- FREW, Russell**, Chemistry Dept, University Of Otago, PO Box 56 Dunedin (PhD Student), G'88
- FRIAR, Murray John**, MSc(Massey), Chemical Service Labs Ltd, PO Box 13-033, Johnsonville (Manager), M'83
- FRIEBERG, Alan George**, MSc(NZ) ARSC, Unit 2, 15 John Davis Rd, Mt Roskill, Auckland 4 (Retired), F'70 M'39
- FUAVAO, Vili**, PhD(New Mexico), School Of Natural Resources, Univ Of The South Pacific, Suva, Fiji (Lecturer I), M'85
- FULLERTON, Terry James**, MSc PhD(Auck), Forest Research Institute, Private Bag, Rotorua (Scientist), M'74
- FURKERT, Roderick John**, MSc(NZ) PhD(Well), Archdiocesan Dev Fund, PO Box 12-407, Wellington (Office Manager), F'77 M'63
- FURNEAUX, Richard Hubert**, MSc PhD(Well), DSIR Chemistry, Private Bag, Petone (Section Leader Carbohydrate), M'76
- FURNESS, Alan Robert**, BSc(Hons) PhD(Massey), Manawatu Polytechnic, Private Bag, Palmerston North (Tutor), M'77
- GAINSFORD, Allan Ross**, BSc(Hons) PhD(Cant), Chemistry Division, DSIR, Private Bag, Petone (Scientist), M'71
- GAINSFORD, Graeme John**, BSc(Hons) PhD(Cant), Chemistry Division, DSIR, Private Bag, Petone (Programme Leader), F'88 M'77
- GALILEE, Helen Doreen**, PO Box 36, Kaiapoi, North Canterbury, S'89
- GALLAGHER, Ian Henderson Chris**, MSc(Otago) PhD(Cant), NZ Quails Auth, U-Bix Centre, 79 Tranaki Street, Wellington (Administration), M'64
- GALLAGHER, Rex Thomas**, MSc(Auck) PhD(Massey), Ruakura Agric Res Centre, Private Bag, Hamilton (Scientist), F'89 M'71
- GALLAGHER, Stewart W**, Shell Chemicals NZ Ltd, PO Box 2091, Wellington, M'91
- GALLAHER, Philip James**, BSc, 49 Great South Road, Papatoetoe, Auckland (Retired), F'69 M'48
- GALLOWAY, Neil**, BSc(Hons) MSc(Well), Taubmans (NZ) Ltd, PO Box 14-064 Kilbirnie, Wellington (Director), M'81
- GAMAGE, Ranyith S K A, C/-** Department Of Chemistry, Univ Of Auckland Private Bag, Auckland, A'89
- GAMAGE, Swarnalatha Akuratiya, C/-** Department Of Chemistry, Univ Of Auckland Private Bag, Auckland, A'89
- GAPPER, Harry Richmond**, MSc(NZ), 38 Nihill Cresnet, Mission Bay, Auckland 5 (Retired), M'49
- GARDINER, Sarah**, 64 Joseph Street, Palmerston North, S'90
- GARDNER, Frank**, MRSC CChem, 16 Ayr Road, Pakuranga, Auckland (Part Time), M'73
- GARLAND, Richard Pelham**, BSc(Hons) PhD(Cant), NZ Pharmaceuticals Ltd, PO Box 1869, Palmerston North (General Manager), M'71
- GARSIDE, John Herbert**, BSc(Hons) PhD(Lond) ARSC, Telarc, Private Bag Remuera, Auckland (Director), F'78 M'66
- GARTHWAITE, Harold Robert**, BSc, GL Bowron & Co Ltd, PO Box 19-544 Woolston, Christchurch 1 (Analytical Chemist), M'87
- GAWNE, Kenneth Maxwell**, BSc MChem(NSW), Bakham Pty Ltd, PO Box 657, Belmont Geeloong Vic 3216, Australia (Consultant), F'86 M'64
- GEDYE, Craig**, 135 Hills Road, Christchurch, S'90
- GEMMILL, Graeme David**, BSc, G L Bowron And Co Ltd, King Edward Terrace, Christchurch (Chemist), M'76
- GERLACH, Robert Frederic**, MSc DPhil(Waikato), Products Res Divn, Exxon Res Eng Box 51 Linden, New Jersey 07036 USA (Research Chemist), M'80
- GIBSON, Jeffrey Raymond**, BSc(Hons) PhD(Cant), Tmf Sarawak Shell Berhad, Locked Bag 1, 98009 Miri, Sarawak, Malaysia (Process Design Engineer), M'81
- GIBSON, Milton George Charles**, MSc(NZ), Auckland Inst of Technology, Private Bag, Auckland (Principal Lecturer), F'83 M'57
- GIFFORD, Frances Vera**, BSc(Hons)(Lond) CChem MRSC, 33 Clarendon Road, St Heliers, Auckland, M'73

- GIGGENBACH, Werner Friedrich**, (RERNat)(Munich), Chemistry Division DSIR, Private Bag, Petone (Scientist), F'81 M'73
- GILLESPIE, Alistair**, 35 Rock Isle Road, Torbay, Auckland, S'89
- GILMORE, Owen Lawry**, BA BSc, 22a Coronation Road, Epsom, Auckland (Principal - Retired), M'53
- GILMOUR, John Alan**, BSc ASTC, Nata 688 Pacific Highway, Chatswood, Nsw 2067, Australia (Chief Executive), M'75
- GINLEY, Eamon John**, BSc, Milburn New Zealand Ltd, Works Cape Foulwind, Westport (Process Engineer), G'88
- GOETH, Michelle Elizabeth**, MSc(Auck), Reckitt & Coleman (NZ) Ltd, PO Box 19-046 Avondale, Auckland 7 (R & D Chemist), G'86
- GOH, Kuan Meng**, JP MagrSc(NZ) PhD(Illinois), Dept of Soil Science, Lincoln College, Canterbury (Professor), F'76 M'70
- GOLDING, Raymund Marshall**, MSc(Auck) PhD(Cant) HonDSc(NSW) BSc, Vice-Chancellor, James Cook Univ Nth Qland, Qland 4811 Australia (Vice-Chancellor), F'66
- GOLDSMITH, John**, DipAnalChem(RSA), Lower Hutt City Council, Private Bag, Lower Hutt (Lab Mngr/Tradewaste Officer), M'88
- GOMMANS, Louie Herman Peter**, BSc MSc(Hons)(Waik) DPhil, Waller Road, RD 3, Pukekohe, Auckland (Development Technologist), M'87
- GOODE, Timothy John Curtis**, Chemistry Dept, Victoria University, Of Wellington (Student), S'88
- GOOLEY, William David John**, Cop(Chem), Inst Of Nuclear Sciences, PO Box 31-312, Lower Hutt (Technician), M'75
- GORDON, Gerard James**, MSc(Well) ARACI MACS, Monex Resources Inc, San Antonio, Texas, USA (President), M'66
- GOURDIE, Trudi Anne**, MSc(Hons) PhD, DSIR Chemistry, Private Bag, Mt Albert, Auckland (Scientist), G'86
- GRAHAM, Bruce William Lang**, MSc(Auck) DPhil(Waikato) BSc, Necal Laboratory, DSIR, 17 Kelly Street, Mt Eden, Auckland 3 (Scientist), F'89 M'73
- GRAHAM, Paul Gerard**, BSc(Hons) PhD(Well), Ministry of Transport, PO Box 27-459, Wellington (Scientist), M'81
- GRANGER, David John**, BSc, S & G Consultants, PO Box 13-219, Onehunga, Auckland 6 (Deputy Manager), M'86
- GRANT, Murray Charles**, MSc(Hons)(Waik), Chemistry Dept, University Of Waikato, P B Hamilton (DPhil Student), G'84
- GRANT, Peter Kemnitz**, MSc(NZ) PhD(Cant), Chemistry Dept, Otago University, Box 56, Dunedin (Professor), F'77 M'62
- GRANT, William Donaldson**, BSc(Hons)(Cant) PhD(NSW), Cawthron Institute, Private Bag, Nelson (Scientist), M'73
- GRAY, Ian Keith**, MAgSci(Massey), NZ Dairy Research Institute, Private Bag, Palmerston North (Analytical Chemist (Head)), M'68
- GRAY, Kerry**, 48 Alexander Street, Palmerston North, S'89
- GRAY, M J**, BSc(Hons) PhD(Cant), C/- Chemistry Division, DSIR, PO Box 29-181, Christchurch (Scientist), M'85
- GRAY, Stuart George**, BSc(Hons)(Otago) MNZIFST, 138 Dukes Road, RD 2, Mosgiel (Technical Devel Mngr), M'76
- GRAY, Vincent Richard**, BA MA PhD(Cant), 75 Silverstream Road, Crofton Downs, Wellington (Chemical & Energy Consultant), F'81 M'74
- GRAYSON, Francis William**, BSc, W Grayson & Associates Ltd, PO Box 13-269, Onehunga, Auckland (Managing Director), M'78
- GREEN, John Charles**, MA(Oxon) PhD(Leeds) PGCE MRSC CChem, Kristin School, PO Box 87 Albany, Auckland (Teacher and IB Coordinator), M'88
- GREEN, Rowland Alfred Weldon**, DSc(NZ), 46 Pupuke Rd, Takapuna, Auckland 9 (Retired), F'76
- GREEN, R F**, 41 Sunrise Boulevard, Tawa, Wellington, M'88
- GREENALL, Brian John**, BE(Chem) FTSC, Equus Management Ltd, PO Box 601, Blenheim (Managing Director), M'67
- GREENAWAY, Anthony Michael**, BSc(Hons) PhD(Cant), Chem Dept, Univ of West Indies, Kingston 7, Jamaica (Senior Lecturer), M'78
- GREENWOOD, Roger Michael**, MSc(NZ), 107 Atawhai Road, Palmerston North (Retired), M'45
- GREGOR, Jan Elizabeth**, BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, PB Christchurch (Scientist), M'87
- GREGORY, John Anthony**, BSc(Chem), Wt Grace, Private Bag, Porirua (Quality & Process Cntl Chemist), S'87
- GREIG, Michael Stuart Mcrae**, BA BCom(Auck) BSc(Hons)(Otago), Winstone Wallboards Ltd, Box 12-256, Penrose, Auckland (Chief Chemist & Spec Prod Mngr), M'68
- GRIFFIN, Donald John**, MSc, Central Inst Of Technology, Private Bag, Trentham (Principal), F'78 M'59
- GRIGG, John Lawrence**, MSc(NZ) MNZSSS, 8/248 Great North Rd, Glendene, Auckland (Retired), F'77 M'44
- GRIGOR, John Andrew**, MSc(NZ), Aranui High School, Shortland St, Christchurch 6 (Principal), M'63
- GRIGSBY, Warren James**, BSc(Waik) MSc(Waik), C/- Chem Dept, Univ of Waikato, Private Bag, Hamilton, A'91
- GRIMMETT, Murray Ross**, MSc PhD(Massey), Chemistry Dept, Otago University, Box 56, Dunedin (Associate Professor), F'80 M'61
- GRINSTED, Martin James**, BSc(Hons)(Bristol) PGCE(Brunel) DPhil(Waikato), Science Dept, CIT, Private Bag, Trentham (Head of School), M'83
- GROOM, David**, PO Box 1, Matata, Auckland, S'89
- GROOM, Philip Stanley**, BSc, Chemistry Division DSIR, PO Box 2224, Auckland (Chemist), F'86 M'60
- GROUT, Alan**, BSc, Chemistry Dept, University Of Auckland, PB Auckland (Senior Technical Officer), M'80
- GROVES, Alan Geoffrey**, MSc, Ellesmere College, Leeston (HOD Science), M'85
- GUILD, Jeanette Raewyn**, BSc(Hons), 108 Glenmore Road, Pakuranga, Auckland (Chromatographer), S'89
- GUMBLEY, Stewart John**, BSc(Hons)(Massey) DPhil(Waik), Ici New Zealand Ltd, PO Box 5034, Mt Maunganui (Research Chemist), M'85
- GUNN, Bruce Ian**, NZCS, Borden (NZ) Filmpac, PO Box 14-027 Panmure, Auckland (Chemist), A'88
- GUNN, Neil Bruce**, BSc DipBusAdmin ANZIM, NZ Dairy Board, PO Box 417, Wellington (Market Development Manager), M'80
- GUTHRIE, Alexander Kevin**, BSc NZCQA, Waitaki International Ltd, PO Box 30, Timaru (Quality Assurance Supervisor), M'81
- HACKNEY, Thomas**, NZCS HND, C/- Levene Paint Manufactur Lt, PO Box 61-131 Otara, Auckland (Technical Director), M'86
- HADEN, David Dennis**, MSc(Cant), NZ Synthetic Fuels Corp, Private Bag, New Plymouth (Environmental Engineer), M'72
- HAGGETT, Theodore Oliver Richard**, MSc(Well), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Officer), M'65
- HAINES, Stephen Roy**, BSc(Hons) PhD(Well), Invermay Agric Res Centre, Private Bag, Mosgiel (Scientist), M'83
- HALL, David**, MSc PhD(NZ) DSc(Auck) FRSNZ, 3a Killarney Street, Takapuna, Auckland (Retired), F'63 M'49
- HALL, Lee**, BSc, SCM Chemicals Ltd, PO Box 58-186, Greenmount, Auckland (NZ Manager), M'77
- HALL, Ronald Berners**, DipBia(Auck) MSc(Well), 64 Mellons Bay Road, Howick, Auckland (Consultant), M'59
- HALL, Roger Irvine**, MSc(Waikato), NZ Dairy Board, PO Box 417, Wellington (Quality Consultant (Industry)), M'81
- HALLIBURTON, Gavin Jack**, MSc(NZ) ANZIM, 6 Barlow St, Christchurch 4 (Retired), F'78
- HALLIWELL, Robert John**, MSc(Waik), ICI Paints, 507 Rosebank Road, Avondale, Auckland (Senior Technical Officer), M'88
- HALSTEAD, Michael**, 27 A Featherston St, Palmerston North, S'90
- HALTON, Brian**, BSc(Hons) PhD(Southampton) DSc(Victoria), Chem Dept, Victoria University, PO Box 600, Wellington (Reader), F'77 M'71
- HAMILTON, Ian Wallace**, NZCS(Chem), Golden Bay Cement, PO Box 1143, Whangarei (Laboratory Supervisor), T'87
- HANCOCK, William Stephen**, BSc(Hons) PhD(Adelaide), Dept Of Chem/Biochem, Massey University, Palmerston North (Reader), M'83
- HANGER, William George**, MSc(NZ) PhD(Cant) ANZIM, Milward & Kempthorne Ltd, PO Box 5211, Dunedin (Management And Technical Consu), F'68 M'59
- HANNAH, Donald James**, BSc DipSci PhD(Otago), Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'79
- HANSEN, Michelle**, BSc, Winstone Industries Ltd, PO Box 12-256 Penrose, Auckland (Works Development Chemist), G'88
- HANTON, Lyall Robert**, BSc(Hons)(Otago) PhD(Cam), Chemistry Dept, University Of Otago, PO Box 56, Dunedin (Lecturer), M'82
- HAPPER, Duncan Alan Robert**, BA BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, Christchurch (Reader), F'78 M'62
- HARDIE, Graeme Maclean**, NZCS BSc MSc(Hons)(Well), Unilever, Private Bag, Petone (Industrial Chemistry), A'87
- HARDING, David Roger Kay**, BSc(Cant) PhD(West Ont), Dept Of Chem/Biochem, Massey University, Palmerston North (Director Sep Science Unit), M'85
- HARLAND, Charles William**, MSc(NZ) FICHEM MIPENZ, 3 Stella Place, Manurewa, Auckland (Retired), F'68 M'52
- HARLAND, Peter William**, BSc(Hons)(Wales) MNZIP PhD(Edin), Chemistry Department, University Of Canterbury, Christchurch (Reader), F'84 M'76
- HARLEY, Michael Steane**, BSc(Hons)(Cant), Reckitt & Colman (NZ) Ltd, 550 Rosebank Rd Avondale, Auckland (Qual Control Chemist), G'87
- HARLOW, Stephen Rodney**, BSc(Waik), 30 McMeekan Avenue, Hamilton (Student), S'90
- HARNETT, Michelle**, BSc(Hons) MSc(Dist)(Cant), NZ Dairy Research Institute, Private Bag, Palmerston North (PhD Student), G'84
- HARPER, Christine Joy**, NZCS, C/o S Gwilliam, 4 Ascot Ave Kamo, Whangarei (Temp Overseas), A'86
- HARRALL, Edward Douglas**, Church Property Trustees, PO Box 8471, Christchurch (Trust Manager), M'59
- HARRINGTON, David Athol**, BSc(Hons)(Cant) PhD(Auck), Chem Dept, Univ Of Victoria, Box 3055, Victoria BC, Canada V8W 3P6 (Assistant Professor), M'84
- HARRIS, Wayne**, BSc, Abels Ltd, Private Bag, Newmarket, Auckland (Works Chemist), M'75
- HARRISON, Neil Robert**, NZCS, Southland Co-op Phosphate Co, PO Box 849, Invercargill (Senior Technician), T'88
- HARTLE, Keith Robert Sidney**, BSc(Hons) Dis(Loughborough) DipTchg, Dargaville High School, Private Bag, Dargaville (HOD Science), M'79

