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# THE NEW ZEALAND JOURNAL OF MEDICAL LABORATORY TECHNOLOGY

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## Two Cases of Infection Involving *Rhodococcus equi*

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Reprints will not be available from the authors

### Abstract

Two cases of infection caused by *Rhodococcus (Corynebacterium) equi* are reported. One occurred as an abscess in the right paraspinal region in a renal transplant patient and the other as part of a mixed infection in a lung abscess of a patient who was not immunocompromised.

The two isolates differed considerably in their colonial morphology.

### Introduction

*Rhodococcus equi* is an aerobic gram positive pleomorphic bacillus which varies from curved rods to being coccoid. It was previously named *Corynebacterium equi*, but has been reclassified by numerical phenetic analyses<sup>1,2</sup> into the genus *Rhodococcus*.

*R. equi* is a known cause of equine pneumonia in foals,<sup>3</sup> but may also infect cattle, swine and sheep, usually causing lymphadenitis.

Infections in humans have been mainly in immunologically compromised individuals and have usually been pulmonary.<sup>4</sup>

We describe two cases of infection involving *R. Equi*.

### Clinical Findings

#### Case 1

In September 1985 a 52 year old woman was admitted to Wellington Hospital with a 2 week history of feeling unwell, backache and the development of a lump to the right of her spine which was increasing in size. She had a past history of chronic renal failure resulting in a cadaveric renal transplant in 1970 which had functioned well.

Her medications had been azathioprine and prednisone and two months on captopril, but after an episode of drug induced pancytopenia in May 1985 this was reduced to prednisone alone.

On admission she was febrile with a temperature of 38.4°C, white blood cell count of  $6.1 \times 10^9/L$  with 84% neutrophils and haemoglobin of 86g/L.

A CT scan showed a soft tissue mass in the right paravertebral region from the 6th thoracic vertebra to the 10th thoracic vertebra. This was drained and 50mL of thick yellow pus obtained.

Treatment with flucloxacillin was started, but after a report on the direct smear of the pus stating that Gram positive cocci and Gram negative bacilli were seen, tobramycin was added. When a heavy pure growth of *Rhodococcus equi* was reported from the culture the treatment was changed to erythromycin and rifampicin.

The patient was discharged 12 days after the operation and continued on erythromycin and rifampicin for 6 weeks, when rifampicin was stopped and erythromycin alone was given for 10 weeks. The abscess has resolved and she has remained well.

#### Case 2

The patient was a 77 year old man who had suffered from amoebic dysentery and hepatitis at the end of World War II. Since then liver abscesses had been drained four times and a biliary fistula between a liver abscess and the lower lobe of the R. lung had formed but settled after drainage of the abscesses.

He had remained well until June 1985 when he again started coughing up bile stained, foul smelling sputum and developed pneumonic consolidation in the right lower lobe of his lung.

A diagnosis of broncho-biliary fistula was made and the patient underwent a thoracotomy to drain the abscess cavities and close the fistula through the diaphragm.

Post operatively he was treated with amoxycillin and tinidazole but after initial clinical improvement a copious purulent discharge appeared in the tubes draining the space below the diaphragm, the cavity in the lung, the right pleural space and the thoracotomy wound. A mixture of *Proteus mirabilis*, *Klebsiella oxytoca* and *Rhodococcus equi* were isolated from this pus.

Table 1

Antibiotic sensitivities of *R. equi* strains

	Case 1	Case 2
Penicillin	R	S
Ampicillin	R	S
Tetracycline	S	S
Cephalothin	R	S
Chloramphenicol	S	S
Gentamicin	S	S
Erythromycin	S	S
Vancomycin	R	S
Trimethoprim	R	R
Sulfonamide	S	S
Clindamicin	R	S

R = resistant

S = sensitive

Immediately post operatively the patient suffered a cardiac arrest and subsequently died from a combination of pneumonia, respiratory failure and surgical sepsis.

### Microbiology Results

#### Case 1

Numerous pus cells, Gram positive cocci and Gram negative bacilli were seen in a Gram stain of the pus.

After 24 hours aerobic incubation at 36°C mucoid colonies of 1-2 mm diameter appeared on Columbia sheep blood agar. The colonies were non haemolytic and became a pale salmon pink colour after 72 hours incubation. Anaerobic cultures were done but no other organisms were isolated.