- HARTLEY, Gilbert Spencer**, BSc(Hons) DSc(Lond), 12 Reynolds Rd, Havelock North (Retired), F73
- HARTMAN, Leopold**, BEChem(Lwow) MSc DSc(NZ) DSc(Unicamp), Fac Of Food Eng, State Univ, Of Campinas, PO Box 1170, Campinas Sp Brazil (Professor Of Food Chemistry), F70 M'49
- HARTSHORN, Michael Phillip**, BSc(Hons) DPhil(Oxon) FRSNZ, Chemistry Dept, University Of Canterbury, P B Christchurch (Professor), F'68 M'61
- HARVEY, Colin Charles**, MSc(Auck) PhD(Indiana), Dept Of Geology, Indiana Univ, 1005 E Tenth St, Bloomington, Ind 4705, USA (Consultant/Geochemist/Geologis), F'86 M'66
- HARVEY, Helen Elizabeth**, MSc(NZ), 14 Churchill Drive, Wilton, Wellington (Scientist), M'51
- HARVEY, William Edward**, MSc(NZ) PhD(Cant), Registrar, Victoria University Of Wgtn (Registrar), HonF'89 F'64
- HASLEMORE, Roger Milne**, BSc PhD(Otago), Plant Physiology Division, DSIR PB, Palmerston North (Scientist), M'74
- HASSALL, Barry Evan**, BSc DipEd DipTchg, Taieri High School, PO Box 45, Mosgiel (HOD Science), M'73
- HASTIE, Donald Robert**, BSc(Hons) PhD(Cant), Chemistry Dept York Univ, 4700 Keele St Downsview Ont, M3j 1p3 Canada (Associate Professor), M'75
- HASTROP, John Harold**, BSc, Napier Girls' High School, Napier (Teacher), M'72
- HAVERKAMP, Richard Gerard**, BSc(Hons)(Well), Fletcher Titanium Prod Ltd, PO Box 38-229, Petone (Research Chemist), M'86
- HAWKE, John Clement**, MSc(NZ) PhD(Cant) DSc(Massey), Dept Of Chem/Biochem, Massey University, Palmerston North (Reader), F'68 M'59
- HAWKES, Allan David**, NZCS, Mycotoxic Diseases Grp, MAF, Tech Ruakura, Private Bag, Hamilton (Research Associate), M'87
- HAWKES, Peter David**, BSc(Hons)(Cant) DipBusAdmin, Colgate-Palmolive Ltd, PO Box 38-077, Petone (Technical Manager), M'90
- HAY, Douglas Millar**, BSc BE(Chem) MSc(Lond)(IndSafety) DIC, Dept Of Business Studies, Massey University, Palmerston North (Snr Lecturer In Safety Mgmt), M'72
- HAY, Timothy**, BSc Radiochemistry Cert, Motorcorp, Broadway, Newmarket, Auckland (Asst Car Salesman), S'87
- HAYES, Raewyn Jane**, NZCS, 31b Onslow Road, Papakura, Auckland (Technician), A'87
- HAYLOCK, Steven John**, BSc(Hons) PhD(Massey), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Manager), M'82
- HEALY, William Bernard**, MSc(NZ) PhD(Rutgers) HonFNZIAS, 30 St Columbans Grove, Lower Hutt (Scientific Adviser), F'73 M'50
- HEARD, Kerry Anthony**, NZCS NZCE, Chemistry Dept, Auckland Technical Institute, P B Auckland (Student), S'86
- HEARN, Janine Marie**, Biochemistry Dept, Victoria University, Of Wellington (Student), S'88
- HEBDEN, William Herbert**, BSc MIFST(NZ), 63 Woodlands Avenue, Motueka, Motueka (Retired), F'81 M'50
- HEDWIG, Gavin Ross**, BSc(Hons) PhD(Cant), Dept Of Chem/Biochem, Massey University, Palmerston North (Senior Lecturer), M'74
- HEENAN, Michael Perry**, MSc PhD(Well), Chemistry Division D,SIR, Private Bag, Petone (Scientist), M'73
- HEMMINGSON, Jacqueline Ann**, MSc PhD(Well), DSIR Chemistry, Private Bag, Petone (Scientist), M'72
- HENG, Sammy**, MSc PhD(Cant), Coal Corporation of Victoria, Private Bag 1, Morwell, Vic, 3840 Australia (Principal Scientist), M'79
- HENSHAW, Geoffrey Stephen**, BSc MSc(Hons), C/- Chem Dept, Auckland Univ, Private Bag, Auckland (PhD Student), S'89
- HENTSCHEL, Peter Rudolf**, MSc(Cant), Chemistry Divn DSIR, PO Box 29-181, Christchurch 4 (Scientist), M'65
- HERBERT, John Michael**, BSc PhD(Auck) MSc, Sterling Research Group, Willowburn Ave, Alnwick, Northumb NE66 2JH, England (Research Investigator), M'88
- HERD, Antony Charles**, BSc(Hons) PhD(Otago), Auckland Technical Institute, Private Bag, Auckland (Senior Tutor), F'85 M'72
- HERD, Jacqueline**, 87/4 Manuka Road, Glenfield, Auckland, S'89
- HEWITT, Peter Lifford**, BSc(Chem) DipFoodQuality, C/- Northern Roller Miller Co, PO Box 20, Auckland (Quality Assurance Manager), M'83
- HEYWORTH, Rex Malcolm**, MSc(Well) Ms PhD(Stanford) DipEd, School Of Education, Chinese Univ Of Hong Kong, Shatin, Hong Kong (Lecturer - Chem Ed & Ed Psych), M'66
- HIGGINS, Desmond James**, BSc MChemE MIPENZ ANZIM CEng, 10 Sanctuary Point, Pakuranga, Auckland (Director), F'69 M'50
- HIGGS, P**, Chemistry Dept, University Of Auckland, P B Auckland, S'87
- HILL, Diana Florence**, BSc PhD(Otago), Dept Of Biochemistry, Otago University, Box 56, Dunedin (Senior Research Fellow), M'76
- HILL, Roger Jon**, MSc(Hons) PhD(Auck), R J Hill Laboratories, PO Box 4048, Hamilton East (Partner), M'77
- HILLS, Dennis Ashley**, BSc FPRI CContEd JP, DSIR Industrial Development, PO Box 20-028, Christchurch (Scientist), F'77 M'60
- HINDMARSH, David Kevin**, BSc, Chemistry Dept, University Of Auckland, P B Auckland (MSc Student), G'86
- HINTZ, Carl Lewis**, BSc FACIS MNZIFST, Austin Chalk Co Ltd, PO Box 146, Kaiapoi (General Manager), M'68
- HINTZ, Frances Blomfield**, BSc, Muriwai RD 1, Waimauku (Teacher), M'80
- HITCHINGS, Terence Richard**, MSc(NZ) DipEd, 39 Te Awa Kura Terrace, St Andrews Hill, Christchurch (Retired), F'69 M'60
- HOARE, John Leonard**, MSc PhD(NZ), De Spa & Co Ltd, PO Box 19-532, Woolston, Christchurch 2 (Consultant), M'60
- HODDER, Anthony Peter Walters**, MSc(Hons) DPhil(Waikato), Earth Sci Dept, Waikato Univ, Private Bag, Hamilton (Lecturer In Earth Sciences), M'73
- HODGE, Suzanne Joy**, BSc(Hons)(Otago), Pharmacy Dept, University Of Otago, PO Box 913 Dunedin (Pharmacy Student), G'87
- HODSON, Derek**, BSc(Hons) PhD(Manc) MEd FRSC, Dept Of Education, University Of Auckland, P B Auckland (Snr Lecturer), F'86
- HOGAN, Denis James**, BSc Cop(Dairy Chem And Bact), 11 Wyn Street, Christchurch (Retired), HonF'84 F'69
- HOGG, John Shone**, MSc(Cant), 90 Arapiki Road, Stoke (Retired), M'64
- HOLDEN, Roger**, MSc(Manc) ARSC MChemE, 43 Nimmo Avenue West, Waikanae (Consultant Air Pollution Contr), M'72
- HOLDER, Rowena**, 96 Dunns Avenue, Pines Beach, Kaiapoi, M'91
- HOLDERNESS, Michael**, BSc(Chem), Pacific Steel Ltd, PO Box 22201, Otahuhu, Auckland (Research Assistant), G'91
- HOLLAND, Patrick Thomas**, BSc(Hons)(Cant) PhD(Queens), Ruakura Agric Res Centre, Private Bag, Hamilton (Scientist - Group Leader), M'76
- HOLLOWAY, Warren Desmond**, MSc(Auck) PhD(Massey), Syrinx Res Inst Pty Ltd, 21 Walker St Bundaburg 4670, Q'land Australia (Scientist), M'75
- HOLROYD, Steve**, BSc(Hons), Chemistry Dept, University Of Auckland, P B Auckland (Student), S'87
- HOOKER, Ronald Owen**, BSc ANZIM FNZIFST, Foodology Services Ltd, PO Box 15-052, Christchurch (Director), F'82 M'59
- HOPE, Steven John**, BSc, Analytical Section, NZFP Pulp, & Paper Ltd, Private Bag, Tokoroa (Laboratory Supervisor), M'87
- HOPGOOD, Raymond Henry**, BSc, Chemiplas Agencies Ltd, Box 37-408, Parnell, Auckland (Project Manager), HonF'91 F'73
- HORN, Alexander Huntly**, MSc(NZ), Wards Road, Rd 2, Christchurch (Retired), M'52
- HORNE, Margaret Lynette**, BSc(Hons)(Massey), NZ Pharmaceuticals Ltd, PO Box 1869, Palmerston North (Research Chemist), M'88
- HORNE, Philip Desmond**, BSc, 61 Waller Ave, Bucklands Beach, Auckland (Retired), F'75 M'42
- HOUNSELL, Eric Russell**, MSc(NZ), 64 Kimberley St, Christchurch 5 (Retired), F'71 M'41
- HOUSE, Donald Alexander**, MSc(NZ) PhD(Well), Chemistry Dept, University Of Canterbury, Christchurch (Reader), F'76 M'61
- HOWARD, Bernard Hugh**, BSc(Hons)(Manc) PhD(Lond) FRSC CChem, 150 Dyers Pass Rd, Cashmere, Christchurch 2 (Retired), F'64
- HOWARTH, David Thomas**, MSc(Cant), Christchurch Boys High School, Straven Rd, Christchurch (Teacher), F'79 M'69
- HOY, Kenneth Frederick**, BSc, 151 Lake Crescent, Hamilton (Retired), M'47
- HOY, Meg**, 15 Green Lane, Hawera, South Taranaki, S'90
- HUBBARD, Michael James**, BDS PhD(Otago), Dept Of Biochemistry, University Of Otago, Dunedin (Senior Fellow), M'86
- HUBER, Rolf**, Swiss FedDiplndChem DipBus(Mkt), Aci Packaging Systems, PO Box 12-345 Penrose, Auckland (Export Manager), A'85
- HUGHES, Colin Geoffrey**, BSc(Hons) PhD(Hull), School Of Pharmacy, Otago University, PO Box 56, Dunedin (Tutor In Pharm Chemistry), M'79
- HUGHES, John Theodore**, BSc CChem FRSC, 24 Makarini St, Paraparaumu (Retired), F'78 M'66
- HUGILL, Archie James**, BSc PhD(Birm), 48a Seacliffe Rd, Onehunga, Auckland 6 (Manager), M'61
- HULLETT, Ernest William**, MSc(Hons)(NZ) HonMFMBAUK HonMNZDA, Woodbury, RD 21, Geraldine (Retired), HonF'73 F'63
- HULSE, Carol Ann**, NZCS BSc(Hons), 20 Iwa St, Mapua, Nelson (Analytical Chemist), M'88
- HULSTON, John Richards**, MSc(NZ) PhD(McMaster) FINSTP BSc, Inst Of Nuclear Sciences, DSIR, PO Box 31-312, Lower Hutt (Group Manager), F'74 M'66
- HUME, Graham Mark**, BSc, Cauty Timber Products Ltd, PO Box 154, Rangiora (Technical Manager), M'76
- HUME, Stephen John**, BSc DipMgt, Ravensdown Fert Co-op Ltd, Box 499, Dunedin (Plant Manager), M'81
- HUME, Sheralyn Marie**, MSc(Hons), Chem Dept, Auckland University, Private Bag, Auckland (Student), S'89
- HUMPHREY, Rex Stuart**, BSc(Hons) PhD(Massey), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Officer), M'78
- HUMPHREYS, Ronald Evan**, BSc CertEd, Wellington College, PO Box 16-703, Wellington (Post Primary Teacher), M'70
- HUNT, Austen Hubert**, MSc(NZ), 18 Sandringham Place, Christchurch (Retired), M'53
- HUNT, Ian Sinclair**, MSc(NZ) FRSC FIWSC MIM FBIM MNZIW, 38 Corinna Street, Welcome Bay, Tauranga (Retired/Part-Time Consultant), F'61

- HUNTER, Christopher Alexander**, Department Of Chemistry, University Of Otago, PO Box 56, Dunedin, A90
- HUNTER, David Wayne Fred**, BSc, 3/124 Firth Street, Hamilton (Student), S'90
- HUNTER, Jack Carlyle**, ASTC MIFST(NZ), 10 Rangiwai Road, Titirangi, Auckland (Consultant), M'62
- HUNTER, Keith Andrew**, MSc(Auck) PhD(East Anglia), Chemistry Dept, University Of Otago, Box 56, Dunedin (Lecturer), M'76
- HUNTER, Maurice**, BSc, 7b Pennith Street, New Plymouth (Retired), M'56
- HUNTER, Wayne Maurice**, BSc, Hunter Chemical Developments, 82 Hetherington Rd Swanson, Auckland 8 (Proprietor), M'76
- HUO, Wen**, MSc(Sichuan), Chemistry Dept, University Of Canterbury, Christchurch (PhD Student), G'88
- HURRELL, Clyde Owen**, BAgSc(Dairy Tech) Ms(Minn) DipNZIM, Orewa College, Riverside Rd, Orewa, Auckland (Chemistry Teacher), M'70
- HURST, Frank**, MSc(NZ), 748 Fergusson Drive, Upper Hutt (Retired), F'73 M'48
- HUSBANDS, David Roderick**, BSc(Hons)(Reading) PhD(Queens), Dept Of Chem/Biochem, Massey University, Palmerston North (Senior Lecturer), M'72
- HUSBANDS, June Margaret**, BSc(Hons) MSc(Chem), 73 Church Street, Palmerston North (Research Technician), M'89
- HUSHEER, Godfrey Asbjorn**, BSc, Scientific Service Laboratorie, S, Box 3030, Onekawa, Napier (Manager), M'59
- HUTCHINSON, Ewen George**, MSc(Hons)(Auck) PhD(Anu) NZCLGA(Int), Auckland Regional Council, Private Bag, Auckland (Assistant General Secretary), F'85 M'71
- HUTCHINSON, Robert Lewis**, MSc(NZ), 59 Augusta St, Christchurch 8 (Retired), M'48
- INDYK, Harvey**, PhD(Liverpool), Anchor Products, PO Box 7, Waitoa (R & D Scientist), M'82
- INGHAM, Peter Edward**, BSc(Hons)(Cant) PhD(Bradford), Wool Research Org Of NZ, Private Bag, Christchurch (Principal Scientist), M'72
- INGHAM, Scott**, 145 Cook Street, Palmerston North, S'89
- IRELAND, Elaine**, 164 Highbury Avenue, Palmerston North, S'91
- IRVINE, Geoffrey J**, 3 Tokomaru Street, Orakei, Auckland (MSc Student)
- ISDALE, Dorothy Helen**, MSc(Hons)(Cant) DipEd, 2 Rimu Place, Oxford (HOD Science), M'66
- JACK, Kevin**, Cnr for Magnetic Reson, Univ, of Qnslnd, St Lucia Queensland, 4072 Australia (PhD Student), S'90
- JACKSON, Barrie Edward**, BSc, 2a Neeve Road, Taradale, Napier (Retired), M'37
- JACKSON, Barry Lance**, BSc, Fielding Ag High School, Churcher Street, Feilding (Principal), M'69
- JACKSON, Douglas Wright**, BSc, State Highway 16, RD3, Helensville (Retired), M'57
- JACKSON, Ken**, C/- Chemistry Department, Auck University Private Bag, Auckland, S'90
- JACOBSON, David Roy**, BSc(Hons)(Well), Shell Oil NZ Ltd, PO Box 38-227, Petone (Chemist), M'86
- JACQUES, Phillip Richard**, BSc, Lion Breweries Ltd, PO Box 3347, Wellington (Trainee Brewer), M'85
- JAMESON, Paula Elizabeth**, BSc(Hons)(Plant), Department Of Botany, University Of Otago, PO Box 56, Dunedin (Lecturer), M'89
- JAMIESON, Norman Danford**, MSc(NZ), 73a Queens Grove, Lower Hutt (Retired), M'45
- JAMIESON, Robert Graham**, MSc(NZ), Research Organisation, Private Bag, Christchurch (Scientist), F'82 M'75
- JANATA, Wolfgang Robert**, DiplIng BE(Chem), 40 Plympton Street, New Plymouth (Scientist), M'81
- JANSEN, Murray Lyle**, MSc(Hons)(Well) PhD(Calgary), 63b Awatea St, Porirua (Programme Coordinator), M'81
- JANSSON, Sally Joyce**, MSc(Auck), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), G'86
- JENKINS, Carl**, 628 River Road, Hamilton, S'90
- JENKINS, Lindsay Allen**, BSc(Hons) BE(Hons)(Chem)(Cant) GradIPENZ, BETZ Labs Pty Ltd, 69 Williamson Rd, Ingleburn, NSW 2565, Australia (Engineering Manager), M'77
- JENKINS, Lynette Dawn**, BSc, 127 River Road, Richmond, Christchurch 1 (Analytical Chemist), M'75
- JOERIN, Michel Marcel**, FRSC, 97 Mardon Road, Hamilton (Retired), F'81 M'67
- JOGIA, Madhu Kant**, MSc PhD(Otago), Chem Dept Univ Brit Columbia, 2036 Main Mall Vancouver, Bc Canada V6t 1y6 (Lecturer), M'79
- JOHANNESON, John Ker**, CChem MSc(NZ) FRSC, 2 South Lynn Rd, New Lynn, Auckland 7 (Retired), F'60 M'46
- JOHNS, Alan Tutton**, CBE MScNZ PhD Cant HonDSc Cant & Massey FRSNZ, 53 The Crescent, Roseneath, Wellington (Retired), Hon F'77 F'60
- JOHNSON, Alexander Lawrence**, MSc(NZ) PhD(Rochester) BSc(Well), Du Pont Merck Pharm Co, Experi, Station, 353 Bldg, Wilmington, DE 19880-0353 USA (Associate Director, Chem Sci), F'76 M'58
- JOHNSON, Cecil Barry**, MSc PhD(Well) BSc, DSIR Fruit And Trees, Private Bag, Palmerston North (Research Chemist), F'83 M'62
- JOHNSON, Ian**, BSc(Hons)(Otago) PhD(Otago), MAF, Private Bag, Ruakura, Hamilton (Environmental Services Manager), M'89
- JOHNSON, J C**, NZCS, 94 Penney Avenue, Mount Roskill, Auckland
- JOHNSTON, James Howard**, MSc(Hons) PhD(Well), Chem Dept, Victoria Univ, PO Box 600, Wellington (Reader - Chem/Geochem), F'88 M'73
- JONES, Clive David**, BSc(Chem), 63 Melanesia Road, Kohimarama, Auckland (Chemist/Lab Manager), M'90
- JONES, Gavin**, C/- 79 Miromiro Rd, Lower Hutt, S'89
- JORDAN, Stuart Andrew**, MSc(Auck), Chemical Specialties Ltd, PO Box 29109, Epsom, Auckland (Proprietor), M'72
- JUDD, Maurice Charles**, BSc(Hons)(Massey) MSc(Dist)(Cant) PhD(Cant), Forest Research Institute, Private Bag 3020, Rotorua (Environmental Chemist), M'85
- JUDD, William Paul**, MSc(NZ) PhD(Auck), Waikato Polytechnic, Tristram St, Hamilton (Head Of Science Dept), M'69
- KAN, David Richard**, BSc DipSci, 270 Pinehill Road, Dunedin (Student), S'89
- KANAS, Ruth**, C/- Chemistry Dept, Otago University, PO Box 56 Otago, S'90
- KANE, Christopher**, Chemistry Dept, Victoria University, Of Wellington (Student), S'88
- KARIMZADEH, Mohammad Reza**, 1/35 Reimers Avenue, Mt Albert, Auckland, A'91
- KARL, Dennis Peter**, NZCS, Scientific & Gen Consulyants, 7 Banfield Pl Hillsborough, Auckland 6 (Lab Manager), M'86
- KAY, Andrew John**, 310c Frimley Avenue, Hastings, S'89
- KAY, George Alfred**, Mbe MA BSc, Schools Divn Head Office, Department Of Education, P B Wellington (Snr Education Officer), M'63
- KAZAKEVICS, Arnis Aris Rolands**, MSc PhD(Auck), Collie Cooke Consolidated, 3 Millers Rd, Brooklyn, Melbourne, Australia 3025 (Resin Plant Manager), M'80
- KEE, Hong Chal**, BSc AMIC LRSC, Envilab Sdn Bhd, 396 Jn Tebrau Johor Bahru, Johor, Malaysia (Manager), M'81
- KEELEY, Graeme Montague**, BSc FNZIFST, Canterbury Frozen Meat Co, Box 2, Belfast, Christchurch 5 (Technical Manager), F'78 M'66
- KEEN, Alan Robert**, BSc(Hons) PhD(Otago), NZ Dairy Research Institute, Private Bag, Palmerston North (Head, Flavour Sectn), M'64
- KEEN, Roger Douglas**, MSc(Cant), Mobil Oil, PO Box 2497, Wellington (Sales Chemist), M'78
- KEEY, Roger Brian**, BSc(Hons) PhD(Birm) FICHEM FIPENZ, Dept Chem & Process Eng, University Of Canterbury, Christchurch (Professor), F'71 M'66
- KENNEDY, James Alexander**, BSc(Hons) PhD(Cant), PO Box 36-328, Northcote, Auckland (Company Director), M'85
- KENNEDY, Lawrence David**, BSc(Hons) PhD(Otago), DSIR Industrial Division, Private Bag, Palmerston North (Scientist), M'66
- KENNERLEY, Rowland Alfred**, MSc(NZ), 49 Ferry Road, Days Bay, Eastbourne (Technical Consultant), F'62 M'50
- KENNY, Frances Mary**, NCEA(Ireland), Waitaki International, Smithfield Works, Timaru (Works Chemist), A'88
- KENNY, John Patrick**, NCEA(Ireland) Biochem & Analchem Dip, Dominion Breweries, PO Box 841, Timaru (Senior Chemist), A'85
- KERRIGAN, Jacinta Lianne**, BSc(Tech), 79 Dunlop Road, Te Puke (Student), S'90
- KETTLE, Anthony James**, BSc(Hons)(Otago) MSc(Simon Fraser) PhD, Christchurch Clinical School, Public Hospital, P B Christchurch (Research Fellow), M'87
- KILMARTIN, Paul Andrew**, BA BSc(Hons) STB GradDipTh, St Bede's College, Main North Road, Christchurch (Teacher), A'89
- KIM, Nicholas Duncan**, BSc(Hons)(Cant), Chemistry Dept, Univ of Waikato, Private Bag, Hamilton (PhD Student), G'87
- KINGSLEY, Susan Margaret**, BSc, 53a Richard Farrell Ave, Remuera, Auckland 5 (Res Assistant: Air Pollution), G'83
- KIRK, Bruce Laurence**, NZCS(Bio), Columbit Marketing Ltd, PO Box 29-093 Greenwoods Cnr, Epsom, Auckland 3 (Managing Director), A'78
- KIRK, Christopher Matthew**, MSc PhD(Cant), Chemistry Dept, University Of Waikato, Hamilton (Senior Lecturer), M'78
- KIRKMAN, John Henry**, BAgSc BSc(Hons)(Dunelm) PhD(Aberdeen), Dept Of Soil Science, Massey University, Palmerston North (Reader), F'86 M'67
- KITT, Watson**, BSc, 345 Waiwhetu Rd, Lower Hutt (Retired), M'51
- KITTO, George Barrie**, MSc(Well) PhD(Brandeis), Clayton Foundn Biochem Inst, Univ Of Texas, Austin, Texas, 78712, USA (Professor), M'66
- KNAPPSTEIN, Robert James**, MSc(Auck), 26 Disraeli St, Mt Eden, Auckland 3 (Tech & Prod Manager), M'85
- KNIGHT, John Stephen**, BSc(Hons) PhD Me(el & El)(Cant), 20 Selwyn Ave, Akaroa, M'85
- KNIGHTON, Derek Robin**, BSc DipSci MSc PhD(Massey), Protein Chemistry Section, Dairy Res Inst, Private Bag, Palmerston North (Research Officer), M'83