#### Case 2

Numerous pus cells, small numbers of Gram negative bacilli and numerous pleomorphic Gram positive bacilli were seen in a Gram stain of the drainage fluid.

After 24 hours aerobic incubation at 36°C *Proteus mirabilis* and *Klebsiella oxytoca* grew on Columbia sheep blood agar and CLED agar. After 48 hours aerobic incubation at 36°C, dry cream coloured colonies appeared on colistin naladixic blood agar. After 4-5 days these colonies became pinkish orange, remained dry and rough and were non haemolytic.

Both isolates were pleomorphic gram positive bacilli which were catalase positive, oxidase negative, produced urease and reduced nitrate to nitrite. They did not ferment glucose, xylose, mannitol, lactose, sucrose or maltose. They differed in their sensitivity to antibiotics. Using Isosensitest blood agar and the Stokes disc diffusion method with Oxford staphylococcus control, their sensitivities were as follows (Table 1).

### Discussion

*R. equi* is probably a saprophytic, opportunist pathogen. Most animal infections are in young foals (less than six months old), whose immune system is immature. In other animals infections seem to occur in cervical lymph nodes and are self limiting. In humans nearly all cases have been in patients who are immunosuppressed.

Infection is probably spread by inhalation or ingestion with most reports implicating soil as the source of infection although it is controversial whether soil or equine faecal flora is the primary habitat of *R. equi*.<sup>5,6,7</sup> Both of our patients denied any contact with horses or any other farm animals.

There was considerable variation in the microscopic and cultural morphology of these two strains of *R. equi*. For example



the Gram positive cocci and Gram negative bacilli seen in the direct smear of pus from Case 1 probably reflects the variation in staining and morphology of *R. equi* as no other organisms were isolated.

The colonial morphology of the strain from Case 2 was not the typical, salmon pink, mucoid colony of *R. equi* but bright pinkish orange and very dry. This resembles the suggested soil strains of Barton.<sup>3</sup> In her review, Barton says that out of 66 isolates she tested for antibiotic sensitivity, those with atypical colonial morphology were all sensitive to penicillin and ampicillin (as was this strain) and thought to be derived from soil. All the isolates from animal cases were resistant to penicillin and ampicillin. This patient was a keen gardener and infection may have occurred via the gut with intestinal organisms ascending the biliary fistula to reach the lung as part of a mixed flora.

These two cases are reported so that *R. equi* may be recognised in microbiology laboratories as an important opportunistic pathogen and not be discarded as a "diphtheroid" contaminant.

#### Acknowledgements

We are grateful to Patricia Cawley of National Health Institute

for confirming the identity of these two isolates as *R. equi*.

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## RIA versus IRMA: A Comparison of Two Commercial Kits for Thyrotropin

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#### Running Heading

RIA/IRMA Thyrotropin Kit Comparison

#### Abstract

The Diagnostic Products Ultra radioimmunoassay (RIA) and the Serono MAIA Clone immunoradiometric assay (IRMA) kits for thyrotropin (TSH) were compared for analytical and clinical performance. Both kits satisfactorily differentiated the hypothyroid state. Only the IRMA was useful for the diagnosis of thyrotoxicosis.

#### Key Words

Immunoassay, Thyrotropin.

#### Introduction

The inability of many immunoassays to differentiate the low concentrations of thyrotropin (TSH) characteristic of thyrotoxicosis, from the euthyroid reference range, is an example of the detrimental effect of poor precision on diagnostic power. Highly precise assays for TSH<sup>1</sup> show no overlap between euthyroid and thyrotoxic ranges. Until recently, commercially available assays for TSH suitable for routine use had precision in the lower working range so poor that an artificial overlap was created. In most cases the euthyroid reference range lower limit extended to zero, and the assays were useful only for distinguishing the hypothyroid state.

Poor precision has also been given as a reason for the high (> 5 mIU/L) upper limit for the euthyroid TSH reference range commonly found using commercially available kits<sup>2</sup>. Poor accuracy, due to lack of specificity or to matrix effects (which may be positive or negative) may also produce a TSH reference range displaced relative to that obtained by reference methods<sup>3</sup>.