- KNOX, Bruce Stanley**, BSc, Postgrad School Of Obs & G. Nat Women's Hosp, Claude Rd, Epsom, Auckland 3 (Research Biochemist), F'85 M'67
- KOMEN, Franciscus Gerardus**, BSc(Netherlands), NZ Steel Ltd, Private Bag, Auckland (Chief Chemist), M'86
- KOOY, Paulus Cornelius Maria**, HBO-B The Netherlands, Petralgas Chemicals NZ Ltd, Private Bag, New Plymouth (Technical Manager), M'85
- KREYMBORG, Rachel Barbara**, BSc(Hons)(Massey), Science Dept, Waikato Technical Institute, P B Hamilton (Tutor), G'84
- LAING, Kerry Richard**, MSc PhD(Auck), Auckland Regional Authority, Private Bag, Auckland (Senior Planning), M'70
- LAKE, Phillip John**, BSc(Chem) BSc(Hons)(Geochem), Research Inst Textile Services, PO Box 31-309, Lower Hutt (Technical Advisor), A'90
- LAKE, Robin John**, BSc(Hons) PhD(Cant), DSIR Chemistry, PO Box 29-181, Christchurch (Scientist), M'81
- LAL, Alick Ruyhit**, BSc(Hons) MSc DipTchg(Otago), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), M'84
- LAL, Benay**, NZCS BSc, Oxyplast (NZ) Ltd, Private Bag, Takapuna (Marketing Surface Coating), A'81
- LAMBDEN, Alfred Edward**, BSc MRSC MICHemE MIPENZ, 207 Whatawhata Rd, Hamilton (Retired), M'62
- LAMBERT, George Stanley**, MSc(NZ) FIM, 335 Riddell Rd, Glendowie, Auckland 5 (Retired), F'60
- LANE, Geoffrey Alexander**, BSc(Hons) PhD(Cant), Biotechnology Divn DSIR, Private Bag, Palmerston North (Scientist), M'77
- LANGDON, Alan George**, MSc PhD(Well), School Of Science, University Of Waikato, Hamilton (Senior Lecturer), F'85 M'68
- LAU, Hui Ming**, BSc(Hons)(Cant), Lam Soon Oil & Soap Mfg Sdn, Petaling Jaya, Selangor, Malaysia (Deputy Chief Chemist), M'72
- LAUREN, Denis Richard**, BSc(Hons) PhD(Otago), Ruakura Agric Res Centre, Private Bag, Hamilton (Scientist), M'79
- LAVERTY, Richard**, VRD MSc PhD(NZ), Dept Of Pharmacology, Medical School, Box 913, Dunedin (Professor), F'77 M'65
- LAW, Norman Heyworth**, OBE MSc(NZ) MChemA CChem FRSC(UK), 24 Clements Crescent, Hamilton (Retired), F'50 M'47
- LAWRENCE, Mark John Frederick**, MSc(Hons)(Wai) BSc PhD, Dept Of Geology, Meston Build, Kings College, Univ Aberdeen, Aberdeen, Scotland, AB9 2UE (Post Doctoral Research Assist), M'86
- LAWRENCE, Robert Charles**, BSc(Hons)(Lond) PhD(Massey), 23 Pahiatua St, Palmerston North (Retired), F'72 M'58
- LAWRY, Robert Courtney**, MSc(NZ) FIQ, PO Box 19, Brightwater, Nelson (Retired), M'44
- LAWS, George Frederick**, BSc(Hons) PhD(Lond), 72 Tanner Rd, Dunedin (Retired), F'64
- LE QUESNE, Philip William**, MSc PhD DSc(Auck), Chemistry Dept, Northeastern Univ, Boston, Mass 02115 USA (Professor), M'62
- LEACH, Meto Te Ota**, BSc MSc, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (Student), S'91
- LEADBETTER, Robert Ian**, BSc, Cadbury Confectionery Ltd, PO Box 890, Dunedin (Quality Assurance Manager), G'88
- LEARY, Gordon James**, MSc(Hons) PhD(Cant), Chemistry Division, DSIR, Private Bag, Petone (Director), F'74
- LEDGER, Robin**, BSc(Hons) PhD(Sheffield), School Of Pharmacy, Cit, Private Bag, Trentham (Senior Tutor), F'90 M'79
- LEE, Donald**, BSc(Hons) PhD(Edin) CChem FRSC, Dept Of Surgery, Otago Medical School, Box 913, Dunedin (Snr Research Fellow), F'86 M'81
- LEE, Hian Kee**, BSc(Hons) PhD(Cant), Dept Of Chemistry, National, Univ Of Singapore Kent Ridge, Singapore 0511 (Senior Lecturer), M'82
- LEE, Julian**, MSc PhD(Massey), Biotechnology Divn DSIR, Private Bag, Palmerston North (Scientist), M'80
- LEE, Mow Ting**, MSc(Cant), Cement Industries Of Malaysia, Kanga, Malaysia (Assistant Works Chemist), M'78
- LEE, Peter**, 258 Mt Smart Rd, Onehunga, Auckland (Student), S'89
- LEGAL DEPOSIT OFFICE**, Copyright Publication Officer, PO Box 12-340, Wellington
- LEIGH, Duncan James**, MSc(Hons), C/- Chemiplas (NZ) Ltd, PO Box 37-408, Auckland (Product Manager), M'89
- LEONARD, Margaret Mary**, BSc MSc(Otago), Wool Research Org Of NZ, Private Bag, Christchurch (Scientist), M'86
- LESTER, Patrick**, MSc PhD(Bristol) DipEd(Massey), Fairfield College, Hamilton (Retired), F'66
- LEUNG, Kin-Fai**, DipSc MSc(Waikato), Biochem Dept, Queensland Univ, St Lucia, Queensland 4067, Australia (PhD Student), G'85
- LEVER-NAYLOR, Peter**, BSc AIFST Diplmede DiplLaw, 40 Coral Tree Drive, Carlingford Nsw 2118, Australia (Legal Adviser), M'49
- LEWIN, Arthur Harry**, BSc AIFST(NZ), 322 Redoubt Road, Manukau City, Auckland (Retired), M'53
- LEWIS, Anthony Leslie**, NZCS, APM Containers, Ashover Rd Rocklea Qld, 4106 Australia (Quality Assurance Manager), A'80
- LEWTHWAITE, David Evan**, MSc(NZ), ChCh Technical Institute, PO Box 22-095, High St, Christchurch 1 (Chemistry Tutor), M'67
- LIAU, Siew Ling**, Flat 3, 315 George Street, Dunedin, S'89
- LIDDLE, John Raymond**, MSc(Hons) BBS PhD(Massey) BSc, DJ Little, Waikanae (Manager), M'81
- LIM, Min**, BSc(Hons) MSc(Cant), Nanyang Girls' High School, 52 King's Road, Singapore 1026 (Research Assistant), G'84
- LIMMER, Alan Wayne**, MSc DPhil(Waik), Stonecroft Wines, RD 5, Mere Road, Hastings (Associate Director), M'80
- LINGGA, Novalina**, F12 Ilam Flats Univ Of Cant, Private Bag, Christchurch, S'90
- LINZEY, John Trevillian**, BSc, 1321 Dominion Rd, Auckland 4 (Retired), M'44
- LITTEN, John Christopher**, Chemistry Dept, University Of Canterbury, Christchurch (Student), S'88
- LITTEN, Stephen Albert**, NZCS BSc, Wills (NZ) Ltd, Private Bag, Petone (Safety & Security Manager), A'87
- LITTLE, Graham Richard**, BSc(Hons) PhD(Cant), Inst Of Theor & Appl Soc Sc, PO Box 67-087, Auckland 3 (Managing Director), M'72
- LLEWELLYN, Donald Rees**, JP DPhil(Oxon) DSc(Birm)(HonD)(Waik) CChem FRSC, Morrinsville Road, RD 4, Hamilton (Retired), HonF'85 F'58
- LOCKER, Ronald Harry**, MSc PhD(NZ), 110 Hillcrest Rd, Hamilton (Retired), F'82 M'50
- LOCKHART, Douglas Watson**, MSc(NZ), 290 Main South Road, Green Island, Otago (Retired), F'81 M'54
- LOCKHART, Kenneth Raymond**, MSc, NP Boys' High School, Private Bag, New Plymouth (HOD Science), M'82
- LODGE, Norman**, MSc(Reading) MRIC(Liverpool) FNZIFST FSIFST, Divn Hort & Processing, DSIR, Mt Albert, Auckland (Science Liaison Officer), F'79
- LOGAN, Michael Bruce**, BSc, Chemistry Dept, University Of Auckland, P B Auckland (Msc Student), G'88
- LOMAX, Terence Douglas**, MSc PhD(Auck), Wood Technology Divn, Forest Research Institute, P B Rotorua (Scientist, Adhesives), M'80
- LONG, Mervyn Allan**, MSc PhD(Auck), Chemistry Dept Univ Of NSW, Box 1 Kensington NSW, 2033 Australia (Associate Professor), M'63
- LOONG, Paul Chim**, BSc(Hons) PhD(Well), NZ Communicable Disease Centre, PO Box 50-348, Porirua (Scientist), M'86
- LOULANTING, Arthur Fatu**, NZCS, Dulux Duvn Ici, 526 Ellerslie/panmure H'way, Auckland (Production Superintendent), T'88
- LOVE, Alexander James**, BSc(Hons)(Cant), BP New Zealand Limited, PO Box 892, Wellington (Planning Manager), M'73
- LOVE, Jonathan Gerald**, C/o Chemistry Dept, University Of Otago, Box 56 Dunedin (Student), S'88
- LOVE, John Lancelot**, MSc PhD(Cant), Chemistry Divn DSIR, PO Box 29-181, Christchurch 4 (Scientist-Food), M'73
- LOW, Seng Chuan**, DipSci MSc(Otago), 18 Jalan Telok Gading, Kelang 41200 Selangor, Malaysia (Senior Staff Engineer), M'82
- LOWE, Debra**, 16/14 Whitaker Place, Auckland, S'89
- LUCA, Vittorio**, BSc(Hons)(Well), Chemistry Dept, Victoria University Of Wgtn (Teaching Assistant), G'85
- LUNDIE, Karen**, BSc(Hons), C/- Chemistry Division, Victoria Univ, PO Box 600, Wellington (Inorganic Technic/Res Assistan), G'88
- LUNDON, Yvonne Marie**, BSc(Chem), PO Box 1656, Wellington (Trade & Tariff Consultant), M'87
- LYNCH, Gregory Paul**, BSc(Hons)(Otago), Chemistry Dept, University Of Otago, PO Box 56 Dunedin (PhD Student), G'86
- LYNDON, Rex Murray**, BSc, Alimentech (NZ) Ltd, PO Box 14-258, Panmure Auckland (Chief Chemist), M'90
- LYON, Graeme Lester**, BSc(Hons)(Otago) PhD(Massey), Nuclear Science, DSIR, PO Box 31-312, Lower Hutt (Scientist), M'68
- LYON, Robert Barry**, BSc, 33 Murvale Drive, Bucklands Beach, Auckland (Manager - Perkin Elmer)
- LYONS, Karen**, MSc(Hons) PhD(Auckland), 425 College St, Palmerston North (Housewife), M'83
- MACDONALD, Colin Graham**, NZCS, 17b Lucknow Road, Havelock North (Product Devel Manager), A'81
- MACDONALD, Melanie Lael**, BSc, C/- Tui Milk Products Ltd, Private Bag, Palmerston North (Analytical Chemist), G'88
- MACDOUGALL, Alan John**, "MiNZion" Rd 2, Roxburgh, Central Otago, S'89
- MACGIBBON, Alastair Kenneth Hugh**, BSc(Hons) PhD(Massey), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Scientist), M'82
- MACKAY, Ian Murray**, BSc, Chemical Cleaning Ltd, Mt Maunganui (Production Manager), M'75
- MACKAY, Angus Murray**, BSc, G L Bowron & Co Ltd, PO Box 19-544 Woolston, Christchurch (Chief Chemist), M'63
- MACKAY, Kenneth Malcolm**, BSc(Hons)(Aberdeen) PhD(Cant) FRSC, Dept Of Chem, Univ of Waikato, Private Bag, Hamilton (Professor Of Chemistry), F'79 M'70
- MACKENZIE, Kenneth John Dallas**, MSc(Hons) PhD DSc(Well) FRSC CChem FICeram, DSIR Chemistry, Private Bag, Petone (Scientist), F'84
- MACKIE, Douglas**, 23 Metcalfe Road, Ranui, Auckland (Student), S'89
- MACKNEY, Alan William**, MSc(Sydney) FRACI, 120 Macleans Road, Bucklands Beach, Auckland (Retired), HonF'78 F'63
- MACLAGAN, Robert George Archibald Remington**, BSc(Hons)(West Aust) PhD(Anu), Chemistry Dept, University Of Canterbury, Christchurch 1 (Senior Lecturer), F'82 M'72

- MACLEAN, Dorothy Margaret**, BSc Cophlp, C/o Peripheral Vascular Unit, Public Hospital, Wellington (Snr Hosp Scientific Officer), M'59
- MACLEOD, Roderick John William**, BSc MNZIFST, Unit 13, 151 Selwyn Street, Onehunga, Auckland (Production Manager), M'75
- MADLE, David Victor**, BSc(Hons)(Lond) BA(Hons), The Open Polytechnic of NZ, Private Bag, Lower Hutt (Tutor), F'79 M'64
- MAGUIRE, Sean Michael**, BSc(Hons)(Well), Mobil Oil (NZ) Ltd, PO Box 2497, Wellington (Special Products Asst), M'88
- MAHON, William Anthony John**, MSc DSc(Well), Geothermal Energy NZ Ltd, PO Box 8332 Symonds St, Auckland (Scientific Director), M'62
- MAHONEY, Michael Francis**, BSc, Rua Justo Azambuja 365, Caixa Postal 15176, 01518, Sao Paulo, Brazil (HOD Science), M'80
- MAIN, Lyndsay**, MSc(Well) PhD(Auck), Chem Dept, Univ of Waikato, Private Bag, Hamilton (Senior Lecturer), M'72
- MAISTER, Selwyn Gerald**, MSc(Cant) DPhil(Oxon), Christchurch Polytechnic, PO Box 22-095, Christchurch 1 (Head Of Department), F'84 M'73
- MAKIN, John Leonard**, BSc, Ciba-geigy NZ Ltd, PO Box 19-149 Avondale, Auckland (Manager (Agricultural Division)), M'63
- MALCOLM, Geoffrey Norman**, MSc(NZ) PhD(Manc), Dept Of Chem/Biochem, Massey University, Palmerston North (Professor Physical Chemistry), F'66 M'60
- MALCOLM, Marion Eveline**, BSc DipEd BA, 6 Kenya Street, Wellington (Retired), M'46
- MALTHUS, Rex Sydenham**, BSc(NZ), 42 Evans Street, Opoho, Dunedin (Retired), M'51
- MANN, Bartholomew Robin**, MSc PhD FNZIM, GL Bowron And Co Ltd, PO Box 19-544 Woolston, Christchurch (Managing Director), F'68 M'62
- MANNING, Terence David Ross**, MSc PhD(Auck), DSIR Chemistry, Private Bag, Petone (Scientist), M'68
- MANSFIELD, Brian Charles**, BSc(Hons)(Cant) Cop PhD(Otago), Dept Of Microbiol & Genetics, Massey University, Palmerston North (Lecturer), M'82
- MARSHALL, Kevin Raymond**, BE(Chem)(Hons)(Cant) MSc(Birm) PhD(Massey), NZ Dairy Board, PO Box 417, Wellington (Corporat Res & Dev Manager), M'66
- MARSHALL, Thomas**, BSc BE(Mining) BE(Metallurgy) AOSM AUSIMM, 215 Whites Line East, Lower Hutt (Director), F'66 M'55
- MARTIN, Anwyn Margaret**, MSc(NZ) ARACI AMAUSIMM MAIE, 19 Ratten Ave, Kew East, Vic, Australia 3102 (-), M'58
- MARTIN, Gerald Francois Louis**, BSc MIFST(NZ), 13 Crowther Avenue, Greenwich NSW 2065, Australia (Retired), M'44
- MARTIN, John William Laurence**, MSc(Hons) PhD(Well), Chch Boys' High School, Straven Road, Christchurch 1 (AssociateTeacher), M'75
- MARTIN, Peter Lawrence**, MSc PhD(Auck), Chemical Cleaning Ltd, Totara St, Mt Maunganui (Chemist), M'76
- MARTIN, Wilhelmina**, BSc, 23 Puriri Terrace, Palmerston North, M'88
- MARTYN, Robert John**, BSc(Hons) PhD(Cant), Chemistry Division, DSIR, PO Box 29-181, Christchurch 4 (Section Leader), M'87
- MASON, Jennifer Mary**, BSc(Hons)(Well), Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'83
- MATHESON, Robert Archibald**, MSc PhD(NZ), 91 Sutherland Street, Dunedin (Retired), F'77 M'53
- MATHESON, Trevor Walter**, BSc(Hons) PhD(Otago), Coal Research Assn Of NZ, PO Box 31-244, Lower Hutt (Manager, Research and Info Grp), M'88
- MATTHEWS, Richard Ellis Ford**, ONZ MSc(NZ) PhD ScD(Cant) FRS FRSNZ, Dept of Cellular & Molecular, Biology, Auck Univ, Prvt Bag, Auckland (Retired), HonF'87 F'63
- MATTINGLEY-CAMERON, Joan Muriel**, MSc PhD(Well) Cophlp, Comm Tech Consulting Assoc Ltd, PO Box 10-704, Wellington (Director), HonF'89 F'74
- MAY, Alan Victor**, BSc, Greenbushes Tin Ltd, 91 Kensington St East Perth, West Australia 6000 (Snr Process Engineer), M'67
- MAYER, Gregory Douglas**, MSc, Aust Gvt Analytical Labs, 11 William St Melbourne, Vic 3000 Australia (Bondsman), M'82
- MAYLOR, Ronald**, BSc(Hons) PhD(Leeds), 12 Micawber Place, Howick, Auckland (Technical Manager), M'76
- MCADAM, Christopher John**, BSc, Chemical Services, Meremere Power Station, P B Meremere (Station Chemical Officer), M'90
- MCANELLY, Francis Patrick**, BSc FINSTPET, 53d David St, New Plymouth (Manufacturing Manager), M'58
- MCARDLE, Catherine**, 21 Rawhiti Avenue, Palmerston North, S'88
- MARTHUR, Gordon Keith**, NZCS, NZ Industrial Gases, PO Box 30-202, Lower Hutt (Laboratory Supervisor), A'84
- MCCABE, William James**, BSc, Institute Of Nuclear Science, Private Bag, Lower Hutt (Scientist), M'57
- MCCAPRA, Ronald**, LRSC ATSC, Coates Bros (NZ) Ltd, PO Box 12-748 Penrose, Auckland (Managing Director), F'86 M'65
- MCCARTAIN, Michael John**, BSc, 193 Whites Line East, Lower Hutt, M'78
- MCCONNELL, Stephen Robert**, MSc(Hons)(Well) PhD(Murdoch) ARACI, Hewlett Packard (NZ) Ltd, PO Box 26-189 Epsom, Auckland (Sales Eng Tech Computer Sys), M'78
- MCCONNELL, Cara**, 54 Hansons Lane, Upper Riccarton, Christchurch, S'91
- MCCONNON, Peter Alan**, MSc, Aorangi Laboratories Ltd, Box 2069, Dunedin (Managing Director), F'88 M'54
- MCCORT, John Graham**, BSc, Carboline Coatings Ltd, Box 76-104 Manakau City, Auckland 6 (Commercial Manager), F'85 M'64
- MCCRAW, Ralph Henry**, MSc(NZ) FIFST(NZ), JWattie Canneries Ltd, Box 439, Hastings (Chief Chemist), M'58
- MCCURDY, Alan Underwood**, BA BSc, 35 Grahams Road, Christchurch (Retired), F'78 M'61
- MCDONALD, Armando Gabriel**, BSc PgDipSci MSc, Wood Chemistry Section, Forest Research Institute, P B Rotorua (Scientist), M'88
- MCDONALD, Duncan Finlayson**, Margaret Place, Hahei, RD 1, Whitianga (Retired), M'73
- MCDONALD, Dugald Quentin**, BSc(Hons)(Cant), Chemistry Department, University Of Canterbury, Christchurch (PhD Student), G'89
- MCDONALD, Hamish**, MSc(Hons)(Auck) BSc, C/- Wellcome Australia Ltd, PO Box 12 Concord, NSW 2137 Australia (Packaging Manager), M'86
- MCDONALD, Ian Robert Clark**, OBE MSc(NZ), 59 Tilley Road, Paekakariki (Retired), HonF'86 F'65
- MCDONALD, Kieran Francis**, Shell Oil (NZ) Ltd, PO Box 38-227, Petone, M'88
- MCDONNELL, Paul**, 26 Knowles Street, Palmerston North, S'90
- MCELROY, Peter James**, BSc(Hons) PhD(Otago), Dept Of Chemical Engineering, University Of Canterbury, Christchurch 1 (Senior Lecturer), M'67
- MCEWAN, Murray James**, MSc PhD(Cant), Chemistry Dept, University Of Canterbury, PB Christchurch (Reader), F'78 M'64
- MCGAVIN, Dennis Gilbert**, MSc(Well) PhD(Monash) BSc, DSIR Chemistry, Private Bag, Petone (Scientist), M'77
- MCGHIE, Tony Kevin**, BSc, BSES, PO Box 86, Indooroopilly, Queensland 4068, Australia (Mass Spectrometer Technician), M'87
- MCGILLIVRAY, William Anderson**, CBE JP MSc PhD(NZ) DSc(Massey) FRSNZ, 72 Harrier St, Tauranga (Retired), HonF'81 F'52
- MCGRATH, Kathryn Mavis**, BSc(Hons)(Chem), Res Sch Physical Sci & Eng, Aust Nat Univ, GPO Box 4, Canberra Act 2601, Australia (PhD Student), S'89
- MCGROUTHER, Kim Grace**, MSc(Chem), Harington Point, RD 2, Dunedin, S'89
- MCINNARNEY, Michael Sean**, BSc(Auck), Britannia Brand, PO Box 183, Papakura, Auckland (Analytical Chemist), A'91
- MCKEE, Edith Victoria Ann**, BSc(Hons) PhD(Belfast), Chemistry Dept, University Of Canterbury, P B Christchurch (Senior Lecturer), M'82
- MCKEEGAN, Neil Stuart**, BSc(Hons)(Cant), C/o Riccarton High School, Curletts Rd, Christchurch 4 (Teacher), M'82
- MCKEEGAN, William Relph**, MSc DipIndChem, 3 Kotare Street, Christchurch 4 (Retired), M'51
- MCKENZIE, Graeme James**, NZCS, Southland Regional Council, Private Bag, Invercargill (Charge Technician), M'90
- MCKENZIE, Lindsay Ronald**, NZCS BSc, Southland Catchment Board, Cnr Price St/north Rd, Invercargill (Director), M'85
- MCKEOWN, Robert Henry**, MSc(NZ) PhD(Otago) CChem FRSC MPS(NZ) MPS(GB), Pharm Chem Research Lab Ltd, PO Box 5313, Dunedin (Director/Consultant), F'80 M'65
- MCKINLEY, Allan James**, BSc(Hons) PhD(Cant), Chem Dept, Furman University, Greenville, Sth Carolina 29613, United States of America (Res Fellow), M'84
- MCKINNON, Alan John**, MSc(Auck) PhD(Princeton), Wool Research Org Of NZ, Private Bag, Christchurch (Principal Scientist), F'79 M'67
- MCKONE, Gerard Joseph**, NZCS, Chemby Chemicals Td, 24 Poland Rd Takapuna, Auckland (Tech Sales Rep), T'87
- MCLAUGHLIN, John Robert**, BSc(Hons) PhD(Otago), Wool Research Org Of NZ, Private Bag, Christchurch (Senior Scientist), M'75
- MCLELLAN, Gavin David**, MSc PhD(Auck) PhD(Glasgow) BSc, Chem Dept, Victoria University, PO Box 600, Wellington (Research Assistant), M'88
- MCLENNAN, Duncan James**, MSc PhD(Well) DSc(Auck), Chem Dept, Auckland University, Private Bag, Auckland (Associate Professor), F'77 M'68
- MCMASTER, Blair Nicholas**, Computer Science, Canterbury Univ, Private Bag, Christchurch, M'90
- MCMATH, Brian David**, BSc(Hons), NZIG, PO Box 22-065, Auckland (Manager Gas Systems), M'75
- MCMORRAN, David**, 20 Exeter Street, Green Island, Dunedin, S'90
- MCNAUGHT, Kenneth John**, DSc(NZ), 627 Grey Street, Hamilton (Retired), F'69
- MCNEIL, Steven James**, BSc(Hons) ME(Chem)(Cant), Wool Research Org Of NZ, Private Bag, Christchurch (Textile Chemist), G'85
- MCPARLAND, R**, PO Box 126, Napier
- MCQUEEN, Russell George**, BSc MPharm(Otago) MPS, 98 Main Street, Blacktown NSW, Australia 2148 (Pharmacist), M'69
- MCQUILLAN, Alexander James**, BSc(Hons) PhD(Otago), Chem Dept, Univ of Otago, PO Box 56, Dunedin (Senior Lecturer), M'77

- MCRONALD, Gordon Eric**, BSc(Hons) Mba(Otago), Riker Labs-Aust Pty Ltd, PO Box 122 Hornsby Nsw, Australia 2077 (Product Manager), M'80
- MCSWEENEY, Garry**, BSc, AC Hattrick Ltd, Patiki Rd Avondale, Auckland (Chief Chemist), F'86 M'67
- MEADS, Roger Francis**, BSc(Hons)(Cant), Chemistry Dept, University Of Canterbury, Christchurch (PhD Student), G'88
- MEAGHER, Lucy Phillipa**, BSc, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton (MSc Student), S'91
- MEINHOLD, Richard Horton**, MSc(Hons) PhD(Auck), Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'84
- MELLING, Peter James**, BSc(Hons)(Cantr) PhD(Well) MSGT & CCH, Battelle Columbus Labs, 505 King Ave. Columbus, Ohio 43201 USA (Senior Scientist), M'78
- MELTON, Laurence D**, MSc(Auck) PhD(Simon Fraser), Food Sci Dept, Univ of Otago, PO Box 56, Dunedin (Associate Professor), F'88 M'76
- MELVILLE, Andrew John**, BSc(Otago) CQA NZIFST, C/- NZ Breweries, PO Box 23, Auckland (Laboratory Services Manager), A'91
- MERCER, Colin Edward**, NZCS, Ivon Watkins-dow Ltd, Private Bag, New Plymouth (Environ Health Specialist), A'84
- METCALF, Walter Sidney**, MUSB MSc(NZ) DPhil(Oxon), 7 Quarry Road, Christchurch (Retired), F'66 M'41
- METCALFE, Loanne**, BSc(Hons) MSc Dalhousie, Villa Maria College, 21 Peer Street, Christchurch 4 (HOD Science), M'88
- METSON, Alan James**, MSc(NZ) DSc(Cant), 1 Burlington Road, Napier (Retired), F'74 M'40
- METSON, James Bernard**, BSc(Hons) PhD(Well), Chemistry Dept, University Of Auckland, P B Auckland (Lecturer), M'85
- MILES, Christopher Owen**, BSc(Waikato) MSc(Hons)(Waikato) DPhil. Ruakura Agricultural Centre, MAF, Private Bag, Hamilton (Scientist), M'91
- MILESTONE, Neil Brennan**, MSc(Well) DPhil(Waikato), Chemistry Division DSIR, Private Bag, Petone (Scientist), M'71
- MILLAR, Keith Raymond**, MSc PhD(NZ), Wallaceville Animal Res Cent, PO Box 40-063, Upper Hutt (Research Chemist), M'63
- MILLER, Christopher John**, NZCSc, Alimentech (NZ) Ltd, Box 14-258 Panmure, Auckland (Technical Director), A'78
- MILLER, Hugh Mynard**, BSc DipSci PhD(Otago), Southland Polytechnic, Private Bag, Invercargill (Senior Tutor), M'77
- MILLER, Ian James**, BSc(Hons) PhD(Cant), Carina Chemical Labs Ltd, PO Box 30-366, Lower Hutt (Managing Director), F'84
- MILLER, Ronald Bruce**, BA MSc(NZ) Agrl(Sweden), 3a Crofton Road, Ngaio, Wellington (Retired), F'70 M'46
- MILLIGAN, John Raymond**, MSc(Hons)(Auck), Chemistry Dept ATU, Private Bag CPO, Auckland (Lecturer In Chemistry), M'79
- MILLS, John Rutherford**, BSc(Hons)(Notts), Christ's College, Rolleston Avenue, Christchurch 1 (Teacher), F'78 M'69
- MILNE, Alan James**, MSc, NZ Aluminium Smelters Ltd, Private Bag, Invercargill (Chemist), G'86
- MINERS, John Oliver**, MSc PhD(Well) BSc, Dept Of Clinical Pharmacol, Flinders Med C Bedford Park, South Australia 5042 (Chief Pharm/Prof of Pharmacolo), F'90 M'73
- MITCHELL, James William**, BSc(Hons) PhD(Cant), DSIR Chemistry, PO Box 2224, Auckland (Section Leader), M'70
- MITCHELL, Kevin**, F5/414 Hereford Street, Christchurch, S'91
- MITCHELL, Robin Edward**, BSc(Hons)(Otago) PhD(Calgary), DSIR Plant Protection, Private Bag, Auckland (Scientist), F'83 M'71
- MITCHELL, Thomas Alexander**, MSc(NZ), 11b Petworth Place, Westmorland, Christchurch 8003 (Retired), HonF'88 F'78
- MOCHAN, Murray David**, BPharm MPS, 4 Waterhouse Street, Wakatu, Nelson (Tutor), M'89
- MOFFAT, Johnstone Flucker**, BA MSc(NZ) DipEd, C/- 8 Allister Avenue, Christchurch (Retired), HonF'81 M'31
- MOK, Kum Fun**, MSc(NZ) PhD(Well), Chem Dept, National University, of Singapore, Kent Ridge, Singapore 0511 (Associate Professor), F'81 M'64
- MOK, Yee Meng**, C/- Chemistry Department, Massey Univ Private Bag, Palmerston North, S'90
- MONK, Gary Neil**, BSc(Hons)(Cant), CFM Co Ltd, Belfast (Analytical Chemist), M'86
- MONKS, Simon Digby**, 201 Glenfield Rd, Birkenhead, Auckland
- MOON, Ronald Philip**, MSc(Cant) DipBusAdmin(PerthWA), FERNZ Corporation, PO Box 479, Auckland (Developpe Manager, Chemicals), M'87
- MOORE, Anthony John**, NZCS NZDipSci, C/o 364a Waiwhetu Rd, Lower Hutt (Production Chemist), A'84
- MOORE, John Brian**, BAgSci, 36 Chapter Street, Christchurch (Retired), M'60
- MORCOM, Anthony Thomas**, MSc(Hons) PhD(Auck), NZ Steel Ltd, Private Bag, Auckland (Senior Analyst), M'76
- MORGAN, Keith Raymond**, BSc(Hons) PhD(Well), Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'84
- MORICE, Isobel Murray**, MSc(NZ) PhD(Lond), 40 Wadestown Road, Wellington 1 (Retired), M'42
- MORRIS, George Clement**, BSc(Hons)(Otago), 10 Baker St, Caversham, Dunedin (Teacher), M'83
- MORRIS, Peter John**, MSc PhD(Well), Dept Of Chemistry, University Of Waikato, PB Hamilton, M'70
- MORRIS, Peter John**, MSc(Massey), NZ Pharmaceuticals Ltd, PO Box 1869, Palmerston North (Quality Manager), M'84
- MORRIS, Patricia Manhire**, BSc, Rangi Ruru Girls' School, 59 Hewitts Road, Christchurch 1 (Teacher), M'70
- MORRISH, Phillip William**, BPharm MPS, Pacific Pharmaceuticals Ltd, PO Box 11-183, Ellerslie, Auckland (Technical Manager), M'74
- MORRISON, Dan Alexander**, MSc(NZ) BSc, Algonquin College Chem Dept, 200 Lees Ave, Ottawa, Ont, Canada K1S 0C5 (Teaching Master), M'60
- MORRISON, Richard Stephen**, BSc(Hons) PhD(Massey), 2/4 Douglas St, Lincoln (Lab Technician), M'84
- MORTON, Alistair Stephen**, MSc(NZ), Rutherford High School, Kotuku St, Auckland 8 (Deputy Principal - Retired), M'65
- MORTON, Ian Douglas**, MSc(NZ) PhD(Cant) FRIC FIFST, 7a Rosebery Avenue, Harpenden, Herts, AL5 2qt England (Retired), F'55 M'44
- MOUSTAFA, Esams**, 261 Sunset Street, Kingsburg, California 93631, United States America, M'90
- MOYLE, Thomas Niels**, BSc, Defiance Flour Mills, PO Box 242, Christchurch (Chief Chemist), M'77
- MROCZEK, Edward Kazimierz**, BSc(Hons) PhD(Well), Geothermal Rsch Cntr, DSIR, Wairakei, Private Bag, Taupo (Scientist), M'81
- MUCALO, Michael Roger**, MSc(Hons)(Auck), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), G'87
- MUHAMMAD, Amjad Tariq**, C/- Chemistry Department, Otago University, Private Bag Dunedin, A'89
- MULLIGAN, Paul Elliot**, BSc, Production Manager, Clandeboye Dairy Factory, Clandeboye, Temuka (Msc Student), M'90
- MUMFORD, Robert Neill**, NZCS DipSM(Massey), Electricorp Production, Marsden Power Stat, Privat Bag, Ruakaka (Chemist), M'81
- MUNRO, Murray Herbert Gibson**, BSc(Hons) PhD(Otago), Chemistry Dept, University Of Canterbury, P B Christchurch (Reader), F'79 M'64
- MUNSTER, Robert John**, BSc(Hons)(Well), 347 Waterloo Road, Lower Hutt, Wellington (Safety & Environment Adviser), M'81
- MURDOCH, John Douglas**, MSc(NZ) DipEd, Cashmere High School, Rose Street, Christchurch 2 (Principal), F'82 M'64
- MURRAY, Graham**, 54 Old Porirua Rd, Ngaio, Wellington, G'88
- MYERS, Donald Burton**, PhD(Ucla), Anatomy Dept, Medical School, PO Box 913, Dunedin (Senior Research Fellow (HRC)), F'82 M'65
- NAIDU, Rajina**, BSc, Chemistry Dept Spas, Univ South Pacific, Box 1168 Suva Fiji (Postgrad Res Asst), G'88
- NAIRN, Debra Kay**, NZCS(Chem), Brown & Dureau (NZ) Ltd, Balmoral, Auckland (Product Manager), T'88
- NAIRN, Michael**, Chem/Biochem Dept, Massey Univ, Private Bag, Palmerston North, S'91
- NAISH, Geoffrey**, BSc, 43 Fyvie Ave, Linden Vale, Tawa, Wellington (Tutor - Retired), F'82 M'62
- NEEVE, Glenn Denis**, MSc(Auck), Alcan NZ Ltd, CPO Box 406, Auckland (Industrial Chemist), M'79
- NELLAILINGAM, Satyavathy**, BSc(Madras), ICI Paints, Hutt Park Road, Gracefield, Lower Hutt (Technical Officer), M'79
- NELSON, Donald Frederick**, MSc(NZ) DCrim(Calif) Cop(Dairy Bact Chem & Pract), PO Box 10-226, Balmoral, Auckland (Retired), F'67 M'46
- NELSON, Dennis George Anthony**, BSc(Hons) PhD(Well), Chemistry Dept, Victoria University Of Wgtn (Mrc Senior Fellow), M'81
- NELSON, Peter Edward**, BSc(Hons) PhD(Otago), Chemistry Divn DSIR, PO Box 2224, Auckland (Govt Analyst, AK), F'85 M'72
- NEWMAN, Catherine Mavis**, NZCS(Chem), NZ Steel Ltd, Private Bag, Auckland (Snr Environmental Analyst), A'89
- NEWMAN, Roger Huntly**, BSc(Hons)(Cant) PhD(UEA), Chemistry Division, DSIR, Private Bag, Petone (Scientist), M'72
- NEWSTEAD, David Francis**, MSc(Cant) PhD(Massey), NZ Dairy Research Institute, Private Bag, Palmerston North (Snr Res Officer), M'66
- NEWTH, Ronald Penrose**, NZCS, Chemistry Dept, Waikato Univ, Private Bag, Hamilton (Coordinator (BSc Tech)), F'86 M'78
- NG, Kee**, Dept Of Chem/Biochem, Massey University, Palmerston North (Msc Student), G'87
- NG, Koong Sinn**, BSc(Chem), Jalan Kapuk Kamal, No 19, Jakara 14470, Indonesia (Technical Executive), G'88
- NG, Mabel**, 2 Springwood Place, Balmoral, Auckland, S'89
- NG, Yew Sun**, BSc(Hons) PhD(Cant), Necom Ltd 10 Cornhill Place, Cherrybrook NSW, 2126 Australia (Director), M'79
- NICHOLLS, Gordon Alfred**, MSc PhD(NZ) DSc, 469 Riddell Road, Glendowie, Auckland (Retired), F'62 M'48
- NICHOLSON, Brian Kenneth**, BSc(Hons) PhD(Otago), School Of Science, University Of Waikato, Hamilton (Associate Professor, Chemistry), M'77
- NICHOLSON, Gillian Margaret**, NZCS, W Grayson & Associates, PO Box 12545 Penrose, Auckland (Laboratory Manager), M'89
- NICHOLSON, Keith**, BSc(Hons)(Sunderland) MSc(Manc) PhD(Strathclyde) M, Geothermal Institute, University Of Auckland, P B Auckland (Lecturer In Geochemistry), M'87

- NIEDERER, Alan Fraser**, NZCS MBa(Otago), Union Bank of Switzerland, Zurich, Switzerland (Fin Analyst, Assis Vice Pres), M'87
- NIELSON, Alastair James**, MSc PhD(Auck), Chemistry Dept, University Of Auckland, P B Auckland (Research Asst), M'85
- NISBET, Trevor John**, DPhil(Waikato), Department of Health, PO Box 5013, Wellington (Scientist, Therapeutics Sect), M'67
- NOKES, Christopher John**, BSc(Hons) PhD(Cant), DSIR Chemistry, PO Box 29-181, Christchurch (Scientist), M'82
- NOLAN, Susan Louise**, MSc(Hons)(Biochem), DSIR Chemistry, PO Box 2224, Auckland (Sect Leader Tox/Illicit Drugs), M'73
- NORDMARK, Birger Arnold**, Ingenieur(Stockholm) ANZIM MNZIFST, C/o NZ Dairy Board, PO Box 1300, Auckland (Retired), M'63
- NORRIS, Gillian Erna**, PhD(Massey), Dept Of Chem/Biochem, Massey University, Palmerston North (Research Officer), M'88
- NORRIS, Rodney John**, BSc, Chemistry Division DSIR, PO Box 2224, Auckland (Senior Scientist), M'70
- NOTTINGHAM, Peter Maxwell**, MSc(NZ) PhD(Aberdeen) FIFST(NZ), 111 Pipi Road, Whangamata (Retired), F'84 M'64
- NOVELLE, Andrew John Scott**, MSc(Hons)(Auck), Sanford Ltd, PO Box 443, Auckland (Technical Manager), M'78
- O'BRIEN, Glennys Anne**, MSc PhD(Auck) BSc, 51 Mack Place, Papakura, Auckland, M'86
- O'BRIEN, John Patrick**, MSc(Hons)(Auck) MIMM CEng, 12 Aratonga Avenue, Greenlane, Auckland (Consultant), F'86 M'74
- O'CONNELL, Michael James**, BSc(Hons) PhD(Cant), Bristol Univ Dept Org Chem, Cantock's Close Bristol, Bs8 Its England (Post-Doctoral Fellow), M'88
- O'CONNOR, Charmian Jocelyn**, CBE MSc(NZ) PhD DSc(Auck) FRSNZ CChem FRSC JP, Chem Dept, Univ of Auckland, Private Bag, Auckland (Professor), F'67 M'60
- O'DONOGHUE, Erin Margaret**, BSc(Hons), Levin Hort Res Centre, Kimberly Road, Levin (Scientist), M'87
- O'DONOVAN, Garry Michael**, MSc(Auck), Central Inst Of Technology, Private Bag, Trentham PO (Assistant Principal), F'80 M'65
- O'KANE, John McDonald**, MSc(NZ) MChemE, Coopers Animal Health, Private Bag, Upper Hutt (Development Chemist), F'78 M'55
- O'KEEFE, Roderick(Rory) Michael**, MSc DipTchg, James Cook High School, Dr Pickering Avenue, Manurewa (HOD Science Teacher)
- O'MAHONY, Richard Shane**, MSc(Auck) DipTchg, C/o Waitakere College, Rathgar Rd, Henderson Auckland (Teacher), M'80
- O'SHEA, Michael**, C/- Chemistry Dept, Otago University, PO Box 56 Otago, S'90
- OAKLEY, Henry Brazenor**, BSc(Hons)(Lond), 2/7 Telford Ave, Balmoral, Auckland 4 (Retired), M'45
- OATS, Owen John**, BSc, 40 Saxton Road, RD 1, New Plymouth (Retired), M'59
- ODELL, Allan Lloyd**, PhD(Lond) DSc(Auck), Chemistry Dept, Auckland University, PB Auckland (Emeritus Professor), HonF'85 F'63
- OFFICER, David Leslie**, BSc(Hons) PhD(Well), Dept Of Chem/Biochem, Massey University, Palmerston North (Lecturer (org Chem)), M'81
- OGILVIE, David James**, BSc, Auckland Regional Council, Private Bag, Auckland (Acting Head Scientist Drainage), F'85 M'66
- OGILVIE, Leasa Janice**, BSc DipTeaching, Paremata School, The Crescent, Paremata (Scale A Primary Teacher), S'88
- OLD, Kenneth Barry**, MSc DPhil(Waik), N Z Pharmaceuticals Ltd, PO Box 1869, Palmerston North (Technical Manager), M'77
- OLIVECRONA, Lloyd Malcolm**, BSc(Hons)(Well), Dussek Campbell Pty Ltd, PO Box 40-192 Glenfield, Auckland 10 (Technical Service), M'83
- OLIVER, Arthur Pleasant**, MSc(NZ), 3 Taunton Place, Stoke, Nelson (Retired), F'77 M'45
- OLIVER, Andrew Rex**, BSc(Hons), Shell Oil NZ Ltd, Private Bag, Wellington (Mark & Manufactur coordinator), M'91
- OLIVER, Kenneth John**, MSc(Hons) PhD(Auck), Reid Rd, RD 1, Hamilton (Self-Employed), M'82
- OLSEN, Gregory Michael**, BSc, Forest Research Institute, Private Bag 3020, Rotorua (Student), S'90
- ONG, Chin Choon**, BSc(Hons) PhD(Cant), Chem Proess Tech Singapore, Polytechnic, 500dover Rd, Singapore 0513 (Lecturer), M'84
- ONG, Michael Kee Saik**, MSc(Auck), Smith & Nephew Ltd, PO Box 442, Auckland (Tecnical Manager), M'87
- OO, Khaik Cheang**, BSc(Hons) PhD(Otago), Dept Of Biochemistry, University Of Malaysia, Kuala Lumpur Malaysia (Assoc Prof Biochemistry), F'80 M'64
- OPIE, Melville Charles Albert**, BSc, Papanui High School, Langdons Rd, Christchurch 5 (Teacher), M'69
- ORAMS, Simon**, 3/41 Taylor Street, Blockhouse Bay, Auckland, S'89
- ORCHISTON, Hector Douglas**, MSc(NZ) DSc(Cant) ARACI MALAS MRIPA, 472 Galston Rd, Dural 2158, Australia (Retired), M'44
- OSBORNE, Graham Oliver**, BSc(Hons) PhD(Wales) ARSC, Esgair, Llansadwm, Llanwrda, Dyfed Sa19 8na, Wales UK (Senior Lecturer), F'71 M'66
- OUGHTON, Timothy James**, BSc(Hons)(Cant) DipTchg(Hons), Chch Boys' High School, Straven Rd, Christchurch 1 (PR2 Science), M'87
- OWERS, William Ronald**, NZCS(Chem) NZCS(Metal), Industrial Processing Divn, DSIR Private Bag, Petone (Scientist), M'84
- OZICH, Davorin Ivan**, MSc(Auck), Essex Laboratories NZ Ltd, PO Box 22-074 Otahuhu, Auckland (Director), M'79
- PACKER, John Edward**, MSc(NZ) PhD(Lond) CChem FRSC, Chem Dept, Auckland University, Private Bag, Auckland (Associate Professor), F'76
- PAGE, Alan Howard**, 17 Richmond Rd, Ponsonby, Auckland
- PAGE, Campbell Thomas**, BSc(Hons) PhD(Cant), CIBA-GEIGY Ltd Bau K-411 306, Postfach CH-4002 Basel, Switzerland (Group Leader - Dyestuff Researc), M'77
- PAICE, Tina**, C/- Dept of Nursing & Health, Studies, Whitireia Polytechnic, Wineera Drive, Porirua, M'91
- PAITRY, Mervyn**, NZCS(Chem), 16 Korma Road, Mt Roskill, Auckland, S'89
- PALMER, Brian Desmond**, MSc(Hons) PhD(Auck) DIC(Lond), Cancer Res Lab Medical Sch, Auckland Univ, Private Bag, Auckland (Senior Research Fellow), M'82
- PANCHIA, Harshad Narsai**, Analytical Laboratory, NZ Steel Ltd, P B Auckland (Senior Analyst), M'89
- PAPPS, Murray Douglas**, BSc(Hons)(Cant), C/- L&k:Rexona Pty Ltd, PO Box 41, Minto, NSW 2566, Australia (Technical Director), M'70
- PARBHU, Ashok Neil**, 9a Hereford Street, Palmerston North, S'89
- PARDOE, Elizabeth Christina**, 68 Campbell Street, Wairoa, A'89
- PARISH, Roy Keith**, Chemical Officer, Electricorp, Huntly Power Stn, Private Bag, Huntly, M'90
- PARKER, Edward Francis**, BSc(Chem), 7 Erin St, Hawera (Lab Technician), A'91
- PARKER, Rani Estelle**, BSc CopHlp FNZIMlt CT(IAC) CMIAC, 6 McKay Street, Paraparumu Beach (Cytologist), M'60
- PARNELL, David Laurence**, MSc(Auck), Formica NZ Ltd, Private Bag, Papakura, Auckland (Distribution Manager), M'72
- PARRY, David Anthony Dougall**, BSc(Hons) PhD DSc(Lond) FRSNZ, Dept Of Physics/Biophysics, Massey University, Palmerston North (Professor), F'83 M'75
- PARSONS, Brett Winston**, NZCS, Hamilton Chemicals (NZ) Ltd, 355 Kohikatea Drive, Hamilton (Manager), A'84
- PASTELIDIS, Demetre**, Graduate(Athens), 81 Farnham St, Wellington 2 (Retired), F'80 M'58
- PATCHETT, Mark Langton**, MSc(Hons) DPhil(Waikato), Biochem Dept Univ Cambridge, Tennis Court Rd Cambridge, Cb2 1qw England (Post-Doc Res Asst), G'85
- PATEL, Dhiru Bhai**, MSc(Chem)(Jabalpur), Sci Svcs, Auck Regn Cncl, Private Bag, Auckland (Snr Techn, Lab Supervisor), M'86
- PATEL, Vijay Jayanti**, Chemistry Dept, Victoria University Of Wgtn (Student), S'86
- PATTERSON, John Ewen**, MSc(Well), Chemistry Divn, DSIR, Private Bag, Petone (Scientist), M'81
- PATTINSON, Mervyn Edward**, FIFST(NZ), 108 Hutchinsons Rd, Howick, Auckland (Retired), M'46
- PAUL, Ivan Keith**, BSc, Aerosol Products Ltd, PO Box 18-051 Glen Innes, Auckland (Sales Manager), M'78
- PAYNE, Everit**, BSc(Hons) PhD(Q'ld), Ruakura Agric Res Centre, Private Bag, Hamilton (Scientist), M'72
- PEACE, Susan Margaret**, BSc, Auckland Area Health Board, Greenlane Hospital, PB Auckland (Clerk), M'72
- PEACOCK, Cedric Brian**, BSc, 36 Parkdale Drive, Wanganui (Retired), F'81 M'65
- PEAKE, Barrie Michael**, BSc(Hons) PhD(Cant), Chemistry Dept, Otago University, Box 56, Dunedin (Lecturer), F'84 M'69
- PEARCE, Euan Ian Frederick**, BDS MS(Rochester) PhD(Otago), Dental Research Unit, Medical Res Council, Box 27007 Wellington (Senior Research Officer), M'76
- PEARCE, Philip David**, MSc(Hons)(Massey) PhD(Adelaide), Biotechnology Divn DSIR, Private Bag, Palmerston North (Scientist), M'73
- PEDDIE, William Stewart**, BSc MPhil(Auck) DipEd, Mangere College, Bader Drive, Mangere, Auckland (Head of Science), F'85 M'69
- PEET, Nelson John**, BSc(Hons)(Edin) PhD(Cant) FICHEM FIPENZ, Dept Chem & Process Eng, University Of Canterbury, Christchurch (Senior Lecturer), F'78 M'64
- PENFOLD, Bruce Russell**, MSc(NZ) PhD(Cant) FRSNZ, Chemistry Dept, University Of Canterbury, PB Christchurch (Retired), F'64 M'53
- PENHALE, Hugh Russell**, MSc(NZ), 31 Miro St, Upper Hutt (Retired), M'49
- PERCIVAL, Henry Joseph**, MSc PhD(Well) MSc(Hons), DSIR Land Resources, Private Bag, Lower Hutt (Team Leader), F'81 M'70
- PERRIN, Dawn Roberta**, MSc(NZ) FRSC FRACI, 10 Dugan Street, Deakin ACT, Australia 2600 (Senior Research Scientist), F'74 M'45
- PERRY, Nigel Brian**, BSc(Hons)(Bristol) PhD(Otago), C/- MAF Tech, Dept of Chem, Univ Of Otago, PO Box 56, Dunedin (Research Scientist), M'84
- PETERSEN, George Bouet**, MSc(NZ) MA DPhil(Oxon) FRSNZ, Biochem Dept, Otago University, PO Box 56, Dunedin (Professor Of Biochemistry), F'67 M'60
- PETERSEN, Melvin John**, MSc(Massey), Ruakura Food Services Centre, Private Bag, Hamilton (Technical Consultant), M'82