Immunoradiometric assays (IRMA's), which use radiolabelled antibodies in excess for direct estimation of the isolated analyte, have several theoretical advantages relevant to the problems of TSH assay, when compared with radioimmunoassays (RIA's), in which radiolabelled analyte competes with unlabelled analyte for limited antibody before isolation of the complex. In an IRMA almost all the analyte is bound and measurable at equilibrium and the method is therefore potentially more sensitive. The antibody excess design both speeds the reaction and reduces the

contribution of pipetting error to imprecision<sup>4</sup>. Precision is also improved in an IRMA as a result of the direct dose-response relationship (changes in the low assay range being made against a low background), and the typical IRMA standard curve conformation, i.e. greater slope over the low assay range compared with RIA<sup>5</sup>. The possibility of interference from auto- or heterophilic antibodies, or from other serum factors which might bridge label and solid phase, is minimized in typical IRMA protocols by the use of specific, high affinity monoclonal antibodies, and the incorporation of multiple analyte antigenic sites in the linked system.

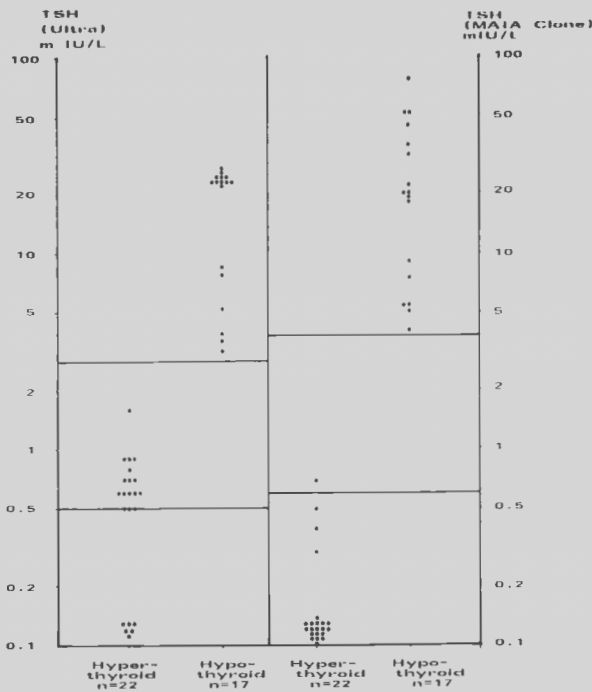
This study was undertaken to compare the DPC Ultra TSH (RIA) and the Serono MAIA Clone TSH (IRMA) kits for certain features of analytical performance, and for their ability to distinguish thyroid dysfunction from the euthyroid state.

#### Materials and Methods

In the Ultra-TSH RIA (Diagnostic Products Corp., Los Angeles, U.S.A.) purified <sup>125</sup>I-TSH competes with sample TSH for sites on polyclonal goat anti-TSH. The bound fraction is precipitated with second antibody-PEG. Calibrators are prepared in TSH-free human serum. We used the 18-hour first antibody incubation protocol, with reagents and sample at the recommended volume.

The MAIA Clone IRMA (Serono Diagnostics Ltd., Woking, U.K.) uses monoclonal antibodies to three different human TSH antigenic determinants, two of the monoclonals being <sup>125</sup>I labelled, and the third fluorescein isothiocyanate (FITC) labelled. Separation is achieved by adding polyclonal anti-FITC antibody attached to magnetic particles. Untreated human serum is used for calibration. We used half the recommended reagent and sample volumes, extended the first antibody incubation to 18 hours, and doubled the pellet wash volume.

Data reduction was performed on an LKB Wallac Multigamma II using a spline curve fit. Sensitivity was assessed for each assay from the within-assay replication of ten zero standards (treated as unknowns), and expressed as the minimum concentration detectable (MCD, equal to 2 SD for the zero standard).



**Figure 1:** Ultra TSH and MAIA Clone TSH concentrations for patients biochemically hyperthyroid (thyrotoxic) or hypothyroid. Reference range limits shown as horizontal lines.

We calculated non-parametric reference ranges (percentile estimates method) from results obtained on blood donor serum. Within — and between — assay precision was calculated for each assay using Lyphocheck Quality Control Sera, reconstituted and kept deep frozen in aliquots.

For comparative clinical data a series of patient sera having Amerlex free thyroxin (FT<sub>4</sub>) (Amersham International) approaching or outside our FT<sub>4</sub> reference range limits was analyzed by both TSH methods. Total tri-iodothyronine (T<sub>3</sub>) (Amersham) was also performed for confirmation of thyrotoxicosis. We excluded patients known to be taking thyroxin or thyrotoxic drugs. All assays were performed in duplicate.

**Results and Discussion**

Precision data for both TSH methods are listed in Table 1. We obtained performance data for the MAIA Clone kit closely similar to those quoted by the manufacturer using the unmodified protocol. For the Ultra kit, our between assay control 2 precision was slightly poorer (7.4% CV cf 5.2% CV) and our sensitivity better (MCD 0.04 cf 0.09). Other performance data were closely similar.

Table 2 lists correlation and regression data for high, reference range, and low MAIA Clone TSH (y) sera versus their

**Table 1**

*Comparative Precision Data For Two TSH Methods (IU/L)*

		WITHIN—ASSAY		BETWEEN—ASSAY	
		ULTRA	MAIA	ULTRA <sup>+</sup>	MAIA
ZERO STANDARD	Mean	0.051	0.181	—	—
	SD	≤0.020	≤0.013	—	—
	MCD*	0.040	0.026	—	—
CONTROL 1	Mean	1.45	2.05	1.65	2.23
	SD	≤0.12	≤0.09	≤0.14	≤0.15
	CV	8.3%	4.4%	8.5%	6.7%
CONTROL 2	Mean	11.05	13.96	14.34	15.36
	SD	≤0.35	≤0.27	≤1.06	≤0.67
	CV	3.2%	2.0%	7.4%	4.4%

\* MCD = minimum concentration detectable. n = 10 except <sup>+</sup> (n = 20)

**Table 2**

*Method (MAIA Clone Versus ULTRA) Correlation and Regression Data*

Range (m IU/L MAIA Clone)	n	r	Slope	Intercept
0.1—0.6	29	0.33*	0.14	0.08
0.7—3.8	23	0.49*	0.61	0.53
>3.8	32	0.89 <sup>+</sup>	0.87	2.59

\* p < 0.05    <sup>+</sup> p > 0.005

corresponding Ultra TSH (x) concentrations. (As the Ultra method had an upper working range limit of 20 m IU/L sera with Ultra TSH concentrations > 20 m IU/L were not included in this table.)

The better detection limit and precision obtained for the MAIA Clone assay suggest that it is potentially better able to distinguish euthyroid from thyrotoxic. In addition, comparison of the means obtained for Lyphocheck Controls by both methods suggests that one or both methods is slightly biased. Similar bias is also suggested by the positive intercept (= 2.6 m IU/L) for the regression line obtained for MAIA Clone (y) versus Ultra (x) in the high TSH range. The U.K. EQAS 1985 report for TSH however<sup>6</sup> found the Serono MAIA Clone to be the least biased of several of the better performing kits tested (DPC Ultra TSH not included). Addition of TSH to TSH-stripped human serum for the preparation of standards could result in a negative matrix effect in the DPC Ultra method. This would explain its relatively low upper limit for the euthyroid range (which suggests greater sensitivity and precision than is obtainable by this method).

Reference ranges found were as follows: Ultra 0.5 — 2.8 mIU/L (n = 80), MAIA Clone 0.6 — 3.8 mIU/L (n = 126). These limits are shown in Figure 1, together with TSH results obtained by both methods on sera having (a) FT<sub>4</sub> ≥ 23 pmol/L, T<sub>3</sub> ≥ 2.5 nmol/L (biochemically hyperthyroid) and (b) FT<sub>4</sub> ≤ 11 pmol/L (biochemically hypothyroid). Undetectable concentrations are plotted at 0.1 mIU/L in each case.