- PETERSEN, Paul Martin**, BSc(Hons)(Well) PhD, Univ Chemical Lab, Cambridge, University, Cambridge, United Kingdom (PhD Fellow), G'86
- PETRICEVICH, Anna**, 28 Cassino Street, Bayswater, Auckland, S'90
- PHELAN, Edward Linton**, BSc PhD(Otago), Wellcome Res Institute, Medical School, Box 913, Dunedin (Senior Res Officer), F'81 M'65
- PHILLIPPS, Maurice Wayne**, MSc(Hons)(Waikato), Caxton Products Ltd, Private Bag, Henderson, Auckland (Materials Manager), M'83
- PHILLIPS, Anthony Ronald John**, Biochemistry Dept, University Of Otago, Box 56 Dunedin (Student), G'88
- PHILLIPS, Leon Francis**, MSc (NZ) PhD ScD (Cant) FRSNZ, Chemistry Dept, University Of Canterbury, PB Christchurch (Professor), F'66 M'62
- PINSKY, Boris**, IngChem(Toulouse), 6 Seaforth Rd, Waihi Beach (Retired), M'71
- PIOLETTI, John Benjamin**, Chemistry Department, Univ Of Waikato, Private Bag, Hamilton, S'91
- PITHAM, David Clement Sidney**, BSc(Hons)(St Andrews) CChem MRSC, Insapipe Industries Ltd, PO B Ox 58-056 East Tamaki, Auckland (Product Manager), M'76
- PLACKETT, David Victor**, BSc(Hons)(Sussex) PhD(British Columbia), Forest Research Institute, Private Bag, Rotorua (Composite Prod Res Manager), M'89
- PLOWMAN, Jeffrey Ernest**, BSc(Hons) PhD(Massey), NZDRI, Private Bag, Palmerston North (Senior Scientist), M'79
- POLLARD, John Scott**, BSc DipIndChem FICHEM FIPENZ, 76 Hackthorne Road, Cashmere, Christchurch (Retired), HonF'88 F'62
- POPE, Christopher George**, BSc(Hons) PhD(Lond) DIC ARCS, Chemistry Dept, Otago Univ, PO Box 56, Dunedin (Senior Lecturer), F'81 M'62
- PORTER, Lawrence James**, MSc PhD(Well), Chemistry Division DSIR, Private Bag, Petone (Section Ldr Org Chem), F'73 M'67
- POWELL, Harry Kipton James**, MSc PhD(Well) BSc, Chem Dept, Univ of Canterbury, Private Bag, Christchurch (Reader), F'78
- POWELL, Robert J**, BSc(Hons)(Otago), Biochemistry Dept, University Of Otago, PO Box 56, Dunedin (PhD Student), S'87
- POYSDEN, Nigel**, 36 Dover Road, Wainuiomata, Wellington, S'91
- PRICE, Sandra Brigit**, Chemistry Dept, University Of Waikato, Hamilton (Student), S'87
- PRITCHARD, Mark William**, MSc(Hons)(Massey), Grasslands Divn, DSIR, Private Bag, Palmerston North (Scientist), M'79
- PRITCHARD, Nathaniel Eames**, MRSC CChem, Electricorp, Private Bag, Huntly (Environmental Manager), M'85
- PROVAN, William George**, BSc DipSci(Otago) DipMgt, Ravensdown Fertiliser Co-op, Private Bag, Napier (Production Manager), M'82
- PURCHASE, Nigel Garth**, BSc(Hons)(Cant) PhD(Cant), Chemistry Dept, University Of Canterbury, PB Christchurch (Research Chemist), M'85
- PYBUS, John**, BSc, Auckland Hospital, PB Auckland (Senior Scientific Hospital), F'86 M'65
- QUARTLY, Murray John**, BSc, Cropper Harcross Limited, PO Box 4275, Christchurch 1 (Chemicals Rep), M'89
- QUAYE, Geoffrey Walter**, BSc(Hons)(Cant), Mobil Oil NZ Ltd, PO Box 13-248 Johnsonville, Wellington (Chemist), G'85
- QUEDLEY, Noelene Alice**, 67 Potter Avenue, Northcote, Auckland, S'89
- QUICKENDEN, Terence Ivan**, MSc(NZ) PhD(Cant) ARACI, Dept Of Phys& Inorg Chem, Univ Of West Aus Nedlands, WA 6009 Australia (Senior Lecturer), M'62
- QUIN, Bertram Francis**, MSc PhD(Massey), Quin Consultants Ltd, PO Box 24-020, Auckland (Scientist), M'75
- RAE, Alan David**, MSc PhD(Auck), Chemistry Dept, University Of Nsw, Sydney, Australia (Associate Professor), M'67
- RAE, Wallace James**, MSc(Cant), Ivon Watkins-dow Ltd, Private Bag, New Plymouth (Industrial Chemist), M'69
- RAFFERTY, Warrick John**, MSc(Hons)(Auck), 17 Beazley Crescent, Tikipunga, Whangarei (Geologist), G'77
- RAFTER, Thomas Athol**, Obe MSc(NZ) DSc(Well) FRSNZ, 16 Simla Crescent, Khandallah, Wellington 4 (Retired), HonF'69
- RAINSFORD, Kim Drummond**, BSc(HonsANU) PhD(Lond) FIBiol MACE MRCPath FRSC, C/- Dept Of Biomedical Science, McMaster Uni Hamilton Ontario, Canada L8N 3Z5 (Prof Of Pharmacology), F'87 M'71
- RALFE, Theo Charles**, BA BSc DipEd, Pyes Pa Road, RD 3, Tauranga (Retired), M'65
- RANDS, David Barrett**, MSc PhD(Auck), Coates Brothers (Aust) Pty Ltd, PO Box 99 Album 2144, Australia (Managing Director), F'80 M'68
- RANDS, Maxwell Barrett**, MSc(NZ), 218 Riddell Road, Auckland 5 (Retired), F'57 M'37
- RANKIN, Douglas Alexander**, BSc(Hons) PhD(Cant), Wool Research Org Of NZ, Private Bag, PB Christchurch (Research Chemist), M'81
- RANKIN, Hugh McDougall**, DipIndChem And ChemEng ASTC, 138a Fendalton Road, Christchurch (Retired), M'54
- RANKIN, Robert John**, BSc, Ravensdown Fert Co-op Ltd, Box 3028 Richmond, Nelson (Production Superintendent), M'73
- RAWDON, Peter Douglas**, 35 Leverett Place, North New Brighton, Christchurch (Retired), M'80
- REAY, Peter Francis**, BSc(Hons) PhD(Cant), Biotechnology Divn DSIR, Private Bag, Palmerston North (Scientist), M'71
- REED, Christopher Alan**, MSc(Hons) PhD(Auck) BSc, Chem Dept Univ Of S Calif, Univ Park Los Angeles, CA 90089-0744 USA (Professor), M'71
- REEVE, John Edward**, MSc(Hons)(Well) MSc(Surrey), Agricultural Compounds Unit, Maf, PO Box 40-063, Upper Hutt (Scientist (Toxicology)), M'74
- REEVES, Roger Douglas**, MSc(NZ) PhD(RPI), Dept Of Chem/Biochem, Massey University, Palmerston North (Associate Professor), F'81 M'65
- REID, David John**, NZCS BSc Cop, Basf New Zealand Ltd, Cpo Box 407, Auckland 1 (Tech Sales Rep; Plastics Divn), G'86
- REWCASTLE, Gordon William**, MSc(Hons) PhD(Auck), Cancer Res Lab Medical School, Univ Of Auckland, Private Bag, Auckland (Snr Research Fellow), F'88 M'80
- RICHARDS, Edward Leonard**, MSc(NZ) PhD(Bristol), 6 Harrow Place, Palmerston North (Professor Emeritus), F'63 M'56
- RICHARDS, Kenneth Edward**, BSc(Hons)(Exeter) PhD(Keele), 95 Clyde St, Hamilton (Company Representative), F'78 M'66
- RICHARDS, Nolan Earle**, MSc PhD(NZ), Reduction ResDivn Reynolds, Metals Co Box 1200 Sheffield, Ala 35660 USA (Manager), F'66 M'54
- RICHARDSON, Barry Charles**, MSc PhD(Massey) BSc, 33a St Andrews Terrace, Hamilton (General Manager), M'72
- RICHARDSON, George Maxwell**, MSc PhD(Lond) DIC, 18 Cashmere Avenue, Khandallah, Wellington 4 (Retired), M'49
- RICHARDSON, John Baskerville**, MSc PhD(Auck) AssocMIPENZ, Ministry Of Energy, Private Bag, Wellington (Scientist), M'67
- RICHARDSON, Russell Keith**, MSc(Auck), NZ Dairy Research Institute, Private Bag, Palmerston North (Research Officer), M'77
- RICKARD, Clifton Edward Frank**, MSc PhD(Auck), Chemistry Dept, Auckland University, P B Auckland (Senior Lecturer), M'63
- ROBB, Alexander John Donaldson**, MSc(NZ), 14 Wales St, Dunedin (Retired), F'77 M'51
- ROBB, James**, MSc(NZ), 22 Oban Street, Roslyn, Dunedin (Retired), F'81
- ROBERTS, Charles Clarence**, MSc(NZ), 70 Richardson Road, Mt Albert, Auckland 3 (Retired), M'36
- ROBERTS, Kathrine Gay**, BSc, Epsom Girls Grammar School, Epsom, Auckland (Deputy Principal), M'79
- ROBERTS, Lynley Susan**, MSc(Auck), 83 Gibblehirst Road, Mt Albert, Auckland (Teacher), G'83
- ROBERTSON, John Gray**, MSc(Otago) PhD(Massey), 2/114 Ngapuhi Road, Remuera, Auckland (Director), M'65
- ROBERTSON, John Maxwell**, BSc(Hons) PhD(Otago) CChem MRSC MIFST(NZ), DSIR Chemistry, PO Box 29-181, Christchurch (Government Analyst), F'77 M'67
- ROBERTSON, Peter Struan**, MSc(NZ) PhD(Reading), 11 Manuka St, Palmerston North (Retired), F'72 M'53
- ROBINSON, James Roper**, MA MD PhD ScD(Cant) FRACP FRSNZ, 42 Prestwick Street, Maori Hill, Dunedin (Emeritus Prof Of Physiology), F'63
- ROBINSON, Marion Frances**, CBE MHSc(NZ) PhD(Cant) FRSNZ, 42 Prestwick Street, Moari Hill, Dunedin (Emeritus Prof of Nutrition), F'76 M'69
- ROBINSON, Nicholas Peter**, MSc(Hons)(Waikato), Chemistry Dept, University Of Waikato, Hamilton (DPhil Student), M'88
- ROBINSON, Phillip Frederick**, MSc(Auck), Hardie Decorative, PO Box 71-060, Auckland 7 (Technical Manager), M'87
- ROBINSON, Peter Graham**, MSc PhD(Auck), Waikato Polytechnic, Private Bag 3036, Hamilton 2020 (Senior Tutor), M'71
- ROBINSON, Ward Thomas**, MSc PhD(Cant) FRSNZ, Chemistry Dept, University Of Canterbury, Christchurch (Reader), F'78 M'62
- RODGERS, Beryl Edith Winifred**, BSc(Hons)(Sthhmpn), Mobil Oil NZ Ltd, Box 38-073, Petone (Senior Chemist), M'78
- RODGERS, Kerry Anthony**, MSc PhD(Auck), Geology Dept, Auckland University, PB Auckland (Associate Professor, Geochem), F'86 M'70
- RODLEY, Gordon Allen**, MSc PhD(Lond), Chemistry Dept, University Of Canterbury, PB Christchurch (Reader), F'78 M'64
- ROEPER, Jacob**, Ing(Bolsward Dy Col Ned) MNZFST, NZ Dairy Research Institute, Private Bag, Palmerston North (Senior Research Technologist), M'88
- ROGERS, Buck**, Chemistry Department, PO Box 56, Dunedin, S'89
- ROGERS, David Alan**, MSc(Hons) PhD(Auck) BSc, GCNZ Woodward-Clyde, PO Box 37-547, Parnell, Auckland (Senior Environmental Chemist), M'84
- ROGERS, Donald Evan**, MSc(Well) PhD(Monash), DSIR Chemistry, Private Bag, Petone (Scientist), M'82
- ROGERS, John**, MSc(NZ) PhD(Cant) MAIME FAUSTIMM FRNZIH, 20 Miles Avenue, Papatoetoe, Auckland (Consultant), HonF'86 F'65
- ROGERS, Karyne Maree**, BSc(Chem), 57 Sunbrae Drive, Silverstream, Lower Hutt (Student), A'90
- ROLLO, Joanne Rae**, BSc(Hons)(Well), Chemistry Dept, Victoria University Of Wgtn (PhD Student), G'88

- RONALDSON, John William**, DPhil(Waikato), 71 Boundary Road, Hamilton (Retired), M'46
- ROPER, Warren Richard**, MSc PhD(Cant) FRS FRNSZ, Chem Dept, Auckland University, Private Bag, Auckland (Professor Of Chemistry), F'84 M'62
- ROSS, Angela**, 29 Drivers Road, Dunedin, S'90
- ROSS, Desmond Joseph**, MSc(NZ) PhD(Lond) DipBact(Lond), DSIR Land Resources, Private Bag, Lower Hutt (Soil Biochemist), F'73 M'48
- ROSSER, Maxwell John**, ARMIT MSc(Monash) PhD(Auck) ARACI, Christ's College, Rolleston Ave, Christchurch 1 (Headmaster), F'82 M'73
- ROUGHAN, Phillip Grattan**, MSc(Otago) PhD(Massey) DSc(Otago) FRNSZ, DSIR Fruit & Trees, Mt Albert Res Cntr, Private Bag, Auckland (Scientist), F'86 M'66
- ROWDEN, Murray Walker**, MSc(Cant), Auckland Chemical Manufacturers, PO Box 323, Christchurch (Part-Time), M'72
- ROWE, Terence Michael**, LRSC, NP Dist Cncl, Wastewater Trtmt, Plant, Rifle Range Road, New Plymouth (Scientist), M'80
- ROY, Ronald Urwin**, BSc, 36 Seven Oaks Drive, Christchurch (Retired), F'69 M'63
- RUBIE, Henry Stephen**, NZCS, Nalco NZ Ltd, PO Box 14-236 Panmure, Auckland (District Manager), A'80
- RUFFELL, Gerald Ernest**, MSc(Auck) ANZIM, 3M (NZ) Ltd, PO Box 33246 Takapuna, Auckland (Quality Assurance Supervisor), M'64
- RUMBALL, Sylvia Vine Sheat**, MSc(NZ) PhD(Auck), Dept Of Chem/Biochem, Massey University, Palmerston North (Associate Professor), M'62
- RUSH, Carolyn**, 280 Albert Street, Palmerston North, S'89
- RUSHWORTH, George Edward**, MSc(Leeds), 88 Kauri Street, Wellington 3 (Retired), M'48
- RUSSELL, Graeme Baxter**, BSc(Hons) PhD(Cant), Biotechnology Divn DSIR, Private Bag, Palmerston North (Scientist), F'79 M'62
- RUSSELL, John Michael**, BSc(Hons) PhD(Cant), Meat Research Institute of NZ, PO Box 617, Hamilton (Chemist), M'77
- RUSSELL, Louise Elizabeth**, MSc(NZ) MRSC DipEd DipTchg, Tawa College, Box 51-045, Tawa, Wellington (HOD Science), F'87 M'70
- RUSSELL, Sarah Grace Gray**, BSc(Hons)(Well), Chemistry Dept, Victoria University Of Wgtn, PO Box 600 Wellington (PhD Student), G'86
- RUSSELL, William Ernest**, MSc(NZ) MRSC MIPENZ FICHEM E, 16 Sunnyhill Crescent, Pakuranga, Auckland (Consultant: Chem Eng), F'63 M'43
- RUTLEDGE, Peter Stewart**, MSc PhD(NZ) DSc(Auck), Chemistry Dept, Auckland University, PB Auckland (Associate Professor), F'86 M'60
- RUTTERSMTTH, Juliet Vanessa**, Thermophile Research Unit, Univ Of Waikato Private Bag, Hamilton, S'90
- RYAN, Glen Richard**, MSc(Auck), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), G'86
- RYBURN, Graham Middleton**, BSc, 9a Lingarth Street, Remuera, Auckland (Industrial Tech Consultant), M'60
- SAGOO, Belinder**, BSc(Tech), 211 Ulster Street, Hamilton, S'90
- SAHASRABUDHE, Neena**, MSc PhD, 1 Camrose Grove, Kingston, Wellington, M'90
- SALTER, David Mark**, BSc MSc(Hons)(Auck), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), G'86
- SANDERSON, Wayne Barry**, BAgSc(Dairy Tech)(NZ) MS PhD(Wisc), NZ Dairy Research Institute, Private Bag, Palmerston North, F'78 M'66
- SARGENT, John Driessen**, MSc(NZ), 3/b Hastings Road, Mairangi Bay, Auckland (Retired), M'61
- SARSON, Luke Dylan**, C/- Chemistry Dept, Otago University, PO Box 56 Otago (Student), S'90
- SATHERLEY, John**, BSc(Hons) PhD(Well), Chem Dept Liverpool University, PO Box 147, Liverpool, United Kingdom L69 3BX (Principal Experimental Officer), M'86
- SCHILD, Frederik Willem Johannes**, BSc, Reckitt And Colman (NZ) Ltd, Auckland (Packaging Manager), M'73
- SCHMIDT, Richard Otto**, BSc, Flat C, 39 Marine Parade, Eastbourne (Retired), M'58
- SCHOFIELD, Linley Rose**, MSc(Hons)(Waikato), Dept Biological Sciences, University Of Waikato, Hamilton (DPhil Student), M'88
- SCHOLLUM, Brendan Warwick**, BSc, Secondary Teachers' College, Symonds St Po, Auckland (Lecturer), M'76
- SCHWARZENBACH, Roger**, 199 Broadway Avenue, Palmerston North, S'89
- SCOLTOCK, Ian**, GradRSC, Griffith Laboratories Ltd, PO Box 22-434, Otahuhu Auckland (Consultant Chemist), M'77
- SCOTT, Gordon Randall**, MSc(NZ), 11a Highfield Place, Christchurch (Retired), F'72 M'47
- SCRYMGEOUR, Alastair Neil**, BSc AIB ANZIM, 12 Old Brighton Rd, Fairfield, Otago (Retired), F'81 M'57
- SEADON, Jeffrey Keith**, MSc(Auck), Auckland Grammar School, Private Bag, Auckland (Master), M'84
- SEAKINS, John Medgley**, MSc(Hons) PhD(Auck), Dairy Laboratory, Min Of Agric And Fisheries, Box 41 Auckland (Scientist), F'85 M'67
- SEAL, Kenneth Edmund**, CBE MSc(Lond) FAUSTIMM, 8 Ruarangi Road, Mt Albert, Auckland (Retired/Consultant), HonF'87 F'63
- SEELYE, Ralph Nicholson**, MSc DPhil(Oxon), 36 Eastbourne Road, Remuera, Auckland (Retired), M'45
- SEETO, Bentley Joseph**, C/- NZ Breweries, 407 Warren Street North, PO Box 687 Hastings, S'89
- SELFE, Geoffrey Reginald**, 211b Fifteenth Avenue, Tauranga (General Manager), M'53
- SELKIRK, Ronald Charles**, MSc(NZ), Unit 1, 15a Macmurray Rd, Remuera, Auckland 5 (Consultant Scientist), F'73 M'49
- SEVERN, Wayne Bruce**, BSc(Hons) PhD(Well), Chemistry Dept, Victoria University Of Wgtn, PB Wellington (Research Associate), M'86
- SEW HOY, Lin**, BSc(Hons)(Cant), 52 Dyers Pass Rd, Christchurch 2 (Family Care), M'82
- SEWELL, Jasper Robert**, BSc, 1 Riverside Grove, Wainuiomata (Retired), M'67
- SHANAHAN, Rory**, MSc(Auck), PO Box 49-048, Mt Roskill South, Auckland 4 (Self-Employed), F'75 M'63
- SHANKS, George Frederick**, BSc(Hons) PhD(Tas) DipChemPharmacol(Edin) AACs, Central Inst Of Technology, Private Bag, Trentham (Senior Tutor In Pharmacology), F'80 M'70
- SHARMAN, Lionel Edward**, MSc(Well), Chemistry Division DSIR, Private Bag, Petone (Scientist), F'86 M'68
- SHARMAN, Wayne Robert**, BSc(Hons)(Cant) PhD(Massey), Building Research Association, Private Bag, Porirua (BRANZ Research Services Manage), F'89 M'71
- SHAW, Douglas John**, NZCS, M & T Chemicals, PO Box 22-193 Otahuhu, Auckland (Analytical Chemist), A'80
- SHAW, Graeme**, 8 Rewi Street, Auckland, S'90
- SHAW, Gary John**, BSc(Hons) PhD(Massey), Applied Biochem Divn DSIR, Private Bag, Palmerston North (Scientist), M'75
- SHAW, Patricia**, BSc MSc, Chem Dept, Univ of Auckland, Private Bag, Auckland (Assistant Lecturer), G'88
- SHAW, Rodney Allenby**, BSc(Hons)(Sheffield) MRSC CChem, Ici New Zealand, Molesworth St, Wellington (Research Manager), M'70
- SHAW, Wayne**, Tinitea Road, Rd 4, Palmerston North, S'89
- SHEERIN, Brian Edwin**, MSc(Massey), Solexin Industries Ltd, Mould St, Waitara (Operations Manager), M'79
- SHEPHERD, Maxwell Gilbert**, BSc(Hons)(Cant) PhD(Calgary), Exp Oral Biology Unit, Dental Fac Otago University, Box 647 Dunedin (Professor), F'81 M'71
- SHERLOCK, Robert Rainsford**, MSc PhD(Cant), Soil Science Dept, Lincoln College, Canterbury (Lecturer), M'78
- SHIRER, Carol Anne**, BSc, ICI (NZ) Ltd, PO Box 30-275, Lower Hutt (Technical Supervisor), G'86
- SHONGWE, Musa Siphso**, BSc(Hons) SWAZI PhD(Cambridge), Chem Dept, Massey University, Private Bag, Palmerston North (Postdoctoral Fellow), M'91
- SHOOTER, David**, PhD(Auck) MSc, Chemistry Dept, Auckland University, PB Auckland (Senior Lecturer), M'68
- SHORLAND, Francis Brian**, OBE DSc(NZ) PhD(Liv) DSc(Liv) FRNSZ, 267 Karaka Bay Rd, Seatoun, Wellington (Retired), HonF'73 F'43
- SHORT, Stephen Alexander**, MSc(Auck) ARACI, Ansto Lucas Heights Res Labs, Private Bag Menai 2234, Australia (Mgr Low Level Radiochem Lab), M'73
- SIDWELL, David Ewart**, BSc DipIndProd, Pacific Steel Ltd, PO Box 22-201 Otahuhu, Auckland (Chief Chemist), M'86
- SIEBERS, Robert Walter Lewis**, MIBiol, Dept of Medicine, Wgtn School, of Medicine, PO Box 7343, Wellington (Senior Technical Officer), M'91
- SIEMON, Stanley Robert**, BSc MAPS(Qland) ME(Melb) MICHemE FRACI FIEAUS FAIE, 4 Alfred Rd, Burwood Vic 3125, Australia (Professor Chemical Engineering), F'58 M'44
- SIES, Christiaan Wijbrand**, BSc MSc(Cant), Canterbury Hospital Board, Path - Biochemistry, P B Christchurch (Graduate Student), G'87
- SIMMS, Raymond Nigel**, HTEC(England) PostGradDip(England), 37 Squirrel Lane, Browns Bay, Auckland (Laboratory Manager), T'89
- SIMPSON, Christopher David**, BSc (89), Chem Dept, Univ of Waikato, Private Bag, Hamilton (Msc Student), S'91
- SIMPSON, Elizabeth Mary**, BSc, 29 Dalrymple St, Pine Hill, Dunedin (Analytical Chemist), M'72
- SIMPSON, J**, 13 Millar Street, Christchurch, M'90
- SIMPSON, James**, BSc(Hons) PhD (southampton), Chemistry Dept, Otago University, Box 56, Dunedin (Senior Lecturer), F'88 M'70
- SIMPSON, Richard William**, BSc(Hons) PhD(Cant), 305-110 Boteler Street, Ottawa, Ontario, Canada K1A 0R6 (Research Associate), M'88
- SIMPSON, Wallace Harley**, BSc Dipbia(Auck) ANZim, PO Box 295, Strathfieldsaye, Victoria 3551, Australia (Operations Manager), M'67
- SIMPSON, William Stanley**, MSc PhD(Leeds) FTI CText, Wool Research Org Of NZ, Private Bag, Christchurch (Director), F'70 M'61
- SIMS, April Jannine**, BSc, Chem Dept, Univ of Waikato, Private Bag 3105, Hamilton (Laboratory Technician), G'86
- SIMS, Anthony William**, MSc(Hons) MPhil(Waikato), Bary V James & Associates, 29 Clarence St, Hamilton (Patent & Trade Mk Attorney T/a), M'88
- SIMS, Ritchie John**, MSc PhD(Auck), Geology Dept, University Of Auckland, P B Auckland (Electronics Technician), M'86

- SINCLAIR, Martin Douglas**, BSc(Hons) MSc(Well), Ici NZ Ltd, PO Box 1592, Wellington (Sales Representative), M'87
- SINCLAIR, Robert Malcolm**, MSc(NZ), 43a Stanley Point Road, Devonport, Auckland (Retired), M'47
- SINGH, Julia Anne**, NZCS BSc(Waik), Chemical Cleaning Ltd, PO Box TG 12-500, Mt Maunganui South (Research Chemist), M'91
- SINKOVICH, Paul**, PO Box 45034, Auckland, S'89
- SIRIWARDENA, Asokamali**, BSc(Hons)(Massey) PhD(VUW) MBA(VUW), DSIR Industrial Development, PO Box 31-310, Lower Hutt (Scientist), M'89
- SISSONS, Christopher Hal**, MSc(Well) PhD(Auck), MRC Dental Res Unit, PO Box 27-007, Wellington (Principal Investigator), M'78
- SKARSHOLT, Olaf Harald**, NZCS Pmafa, 203a Godley Rd, Titirangi, Auckland 7 (Consult Chemist & Computerist), A'81
- SKIDMORE, Adrian Howard**, BE(Chem) CEng MICHemE MIPENZ, "Timbers" Horsell Park, Horsell Woking, Surrey GU21 4IW (Manufacturing Operation Manager), M'68
- SKIPPER, John Leslie**, MSc(Cant), Canterbury Frozen Meats Ltd, PO Box 2, Belfast (Laboratory Manager), M'85
- SMART, Deane William**, BSc ANWSC, Fletcher Wood Panels Ltd, Box 17-201 Greenlane, Auckland (Commercial Manager), F'85 M'70
- SMEDLEY, Stuart Ivor**, MSc(vuw) PhD(southampton), Chemistry Lab, Sri Int, 333 Ravenswood Ave, Menlo Park, Ca 94025, USA (Reader), F'78 M'72
- SMITH, Christopher Robert**, Member SACHEM Institute, MMAL, GPO Box 1851, Adelaide 5001, South Australia (Scientist, Paint & Plating Eng), M'76
- SMITH, David Glynn**, PhD(Edin) CChem MRSC BSc, Water Quality Centre, PO Box 11-115 Hillcrest, Hamilton (Scientist), M'82
- SMITH, Derek William**, BSc(Hons)(StAndrews) DPhil(Oxon), School Of Science, University Of Waikato, Hamilton (Associate Professor), M'80
- SMITH, John Norman**, BSc(Hons) PhD DSc(liverpool) Frsc FRSNZ, 40 Robieson St, Roseneath, Wellington (Retired), F'64
- SMITH, Malcolm Gordon**, MSc DPhil(Oxon), W Grayson & Assocs Ltd, PO Box 12-545, Auckland (Manager), M'71
- SMITH, Mervyn Graham**, MSc(NZ) DPhil(Oxon), Dept Of Biochemistry, Otago University, Box 56, Dunedin (Associate Professor), F'81 M'72
- SMITH, Robin Andrew James**, BSc(Hons) PhD(Otago), Chemistry Dept, Otago Univ, PO Box 56, Dunedin (Senior Lecturer), F'84 M'67
- SMITH, Sean Campbell**, BSc(Hons)(Cant), Inst Physikalische Chemie, Der, Univ Gottingen, 3400 Gottingen, Tammannstrasse 6, Germany, G'86
- SMITH, Terrence John**, MSc, Chem Dept, Univ of Waikato, Private Bag, Hamilton (DPhil Student), G'87
- SNOWBALL, Rosalind**, 4013 Great North Rd, Glen Eden, Auckland (Student), S'89
- SOMERVILLE, Robyn Faith**, BSc MSc(Hons)(Auck), 1 Cambrai Avenue, Mt Roskill, Auckland (Scientist), M'88
- SOUTHWARD, Charles Ramsey**, MSc(NZ), NZ Dairy Research Institute, Private Bag, Palmerston North (Head, Casein Section), F'83 M'62
- SPACKMAN, Leonard Storkey**, 3/124 Taylor Street, Blockhouse Bay, Auckland (Retired), HonF'73 M'31
- SPROTT, Thomas James**, MSc PhD, 3331 Point Grey Road, Vancouver BC, Canada V6r 1a4 (Consultant), F'86 M'48
- STJOHN, Donald Allister**, MNZic, Chemistry Division DSIR, Private Bag, Petone (Scientist), F'80 M'67
- STACEY, Robyn Irene**, MSc(Well), Naenae College, Private Bag, Lower Hutt (Teacher), M'76
- STANLEY, Alan Arthur**, MSc(Auck), Baxter Healthcare Ltd, PO Box 14-062, Auckland (Technical Manager), M'75
- STANLEY, Bernard George**, MSc(NZ), Lockfast Chemicals Ltd, Box 23-144 Papatotoe, Auckland (Manager - Latex Comp Divn), M'49
- STEDMAN, Brian Maurice**, MSc(NZ), 22 Perry St, Papanui, Christchurch (Retired), F'78 M'49
- STEEDMAN, Murray Rex**, NZCS, Borg/warner (aust) Ltd Pty, Fairfield 2165, Australia (Production Super), A'86
- STEEL, Peter James**, BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, P B Christchurch (Senior Lecturer), M'80
- STEPHENSON, Robert Perry**, BSc ANZim Atsc, Coates Bros (NZ) Ltd, Box 12-748, Penrose, Auckland (National Development Manager), M'67
- STEVENS, Earl Victor John**, BAgSci(Hons) PhD(Massey), Roche Products (NZ) Ltd, Auckland (Lecturer), M'87
- STEVENSON, Craig Douglas**, MSc(Well) PhD(Cant), Chemistry Division DSIR, Private Bag, Petone (Health Group Manager), F'82 M'75
- STEWART, Carol**, BSc(Hons)(Cant), Chemistry Dept, University Of Canterbury, Christchurch (PhD Student), G'85
- STEWART, Georgina Marjorie**, MSc(i)(Auck), Alphatech Systems Ltd & Co, PO Box 37-583, Auckland (Scientific Representative), M'87
- STEWART, Robert Carmichael**, MSc(NZ), Workers Comp Bd Lab Services, 6951 Westminster Hy Richmond, BC V7c 1c6 Canada (Laboratory Supervisor), M'65
- STONE, Harry McEwen**, MSc(NZ) Cop(Dairy Chem & Dairy Bact), 24 Chamberlain Road, Karori, Wellington (Retired), F'73 M'52
- STONE, Martin Jeremy**, MSc(Hons)(Auck) BSc, Univ Chemical Lab, Lensfield Rd Cambridge, Cb2 1ew (PhD Student), G'86
- STONYER, Cyril Lester Haste**, BSc DipIndAdmin ANZim, 10 Manly Gardens, Paraparaumu (Consultant - XL Consultant), HonF'81 M'46
- STRANGE, Gary Anthony**, Douglas Pharmaceuticals Ltd, PO Box 57-086, Auckland, M'90
- STRATTON, Malcolm Kenneth**, NZCS, Waitemata Brewery, PO Box 22-010 Otahuhu, Auckland 6 (Production Manager), A'81
- STRODE-PENNY, John Keith**, BSc(Hons) PhD(Otago), Wellington Polytechnic, Private Bag, Wellington (Senior Tutor), M'75
- STUBBS, Hilary Jane**, BSc(Hons), C/- Chemistry Department, Univ Of Otago, PO Box 56, Dunedin (Student PhD), A'89
- STUTHRIDGE, Trevor Raymond**, C/- Biotech Dept FRI, Private Bag 3020, Rotorua, G'90
- SUCKLING, Ian Douglas**, BSc(Hons)(Well) PhD(brColumbia), Forest Research Institute, Private Bag, Rotorua (Res Chemist), M'85
- SUE, Michael**, BSc MSc, 406 Winstanley Street, Carindale Qld 4152, Australia (Senior Lecturer), G'87
- SULLIVAN, Patrick Alexander**, MSc PhD(Otago), Dept Of Biochemistry, Otago University, Box 56, Dunedin (Professor), F'81 M'65
- SUTCLIFFE, Eric Raymond**, BSc, Chemistry Divn DSIR, PO Box 29-181, Christchurch 4 (Scientist), M'63
- SUTHERLAND, Graeme John**, MSc PhD(Cant), Chemistry Divn DSIR, Private Bag, Petone (Sctn Ldr, Illicit Drugs/alcohol), M'62
- SUTHERLAND, Gillian Patricia**, MSc(Hons)(Well), 70 Spencer St, Crofton Downs, Wellington (Scientific Editor), M'82
- SUTTON, Bridget Mary**, MSc PhD(90) Auckland, DSIR Chemistry, Private Bag, Petone, G'86
- SUTTON, Gordon Leonard Allan**, BSc, Chemistry Dept, University Of Canterbury, Christchurch (Hons Student), G'88
- SUTTON, Harry Callender**, MSc(NZ) PhD(durham) Frse, 48 Totara Crescent, Lower Hutt (Scientist), F'80 M'68
- SUTTON, Maxwell Mclauchlan**, BSc(Hons) MSc PhD(leeds), Ruakura Soil & Plant Res St, Private Bag, Hamilton (Scientist), M'73
- SUTTON, Paul Alan**, BSc(Hons)(Otago), Chemistry Dept, University Of Otago, PO Box 56 Dunedin (PhD Student), M'86
- SURING, Dora**, Cand & Doct Exam(Amsterdam) ARSC, 27 Silverstream Road, Crofton Downs, Wellington (Retired), F'77 M'54
- SVOBODA, Armin Emil**, Henkel NZ Ltd, 2 Allens Road, East Tamaki (Chief Chemist), M'76
- SVOBODA, Drahomira Marie**, MNZic, 7 Rangiatea Rd, Epsom, Auckland 3 (Retired), M'76
- SWALLOW, William Henry**, MSc PhD(Cant), DSIR Crop Research, Private Bag, Christchurch (Group Manager), F'83 M'69
- SWANEY, Alan Harding**, BSc DipIndchem, 42 Whitemans Rd, Silverstream, Upper Hutt (Retired), M'47
- SWANWICK, Roberta May**, BSc Bhsc Diped, 20 Hamilton Avenue, Fendalton, Christchurch 4 (Retired), M'47
- SWEDLUND, Bernard Eskil**, MSc PhD(Lond), Chem Dept, Auckland University, Private Bag, Auckland (Retired), F'74 M'47
- SWEETMAN, Leslie John**, MSc(Hons)(Waik) BSc PhD(Cant), Dargaville High School, Plunket Street, Dargaville (Principal), M'69
- SWINDALE, Leslie Denis**, MSc(NZ) PhD(Wisc), 2910 Naihale Place, Honolulu, HI 96822, United States of America (Dir Gen, Emeritus, ICRISAT), F'63 M'51
- SYDDALL, Thomas Harold**, BSc LLB, A J Park & Son, PO Box 949, Wellington (Partner), M'66
- SYERS, John Keith**, BSc(Hons) PhD(Durham) DSc(Cant) FRSC FRSNZ, Dept Agri & Envir Science, Univ Newcastle Upon Tyne, England NE1 7RU (Dean of Agriculture), F'72
- TAGELAGI, Wayne**, 60 Walter Strevens Dr, Conifer Grove, Auckland (Student), S'89
- TAIT, Crofton Roscoe**, BSc BE(Chem Eng), Nuplex Industries Ltd, Industry Rd, Penrose, Auckland (Manufacturing Manager), M'74
- TAN, Rowland Joo Siong**, BSc MSc PhD(Otago) Dipsci, Micro Labs 126 Joo Seng Rd, #06-17 Goldpine Ind Bldg, Singapore 1336 (Mng Director/consult Microbiol), M'73
- TAN, Seng To**, MSc(Hons) DPhil(Waik), DSIR Chemistry, PO Box 2224, Auckland (Forensic Scientist), A'90
- TAPP, Neville John**, BSc(Hons)(Otago) PhD(Well), Lever Rexona, Private Bag 1, Petone (Development Manager), M'87
- TAPPER, Brian Anthony**, BSc(Hons) PhD(Massey), DSIR Plant Protection, Private Bag, Palmerston North (Scientist), M'67
- TAPPER, Richard Yardley**, MSc(Otago), Bayfield High School, Andersons Bay, Dunedin (HOD Science), M'76
- TAPSELL, Quentin Taiporutu**, MSc(Cant) DipTchg, Tuakau College, Pukekohe (Principal), M'71
- TATE, Kevin Russel**, MSc PhD(Well), DSIR Land Resources, Private Bag, Lower Hutt (Project Leader), F'80 M'66
- TATE, Warren Perry**, MSc(Well) PhD(Otago), Dept Of Biochemistry, Otago University, Box 56, Dunedin (Associate Professor), F'88 M'75
- TAYLOR, Albert Edward**, MSc, Wharawhara Road, RD 2, Katikati (Consulting Chemist), M'73
- TAYLOR, Carol Maree**, MSc(Hons)(Auck) BSc, Chemistry Dept, University Of Pennsylvania, Philadelphia USA (PhD Student), S'86
- TAYLOR, John Anthony**, DipBact MNZIFST DipMeatTech, Huttons/Kiwi Ltd, PO Box 12-066 Penrose, Auckland (Group Technical