As the reference range for the DPC Ultra TSH method does not extend to the theoretical detection limit of the assay, one might expect that thyrotoxicosis could be diagnosed using this method<sup>3</sup>. The degree of 'thyrotoxic' overlap with the reference range is extensive however (73%), apparently precluding use of this assay for the diagnosis of thyrotoxicosis. The MAIA Clone method achieved a clearer 'thyrotoxic'/euthyroid range separation (< 5% overlap). Other workers<sup>7</sup> using the unmodified Serono MAIA Clone method also concluded that 96% of patients with thyrotoxicosis could be distinguished from normal on the basis of a single MAIA Clone TSH assay. The poor clinical performance of the Ultra TSH in the thyrotoxic range is reflected in the correlation and regression data. Two patients with normal FT<sub>4</sub> (12 and 13 pmol/L) and normal MAIA Clone TSH concentrations had Ultra TSH concentrations marginally above reference range. Neither method however was clearly superior for diagnosing hypothyroidism on the evidence available to us.

We conclude that the Serono MAIA Clone TSH method is superior overall, both analytically and clinically, to the DPC Ultra TSH. Our findings suggest that the name 'Ultra' is potentially misleading. As release of the DPC Ultra TSH kit coincided with that of the first high-sensitivity commercial IRMA's for TSH, its name was an unfortunate choice.

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## Anti-Chido: A Case Report

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### Abstract

A case-study of a patient with anti Chido antibodies is reported along with the methods used for identification of the antibodies. Data are reviewed to show that these antigens are now more complex than was at first thought.

### Introduction

In 1967 Harris<sup>5</sup> described a new red cell antigen which she named Chido. The antigen was later detected in plasma by Middleton<sup>6</sup>, and he found that its antibody (anti Chido) could be inhibited by plasma or serum from Chido positive subjects. Family studies showed linkage between histocompatibility antigens on chromosome 6 and the Chido antigen<sup>7</sup>. Other studies associated C4 with HLA<sup>8</sup>.

Giles<sup>9</sup> described another red cell antigen associated with HLA, present on red cells and in serum. She named it the Rodgers antigen. Using electrophoretic studies O'Neill<sup>12</sup> demonstrated that the Chido and Rodgers antigens were part of the 4th component of complement. Later he demonstrated a rare variant C4F1 (an allele of the C4F locus) and suggested a genetic control of Chido and Rodgers. Demonstration of a new and distinct inhibition pattern for Chido<sup>16</sup> showed recessive inheritance and linkage to HLA. This new genetic variant gave rise to four allotypes for Chido, Ch1, Ch2, Ch3 and Ch—.

Chido and Rodgers antibodies react with high frequency antigens (> 90%). They are not uncommonly found in multiparous and transfused patients. They do not cause transfusion reactions and haemolytic disease of the newborn, yet react with anti-IgG but do not bind complement. Their reactions are not enhanced by using proteolytic enzymes, and are of variable strength being of the high titre and low avidity type. Sera of individuals containing anti-Chido, are also often positive for leucocyte antibodies.

We outline clinical details of the patient and the serological findings.

### Case Study

A thirty-five year old woman was admitted to hospital in 1968 for an emergency cholecystectomy during pregnancy. There was accidental damage to the common bile duct and she developed severe jaundice and cholangitis. Repairs were made to the bile duct and she was transfused with six units of blood. The surgical repairs were only partially successful; the cholangitis recurred and she was readmitted to hospital in 1976 with cirrhosis, ascites and oesophageal varices. A diagnosis of portal hypertension secondary to cirrhosis was made. In 1979 she was readmitted with haematemesis, resulting from oesophageal bleeds.

All blood crossmatched was incompatible by the LISS-Coombs technique. Because of the variable-strength reactions and the fact that this antibody defined a high-frequency antigen, titration studies were carried out, followed by the Chido Inhibition Test. She was shown to be Ch (a—) and her antibody identified as anti Ch (a). It was then decided that an in-vivo crossmatch be carried out using 51-chromium labelled red cells from an incompatible donor. These in-vitro incompatible cells had a normal survival at one hour of 89% using the method of Silvergleid et al<sup>1</sup>. The patient subsequently underwent a portocaval shunt followed by a spleno-renal anastomosis, during which she was transfused with seventeen units of incompatible blood. She subsequently developed a weakly positive Direct Antiglobulin Test, yet there was no evidence of increased red cell destruction. Despite these procedures she died of hepatic coma three weeks after admission.