- Manager), M78
- TAYLOR, Michael Cecil**, BSc(Hons) PhD(Cant), Chemistry Divn DSIR, PO Box 29-181, Christchurch 4 (Section Leader), M79
- TAYLOR, Michael Eric Upcott**, BSc(Hons) PhD(Lond) CChem MRSC, 86 Waerenga Road, Otaki (Chief Director, Resources), F79 M'64
- TAYLOR, Michael John**, MA DPhil(Oxon), Chem Dept, Auckland University, Private Bag, Auckland (Associate Professor), F72 M'66
- TAYLOR, Michael John**, MSc(Well), Okato College, Okato (Teacher), M'68
- TAYLOR, Michael William**, BSc(Hons)(Cant) PhD(Massey), Food Technology Dept, Massey University, Palmerston North (Chemist), M'69
- TAYLOR, Robert William Edgar**, ., 22 Annan Grove, Papakowhai, Paremata (Retired), M'66
- TEAVA, Keri Ann**, BSc(Hons), 32 Grange Street, Dunedin (Student), A89
- TEMPLE, Wayne Anthony**, BSc(Hons) PhD(Otago) CChem FRSC MAACT, National Toxicology Group, Otago Medical Sch, PO Box 913, Dunedin (Acting Director), F'84 M'77
- TENNANT, William Craighead**, MSc(NZ) PhD(NSW), DSIR Chemistry, Private Bag, Petone (Scientist), F78 M'65
- THAM, Efrem King Shoo**, DipPetTech DipAnalChem FInstPet MCIMM MACI, Dunlop Industrial, 67 Dalgety Drive, Auckland (Quality Control Manager), M'90
- THENG, Benny Kian Goan**, BAgSc PhD(Adelaide), DSIR Land Resources, Private Bag, Lower Hutt (Scientist), F76 M'70
- THOM, Norman George**, BSc DHA MIPENZ, Nat Environ Chem/acoust Lab, 2 Edenvale Rd Mt Eden, Auckland 3 (Retired), F'82 M'67
- THOMAS, Peter William**, MSc(Auck), Ak Regional Dairy Board P, O Box 41, Auckland (Scientist), M'78
- THOMAS, Stephen David**, BSc DipEd, The Holt School, Holt Lane, Wokingham, Berks England (Head Of Chemistry), M75
- THOMAS, Wayne Ashley**, NZCS, Robert Chemicals Ltd, PO Box 38-547, Petone (Production Manager), M'89
- THOMPSON, Frank Burnhope**, MSc(NZ) MNZiac, 50 Hillcrest Road, Hamilton (Retired), M'33
- THOMPSON, John Christopher**, NZCS, Chemtest Laboratories, PO Box 63-097, Papatoetoe South (Manager), A82
- THOMPSON, Murray Bruce**, BSc Dip Tchg, Logan Park High School, Dunedin (Teacher), M'86
- THOMPSON, Robert Leslie**, MSc(NZ), 28 Sharon Road, Browns Bay, Auckland (Retired), M'50
- THOMSON, Cullen William**, BSc, Mount Royal Road, RD 1, Palmerston, Otago (Retired), F'80 M'60
- THOMSON, Helen Marion Sheila**, Mhsc(NZ) PhD(leeds) Lti, 32 Wai-iti Terrace, Fendalton, Christchurch 5 (Retired), M'39
- THOMSON, Thomas Alexander**, BSc F1st, Daisybank, Hughes Road, Palmerston, RD1, Otago (Retired), F'67
- THORP, John Martin**, BSc(Hons) PhD(Lond), Kennedy Bay Road, RD, Coromandel (Retired), F'67 M'60
- TIMPERLEY, Michael Horace**, MSc(Auck) PhD(Massey), Chemistry Divn DSIR, PO Box 2224, Auckland (Scientist), M74
- TIPPETT, Richard James**, BSc, Chemistry Dept, Victoria University Of Wgtn, P B Wellington (Lab Chemist), G'88
- TODD, Ann Margaret**, BSc, Chemistry Dept, Victoria University Of Wgtn, PO Box 600 Wellington (Student), S'88
- TODD, Harry Jackson**, BSc(Lond), 64 Hair Street, Wainiuiomata (Retired), M'51
- TOMLINSON, John Woollen**, ARCS BSc(Hons) DIC PhD(Lond) CChem FRSC, Chemistry Dept, Victoria University Of Wgtn (Professor Physical Chemistry), F'67
- TOTTON, Rosemary Ruth**, NZCS, Necal, Dept Of Health, 2 Edenvale Rd Mt Eden, Auckland 3 (Chemistry Technician), A87
- TOWLER, Charles**, BSc(Hons)(edin), NZ Dairy Research Institute, Private Bag, Palmerston North (Head, Product Use & Eval Sect), M70
- TOWN, Keith Gregory**, MSc PhD(Auck), Chem Industries, Pakuranga, Auckland (Qual Assurance Manager), M'81
- TOWN, Raewyn May**, BSc(Hons)(Cant) PhD, Dep Of Inorganic, Anal & Appl, Chem, Univ Of Geneva, 30 Quai, Ernest, Geneva 4, Switzerland (Post-Doctoral Scientist), G'88
- TRAINOR, Timothy Robert**, BSc(Hons) MSc(Otago), Evans Medical (NZ) Ltd, PO Box 2075, Palmerston North (Product Development Officer), G'85
- TREE, Philip James**, BSc(Hons)(Well), St Johns' College, Hillcrest Rd, Hamilton (Teacher), M'82
- TREVEAN, Mark Adrian**, NZCS DipPharm MPSNZ, Dept Of Pharmacy, Cent Inst Of Technology, PB Trentham Po (Tutor In Pharmaceuticals), M'82
- TROTMAN, Clive Norman Albert**, BTech(Hons)(Brunel) PhD(East Anglia) FIBIOL, Dept Of Biochem, Univ Of Otago, PO Box 56, Dunedin (Senior Lecturer), M79
- TROTTER, Nicholas**, 609 Castle Street, Dunedin, S'90
- TROUNSON, Mary Elizabeth**, BSc(Hons) PhD(Otago), Wool Res Org Of NZ, Private Bag, Christchurch (Computer Systems Officer), M'86
- TSE, Phillip Gordon**, MSc(Massey), Chemie-tech Ltd, PO Box 51-604 Pakuranga, Auckland (Managing Director), M'76
- TUREPU, Manea**, BSc, Cook Islands Consular Office, PO Box 37-391 Parnell, Auckland (Student), G'83
- TURNER, Alan Arthur**, BSc, NZ Institute Of Chemistry Inc, PO Box 12-347, Wellington (Project Co-ordinator), F'88 M'61
- TURNER, Iivi Reet**, MSc, Chemistry Dept, Victoria University, PB Wellington (Sessional Asst), M'61
- TURNER, Maria Dorothy**, BSc(Liverpool), St Patricks College, Silverstream, Upper Hutt (HOD Science), M'74
- TURNER, Roscoe Cameron**, BSc(Lond), Shell Chemicals -NZ- Ltd, Box 2091, Wellington (Regional Manager, Singapore), M'66
- TURNEY, Thomas Albert**, MSc(Hons), 17 Sylvan Avenue, Mt Eden, Auckland (Retired), M'57
- TZIKANOVSKI, Zisel**, BSc, DSIR Gracefield, Private Bag, Lower Hutt (Technical Officer), A77
- UDY, David John**, MSc PhD(Auck), Tembec Inc CPO 3000, Temiscaming Quebec, Canada JOZ-3RO (Mngr Prod Dev & Techn Service), M'73
- UMAR, Adam Saeed**, 42a Galloway Street, Hamilton, S'90
- UNDERHILL, Roger**, BSc, 63 Bouncers Lane, Prestbury, Cheltenham, Glouc, G152, 5jb, England, M'53
- UPTON, Andrew**, 80 Victoria Street, Devonport, Auckland
- URQUHART, James Stewart**, BSc GradDipMgt, Baxter Healthcare Pty Ltd, Box 88 Toongabbie NSW, 2146 Australia (Quality Assurance Manager), M'75
- USSHER, Jillian Ann**, BSc DipEd, Rangiora High School, East Belt, Rangiora (Deputy Principal), M'81
- VAN AMELSFORT, Adriana Hendrika**, HTS-Chem Ing The Netherlands, 159 Salisbury Street, Ashhurst (Science Technician), S'90
- VAN DER HEIDE, Paul**, BSc(Auck) MSc(Auck), C/- Chemistry Department, University Of Auckland, Auckland (PhD Student), S'89
- VAN EYK, Stephen John**, BSc(Hons)(Cant) PhD, Chemistry Dept, University Of Canterbury, PB Christchurch (Research Associate), G'87
- VAN GALEN, Wilhelmus Anthonius Carolus Theresia**, DipChemEng ANZIM MNZOQA, Coca-cola Bottlers Ltd, Refreshment Place, Upper Hutt (Quality Assurance Manager), M'69
- VAN HORIK, Edward Theodorus**, BSc(Hons)(Otago), Southland Catchment Bd, PO Box 5026, Invercargill (Water Resources Officer), G'86
- VANNOORT, Richard William**, BSc(Hons) PhD(Cant), DSIR Chemistry, Private Bag, Petone (Scientist), M'84
- VELVIN, Neill Stuart**, Glaxo New Zealand Ltd, Private Bag, Palmerston North, M'90
- VIATOS, James**, BSc(Hons)(Well) ARACI, BHP Coated Products Divn, PO Box 77 Port Kembla NSW, 2505 Australia (Research Officer), M'87
- VIITAKANGAS, Lilian June Price**, MSc(Auck) BBS(Massey) DipTchg, Tamaki Campus, Univ of Aucklan, Private Bag, Auckland (Senior Tutor), M'76
- VISSER, Frans Robert**, BSc PhD(Amsterdam), NZ Dairy Research Institute, Private Bag, Palmerston North (Senior Scientist), M'79
- VIVIAN, Gerald Wilfred**, MSc(NZ) PhD(Leeds), 22 Wikiriwhi Crescent, Palmerston North (Retired), M'49
- WADDINGHAM, Donald Markham**, BSc, Uroxxsys Ltd, PO Box 45 Beachlands, Auckland (Technical Director), M'70
- WAGENVOORT, Marinus**, BSc, Equus Industries Ltd, 4 North St, Blenheim (Technical Director), M'78
- WAKEMAN, Jonathan Leslie**, BSc, Chemby Chemicals Ltd, Box 30036 Takapuna, Auckland (Technical Manager), M'78
- WALKER, Ian Kenneth**, DSc(NZ), 19 Cresswell Avenue, Governors Bay, RD1, Lyttelton (Retired), HonF'77
- WALKER, James Anthony**, BSc(Hons)(Cant) MNZACB FNZIMLT, Path Dept Nepean Hospital, PO Box 63 Penrith Nsw, Australia 2750 (Laboratory Manager), M'77
- WALKER, John Richard Laurence**, BSc(Hons) PhD(Leeds), Dept Plant & Microbial Science, University Of Canterbury, Christchurch (Reader/Associate Professor), F'67 M'57
- WALKER, Neil James**, Ici Resins Ltd, PO Box 5034, Mt Maunganui (Student), S'87
- WALKER, Neil John**, MSc(Well) PhD(Penn-State), Milk Product Inc / #312, 3550 Round Barn Blvd Ca, Santa Rosa 95403 USA (Chemist), M'69
- WALKER, Neil William**, BSc BBS, Kiwi Co-op Dairies Ltd, PO Box 444, Hawera (Senior Technical Officer), M'79
- WALKER, S Paul**, 8 Union Street, Palmerston North, S'90
- WALKER, Thomas William**, BSc(Hons) ARCS DIC PhD DSc(Lond), 843 Cashmere Rd, Christchurch 3 (Retired), F'61
- WALLAART, Johannes Christiaan**, NZCS, Marama Ave North, RD 9, Invercargill (Consultant), M'84
- WALLACE, Garth Morton**, BSc PhD(Massey) FNZIFST, 19 Fitzroy St, Palmerston North (Retired), F'57 M'49
- WALLACE, Robert Gerard**, MSc(Hons) PhD(Auck), 19 Rainer Mews, Willetton, Western Australia (Food Technology Consultant), M'77
- WALLER, Andrew Grant**, BSc(Hons)(Cant), Chemistry Dept, University Of Canterbury, Christchurch (PhD Student), G'88
- WALSH, Russell Stuart**, BSc PhD(Otago), Chem Dept, Otago University, PO Box 56, Dunedin (Research Assistant), G'86
- WANSBROUGH, Norman Clifford**, MSc(Well), Gillette NZ Ltd, PO Box 97-224 South Auckland, Auckland (Chief Chemist), M'72
- WARE, David Charles**, PhD(Stan) BSc(Hons), Cancer Society of NZ

- (Research Fellow), M'91
- WARING, Juliet Mary**, BSc(Hons)(Lond), Chemistry Division, DSIR, Private Bag, Petone (Scientist), M'78
- WARREN, David Ross**, MSc(Otago), 2 Bairds Road, Otahuhu, Auckland (Gen Mngr Technical Services), M'77
- WATERS, James Desmond**, MSc(Hons)(Waik) MSc(Toxicol)(Surrey), Public Health Services, Dept Of Health Box 5013, Wellington (Toxicologist), M'81
- WATERS, Joyce Mary**, MSc(Hons) PhD(NZ), Dept Of Chem/Biochem, Massey University, Palmerston North (Sen Research Fellow), F'77 M'60
- WATERS, Thomas Neil Morris**, MSc PhD(NZ) DSc(Auck) FANZAAS FRNSZ DSc(Hons)(Asia, Vice-chancellor, Massey University, Palmerston North (Vice-Chancellor), F'77 M'56
- WATKINSON, John Herbert**, BSc PhD(Well), Ruakura Agricultural Res Cent, Private Bag, Hamilton (Scientist), M'64
- WATKINSON, Phillip John**, MSc(Hons) DPhil(Chem)(Waik) BSc(Physics/Chem), NZDRI, Private Bag, Palmerston North (Scientist), M'83
- WATSON, Andrew Augustus**, BSc(Hons)(Cant) PhD, Australian National University, Res Sch Of Chem, GPO 4, Canberra, Act 2601, Australia (Research Fellow), G'85
- WATSON, Charles Colin**, MSc(NZ), 18 Burns Road, Napier (Orchardist), M'54
- WATSON, D J**, BSc(Hons) PhD, 8 Pokohiwi Road, Normandale, Lower Hutt
- WATSON, Ian Douglas**, BSc(NZ) PhD(Otago), Dept Of Chem/Biochem, Massey University, Palmerston North (Assistant Vice Chancellor Res), F'77 M'63
- WATSON, Joyce**, MSc(NZ) ARSC, 191 Annesbrook Drive, Nelson (Retired), F'71
- WATSON, Paul Andrew**, MSc(Hons), Papro NZ, Forest Research Institute, P B Rotorua (PhD Student), G'86
- WATSON, Rosemary Anne**, BSc(Hons)(Zoology)(Nottingham), Dept Of Animal Science, Massey University, Palmerston North, L'88
- WATT, John Stephen**, MSc(NZ) DPhil(Oxon), 108 Point View Drive, RD1, Papatoetoe (Retired), F'65
- WATTS, F D**, 8/69 Firth St, Hamilton
- WEATHERALL, Ian Leslie**, MSc(NZ) PhD(Cant) FTI CText, Textiles Science Dept, Otago Univ, PO Box 56, Dunedin (Senior Lecturer), F'86 M'68
- WEATHERBURN, David Charles**, BSc(Hons) PhD(Sydney), Chemistry Dept, Victoria University Of Wgtn (Lecturer), F'88 M'76
- WEAVER, Stephen**, BSc(Hons)(Birm) PhD(Lond), Geology Department, University Of Canterbury, Christchurch (Reader), M'86
- WEAVERS, Donald George**, BSc BEd MPhil(Auck), Heretaunga College, Ward St, Upper Hutt (Science Teacher), M'69
- WEBB, Vincent Mark**, BSc, Petrochem Corp of NZ, PO Box 439, Hawera (Product Development Manager), A'81
- WEBBY, Rosemary Fiona**, BSc(Hons) MSc(Cant), DSIR Chemistry, Private Bag, Petone (Scientist), M'82
- WEBLEY, Wayne Stephen**, BSc(Hons) PhD(Otago), PO Box 687, Nelson (Self-Employed), M'82
- WEBSTER, Dianne Rosemary**, MSc(Auck) PhD(Lond), National Testing Centre, PO Box 872, Auckland (Acting Director), M'73
- WEBSTER, Geoffrey Alan**, BSc DipFqa, Abels Ltd, Private Bag, Newmarket, Auckland (Laboratory Manager), M'82
- WEBSTER, Jenny Gaye**, BSc(Hons)(Otago) PhD(WA), DSIR Chemistry, PO Box 2224, Auckland (Scientist (Research)), M'88
- WEBSTER, Valerie Joy**, BSc, 13 Bungaloe Ave, Balgowlah Heights Nsw, 2093 Australia (Retired), G'74
- WELCH, Barry John**, DSc(Auck) PhD(NZ) FRACI MAMICHE FRNSZ FNorskATS, School of Eng, Univ of Auck, Private Bag, Auckland (Professor, Chemical Mat Eng), F'74 M'59
- WELSH, Ian Kenneth**, BSc DipSci(Otago) DipTeaching, Southland Regional Council, Private Bag, Invercargill (Water Quality Officer), M'88
- WEST, John**, MSc(Sheffield), Meat Indus Res Inst Of NZ, Box 617, Hamilton (Research Officer), M'78
- WEST, William Harold**, MSc(NZ), C/- Emoleum NZ Ltd, Penrose, Auckland (Industrial Chemist), M'52
- WESTON, Claude Warwick**, BSc DipIndChem, 12 Mary St, Longueville, Nsw, Australia 2066 (Retired), M'47
- WESTON, Grant Campbell**, BSc DipTchg, Mount Albert Grammar School, Private Bag, Auckland (Teacher), M'85
- WESTON, Roderick James**, MSc(Auck) DPhil(Oxon) DIC(Lond) BSc, Chemistry Division DSIR, Private Bag, Petone (Scientist), M'72
- WEVERS, Willem Frans**, MSc(Hons)(Auck) MIFST(NZ) CChem MRSC, Meishan-mauri Yeast Co Ltd, Huangge, Panyu County, Guangzhou, China (Deputy General Manager), M'69
- WHEATCROFT, Annette Joy**, NZCS BSc DipTchg, Otahuhu College, Mangere Road, Otahuhu, Auckland (Teacher), M'88
- WHIMSTER, Alexander Thomas**, MSc(Waikato), Kuranui College, Greytown (Teacher), M'77
- WHITE, Edwin Percy**, DSc(NZ), Woodlands Road, RD 1, Hamilton (Retired), F'61 M'38
- WHITE, Graham Richard**, MSc(NZ), Physico-Chem Sch of Medicine, Auckland Univ, Private Bag, Auckland (Senior Lecturer), M'61
- WHITE, Geoffrey Vaughan**, NZCS MSc, Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'84
- WHITE, Jonathan Michael**, BSc(Hons) PhD(Cant), Sch Of Chem Univ Of Bristol, Cantock's Place, Bristol, England Bs8 1ts (Post-doctoral Fellow), M'86
- WHITE, Malcolm Stuart**, MSc(Auck) PhD(Tas), FERNZ Corporation, PO Box 759, Auckland (Manager, Development), M'69
- WHITE, Robert Edwin**, BAgSc(Qld) DPhil(Oxon), Dept Of Soil Science, Massey University, Palmerston North (Professor and Head of Dept), F'88
- WHITE, Stanley Weston**, BSc MIFST(NZ), 30 Churcher St, Feilding (Retired), M'54
- WHITEHEAD, Neil Evan**, MSc(Well) PhD(Massey), Institute Of Nuclear Sciences, PO Box 31-312, Lower Hutt (Scientist), M'71
- WHITFIELD, Thomas**, LRSC FTSC, Protec Creative Coatings Ltd, PO Box 83-174, Auckland (Technical Director), M'66
- WHITING, Roger**, PhD(Auck), Auckland Technical Institute, Private Bag, Auckland (Lecturer), M'74
- WHITNEY, Robert Stephen**, BSc(Tech)(Hons)(Wales) PhD(Essex), Coal Res Assn Of NZ, PO Box 31-244, Lower Hutt (Director), F'88 M'74
- WHITTLE, Kenneth Rodney**, MSc(Hons) PhD(Auck), Manawatu Polytechnic, Private Bag, Palmerston North (Head of Department), F'83 M'73
- WHYMAN, Derek**, BSc(Hons) PhD(Lond) CChem MRSC, Chemistry Dept, Otago University, Box 56, Dunedin (Senior Lecturer), F'86 M'73
- WIDJAJA, Suhendra**, 67 Gribblehirst Road, Mt Albert, Auckland
- WIGGINS, Philippa Marion**, MSc(NZ) PhD(Lond), Dept Of Medicine, University Of Auckland, P B Auckland (Career Fellow), F'72 M'59
- WIGNALL, Anne Philippa Dorothy**, BSc TTC, Southland Girls' High School, 325 Tweed St, Invercargill (Teacher), M'85
- WIKAIRA, Jan**, BSc MSc(Hons) TTC, Chemistry Dept, University Of Canterbury, Christchurch (PhD Student), G'88
- WILCOCK, Robert John**, BSc(Hons) PhD(Cant), Water Quality Centre, DSIR, PO Box 11-115, Hillcrest, Hamilton (Scientist), F'86 M'75
- WILD, Kristine Lynette**, NZCS, Scientific & General Consult, PO Box 13-219 Onehunga, Auckland (Analyst), T'87
- WILKINS, Alistair Lawrence**, BSc(Hons) PhD(Otago), Chemistry Dept, Waikato University, Hamilton (Lecturer), M'76
- WILKINS, Brian Joseph**, MSc(NZ) PhD(Lond), 92 Kelburn Parade, Wellington (Retired), F'88 M'59
- WILKINS, Cuthbert John**, MSc(NZ) PhD(Lond) DIC, 81 Andover Street, Christchurch (Professor Emeritus), F'64 M'44
- WILKINS, David Joseph Henry**, LRCS DipTchg, Auckland Technical Institute, Private Bag, Auckland (Senior Lecturer), M'82
- WILKINSON, Adele Robyn**, Dept Of Anaesthetics, Chch Clinical School, P B Christchurch (Technician II - Med Res), S'84
- WILL, Graham Melville**, MSc(NZ) DSc(Well), 20 Mcdowell St, Rotorua (Retired), F'69 M'51
- WILLIAMS, Allette Louise**, MSc(NZ) DIC(Lond), Medical Laboratory, Cmc Bldg Courtenay Pl, Wellington (Part-Time), M'55
- WILLIAMS, Geoffrey**, Chem/Biochem Dept, Massey Univ, Private Bag, Palmerston North, S'91
- WILLIAMS, Mary Patricia**, BSc Cophlp, Sacred Heart College, Lower Hutt (HODScience), M'58
- WILLIAMS, Peter Prior**, MSc(NZ) PhD(Cant) MINSTP, Chemistry Division DSIR, Private Bag, Petone (Scientist), F'66 M'56
- WILLIAMSON, Arthur Gordon**, MSc(NZ) PhD(Reading) FIPENZ, Dept Of Chem & Process Eng, University Of Canterbury, Christchurch I (Professor), F'69 M'61
- WILLIAMSON, Bryce Elliot**, BSc(Hons)(Well) PhD(ANU), Chemistry Dept, University Of Canterbury, Christchurch (Lecturer), M'84
- WILLIAMSON, Wayne Sinclair**, NZCS, New Plymouth Power Station, Private Bag, New Plymouth (Station Chemist)
- WILLS, Barthrop David**, MRSC, Seachange Farm, Applyby RD 1, Richmond (Research Leader), M'63
- WILSON, Arthur David**, MSc(NZ) MICHemE FNZIFST, 53a Wastney Tce, Marybank, Nelson (Retired), F'80 M'52
- WILSON, Ashley Francis**, MSc PhD(NZ) JP, DSIR Industrial Development, PO Box 2225, Auckland (Director), F'69 M'56
- WILSON, Caroline Jane**, Lab Technician, National Testi, Centre, Auckland Medical Sch, Park Rd, Auckland, S'90
- WILSON, Graham Samuel**, BSc, Shell Oil (NZ) Ltd, Box 2091, Wellington (Fuels Technical Manager), M'79
- WILSON, Kenneth William**, BSc MIFST MNZIFST, Fermentation Indus (NZ) Ltd, PO Box 3974, Auckland (Technical/Dev Manager), M'56
- WILSON, Margaret Nellie**, BSc MHSc(Otago) PhD(Massey), Dept Of Chem/Biochem, Massey University, Palmerston North (Senior Lecturer), M'61
- WILSON, Russell Douglas**, MSc(Massey), NZ Dairy Res Institute, Private Bag, Palmerston North (Research Officer), M'85
- WILSON, Thomas Henry**, -, 1286 Huia Road, Huia, Auckland (Retired), M'52
- WINCHESTER, Robert Victor**, MSc PhD(Auck), DSIR Chemistry, PO Box 2224, Auckland (Forensic Scientist), F'85 M'71
- WINTER, David Stanley**, NZCS Int, Southland Co-op Phosphate, PO Box 849, Invercargill (Technical Manager), F'86 M'81

WINTER, Hans-wilhelm, MSc PhD(Marburg), Tuakau College, Tuakau (Science Teacher), M'83
WINTERBOURN, Christine Coe, MSc(Auck) PhD(Massey), Pathology Dept, Sch of Medicin, Chch Hospital, Private Bag, Christchurch (Professional Research Fellow), M'65
WONG, Edmon, MSc PhD(NZ), 21 Pahiataua Street, Palmerston North (Retired), F'71 M'56
WONG, Herbert, MSc PhD(Well) BSc, Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'79
WONG, Lisa, BSc DipSci(Otago) MSc(Well), Dental Research Unit, HRC, PO Box 27-007, Wellington (Research Assistant), M'85
WONG, Ooi, BSc MPharm PhD(Otago), Pc Mccollum Labs 2065 Av A, West Campus Univ Of Kansas, Lawrence Ks66044 USA (Postdoc Res Fellow), M'85
WONG, Ronald James, MSc PhD(Auck), DSIR Crop Research, Private Bag, Auckland (Scientist), M'72
WOO, Chee Pan, BSc Dipbia, Abels Ltd, Private Bag, Newmarket, Auckland 1 (Analyst), M'76
WOOD, Jackie, 16a Hillcrest Place, Christchurch, S'91
WOOD, John Milton, MSc(NZ) MICHemE ANZIM, 9 Wera St, Hawera (Retired), M'51
WOODGATE, Paul Desmond, MSc PhD DSc(Auck), Chemistry Dept, Auckland University, P B Auckland (Associate Professor), F'77 M'71
WOODHALL, Margaret Claire, BSc(Hons) PhD(Cant), 1213 Ada Street, Hastings (Self Employed), M'87
WOODHAMS, David John, ME(Chem)(Cant) PhD(Wis) MICHemE MIPENZ, Dairy Process Consultant, 2/47-49 Church St Devonport, Auckland 9 (Principal), M'64
WOOLF, Alan Herbert, BSc DipIndChem, 22 Meadow Street, Christchurch 5 (Retired), HonF'86 F'70
WOOLHOUSE, Anthony David, MSc PhD(Well), Chemistry Divn DSIR, Private Bag, Petone (Scientist), M'72
WORTH, Gillian Helen, PhD(Bristol), Wool Research Organisation NZ, Private Bag, Christchurch (Scientist), M'91
WOTHERSPOON, James Stewart, NZCS, Roche Products (NZ) Ltd, 312 Church St, Penrose, Auckland 6 (Tech Services Representative), A'80
WRATISLAV, Arnost, Ing(Prag), 16a Tiverton Crescent, New Plymouth (Consultant), M'56
WRIGHT, Charles Edwin, NZCS, Maftech; Min Ag & Fish, PO Box 24, Lincoln (Tech Officer), A'79
WRIGHT, Douglas Elliott, MSc PhD(NZ) DSc(Otago), Meat Ind Res Inst Of NZ, PO Box 617, Hamilton (Director), F'67 M'58

WRIGHT, Evan Wilfrid, MSc(NZ) PhD(Reading) MEINZ, 74c Heretaunga Sq, Heretaunga, (Retired), M'46
WRIGHT, G, Oxyplast NZ Ltd, Auckland (Product Manager), A'87
WRIGHT, Graham Allen, MSc(NZ) DPhil(Oxon), Chem Dept, Auckland University, Private Bag, Auckland (Associate Professor), F'67 M'62
WRIGHT, Graeme John, BSc(Hons) PhD(Cant), Chemistry Dept, University Of Canterbury, Christchurch (Reader), F'73 M'62
WRIGHT, Geoffrey Richard Goddard, BSc(Auck), Forest Research Institute, PO Box 31-011, Christchurch (Technical Officer), M'67
WRIGHT, Leonard James, MSc PhD(Auck), Chemistry Dept, University Of Auckland, P B Auckland (Scientist), M'81
WYATT, Gordon Neil, BE(Chem) BSc DipTchg, Hutt Valley Polytechnic, Private Bag, Petone (Deputy Principal), F'81 M'69
WYLIE, David J, Chem Dept, Univ of Auckland, Private Bag, Auckland, S'87
XU, Shuanghua, Dept Of Chemistry Univ Of, Canterbury Private Bag, Christchurch, S'90
YANG, David Chin Ming, BSc MSc DipBusAdmin, Stafford-Miller Ltd, 5-9 Enterprise Ave, Padstow, NSW 2211 Australia (New Product Devel Manager), M'85
YOLLAND, John Russell, BSc BE(Chem) ME(Chem & Mat)(Auck) MICHemE MIPENZ, John Yolland & Assocs Ltd, PO Box 51-411 Pakuranga, Auckland (Principal), M'68
YORKE, Selwyn Collin, MSc PhD(Cant), DSIR Chemistry, Private Bag, Petone (Chief Chemist), M'77
YOUNG, Harry, BSc(Hons) PhD(Otago), DSIR Fruit and Trees, Mt Albert Res Cnt, Private Bag, Auckland (Scientist), F'85 M'64
YOUNG, Jason Carmel, BSc DipIndChem DipBia, James Hardie & Co Pty Ltd, Box 12-070, Penrose, Auckland (Manager, Quality Assurance), M'62
YOUNG, Leslie, BSc MSc(Auck), Chemistry Dept, University Of Auckland, P B Auckland (PhD Student), M'88
YOUNG, Owen Archibald, BSc(Hons)(Cant) PhD(La Trobe), Meat Ind Res Inst Of NZ, PO Box 617, Hamilton (Biochemist), M'78
YOUNG, Peter Nicholas William, MRSC CChem, Berec(nigeria) Ltd, Western By-pass Rd, Kaduna, Nigeria (General Manager), M'76
ZABKIEWICZ, Jerzy Antoni, BSc(Hons) PhD(glasgow), Forest Research Institute, Private Bag, Rotorua (Scientist), F'86 M'73



Sorvall — The force in centrifuges

The outstanding features and advantages of Sorvall Centrifuges add up to unparalleled versatility and enhanced user convenience giving you the edge you need for your research.

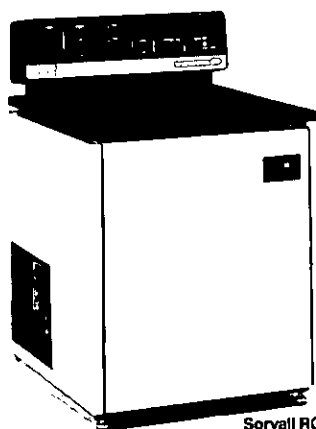
Sorvall RC28S

- Performs all superspeed applications plus those that extend to the low end of the Ultracentrifuge range — bridging the gap between super and ultra.
- 20 program memory storage for easy recall of frequently run programs.
- Spin-Right™ rotor management system ensures safe, correct operation.
- Slow-start, slow-stop facility minimizes mixing.

Sorvall RC5C

- Automatic compensation for fluctuations in time, speed, and temperature assures run-to-run reproducibility.
- Convenient controls and a large digital LED display showing both set and actual run conditions allows manageable operation.
- The direct drive motor system and high capacity refrigeration system do not require a vacuum to achieve rotor speeds or maintain operating temperatures.

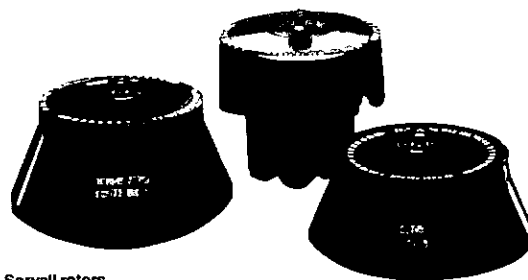
Sorvall Centrifuges are available exclusively in New Zealand from Watson Victor Ltd.



Sorvall RC5C



Sorvall RC28S



Sorvall rotors



WATSON VICTOR
Your Assurance of Quality.

Auckland PO. Box 1216.
Ph 579-3039 Fax 525-0951.

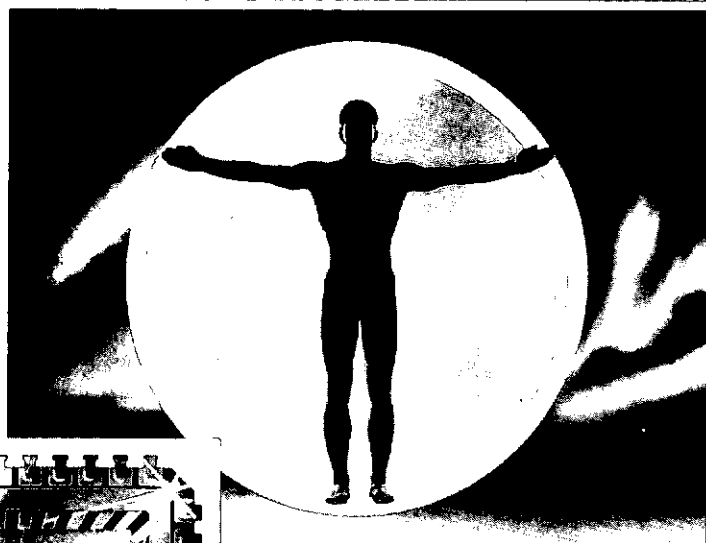
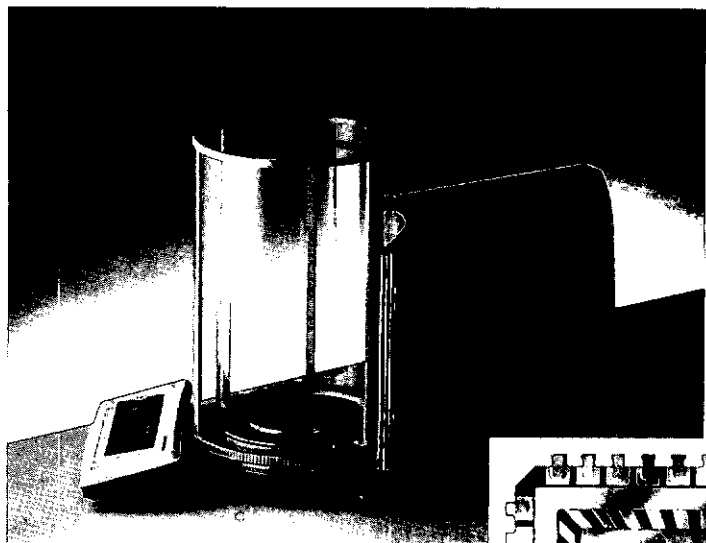
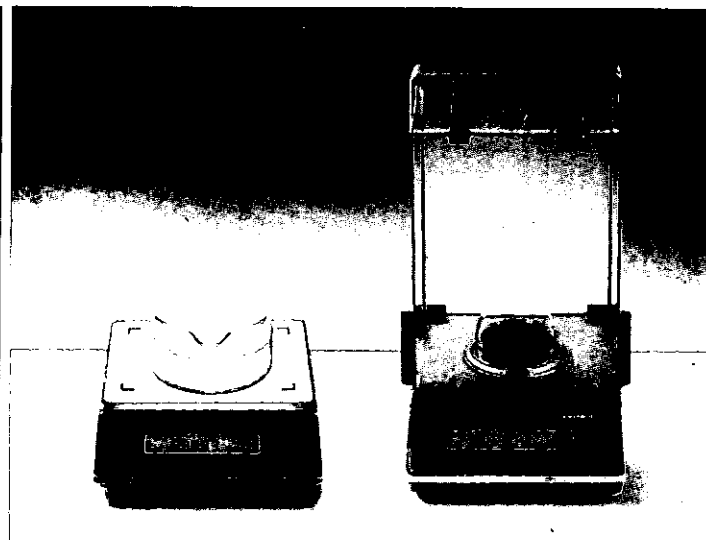
Wellington PO. Box 1180.
Ph 857-699 Fax 844-651.

Christchurch PO. Box 706.
Ph 669-282 Fax 662-537.

Dunedin PO. Box 921.
Ph 4777-291 Fax 4778-720.

6204A

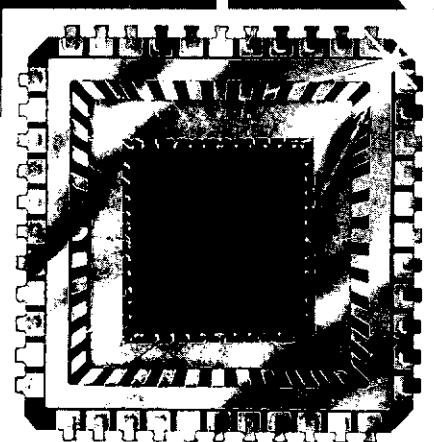
The world's most advanced weighing technology – redefined.



We've made a new age of weighing technology a reality for you.

What makes it a reality is maximum quality assurance through stringent quality control testing – and our spectacular, new **MC1-technology**. Plus our superfast single-chip microcomputer, specially designed for weighing technology and exclusively manufactured for Sartorius Balances.

What you gain is new speed, a new display, new economy and new versatility.



Test our **new dimension** in quality and performance.

Experience the new **Sartorius Laboratory Series**. 18 models to choose from – with

the right balance of power for each of your weighing applications.

Or discover the new **Sartorius Analytic Series** – they keep their "balance" even when exposed to the most unsettling ambient conditions.

Try the new **Sartorius Research Series** – the revolution that goes all-around. Ask about the revolutionary advantages of **rotational symmetry**. You'll come to appreciate the freedom to access the weighing chamber from any angle.

When can we talk?



WILTON INSTRUMENTS

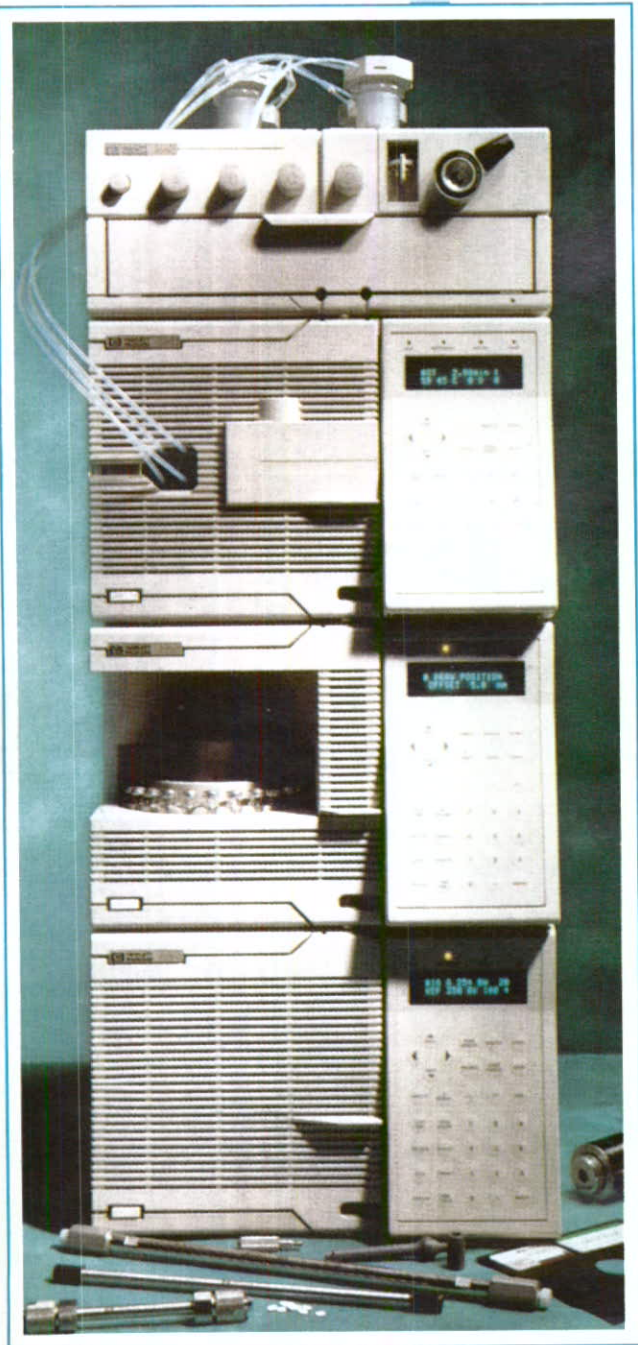
People you can count on

sartorius

Auckland, Private Bag Northcote 9. Tel 418.3039
Lower Hutt, Box 31-044. Tel 5697.099
Christchurch, Box 1813. Tel 663.663

The world's most advanced weighing technology.

HPLC SAVINGS FROM MEDTEC



With today's tighter budgets, perhaps you thought our high-quality HPLC modules would be out of reach. If so, here's good news. When you put together a complete HP 1050 series system you can save up to 20%

So now you can afford fast sample turnaround and the consistently high uptime you need to enhance productivity in routine analysis. And with our comprehensive selection of modules, consumables and data handling options you have the flexibility to configure solutions for widely diverse sample types.

Plus you have the confidence that comes from top-ranked HP quality, reliability and support. And the convenience of a single-vendor solution for hardware, software and supplies – including the ChemStation (pictured) for industry-standard PC control.

If you already own an autosampler we can supply the most economic accessories (vials, caps, septa, seals etc.) on the market. These accessories are from Sun Brokers U.S.A. and are suitable for the following brands.

HEWLETT PACKARD
VARIAN
SHIMADZU
PERKIN ELMER
SPECTRA PHYSICS
HITACHI
WATERS

For further information on these savings contact:



MEDTEC

P.O. Box 38-543, Petone, Wellington

Phone 0-4-567 0011

P.O. Box 34-241, Birkenhead, Auckland

Phone 0-9-480 6763