### Materials and Methods

Red cell antibody screening was carried out by routine procedures. Positive sera were tested against a panel of twelve different red cell types by room temperature, two-stage ficin enzyme and indirect coombs techniques.

Titration studies<sup>2</sup> were undertaken by testing sera titred both in pooled AB serum and in saline against Ch (a+) cells.

The Chido Inhibition Test<sup>4</sup> was carried out by reacting known anti-Chido sera with unknown sera to which was added Ch (a+) cells. Appropriate controls were run concomitantly. Lack of agglutination indicated that the subject was Ch (a+).

### Results

The antibody of the patient reacted variably, but mainly weakly with all cells of an extensive identification panel, but only in the antiglobulin (AHG) phase using IgG AHG. The reactions were of a low avidity but had a high titre for such a weak reacting antibody. The agglutinates were fragile and easily dispersed. Titration studies were performed in AB serum and in saline. The titre of the antibody in the AB serum was reduced to 1/16 when compared to the titre in saline (1/512) (Fig 1). The patient's antibody was also inhibited by plasma from an incompatible donor. These findings indicated that the antibody was inhibited by a plasma component, and probably was of the high titre low avidity type.

The serum of the patient was tested in the Chido Inhibition Test using a known anti-Chido serum. The result was negative indicating a Ch (a—) status. Her antibody was inhibited by sera from other Ch (a+) individuals, but not by sera from Ch (a—) individuals. On these findings the antibody was identified as anti-Chido. This was later confirmed by the Ortho Reference Laboratory.

Her HLA type was determined as HLA A1,2; B40, 12;w4, w6.

### Discussion

The association of Chido/Rodgers, C4 and HLA is an interesting one. Persons who are Ch (a—) Rg (a+) usually have HLA antigens that are associated with HLA B12, (Bw35), B5, B18, B17 and B37<sup>14</sup>. Separation of C4 by electrophoresis reveals that they have four fast moving bands now termed C4A<sup>20</sup>, whereas those individuals that are Ch (a+) Rg (—) are associated with HLA B8 and B40, and have four slow-moving bands of C4 now termed C4B<sup>20</sup>. The majority of the population (over 90%) are Ch (a+) and Rg (+) and their C4 electrophoresis shows both the fast and the slow moving bands. Only two known individuals, who are Ch (a—) and Rg (a—) have no C4 bands at all.

The HLA type of our patient showed the presence of HLA B12 thus giving further support to our findings.

The Chido/Rodgers antibodies should be suspected when an

Patients	1	1	1	1	1	1	1	1	1	1	Cells
serum dilution	1	2	4	8	16	32	64	128	256	512	1024
Pooled AB Serum	8	5	3	3	3	—	—	—	—	—	Ch+0
Saline	8	5	5	5	5	5	5	5	5	3	— Ch+0
Incompatible donor	8	5	5	3	3	3	—	—	—	—	Ch+0

Fig. 1

Reaction scores of dilutions of patients serum against Chido positive cells in various media.

antibody is IgG and the reactions are of variable strength, high titre and low avidity and are not enhanced by enzymes. From this point, titration studies<sup>2</sup> can be carried out. If there is inhibition with pooled AB serum an antibody to a plasma antigen is present. At this stage Chido typing of the serum can be carried out. If there appear to be other alloantibodies present the anti-Chido may be removed by autoabsorbing with C4 coated cells<sup>19</sup>.

Two other cases of anti-Chido were found subsequent to the case described above. One required a two unit transfusion of incompatible blood, which was uneventful.

More recent information has shown that the relationship of C4 with Chido and Rodgers antigens is more complicated than first thought. Partial inhibitors (p.i.) have been recognised by Nordhagen et al.<sup>17</sup> These persons had weak amounts of plasma Ch/Rg antigens, and this was an inherited characteristic. Ch(p.i.) were associated with the C4M (B2) allotype of C4.

Evidence to suggest that the genetic control of C4 synthesis is controlled by more than one gene was presented by O'Neill et al.<sup>18</sup> He demonstrated that in a third, newly discovered C4 deficient individual, the plasma lacked both Chido and Rodgers antigens, whereas the red cells, reacted with anti Chido and anti Rodgers sera. This finding contrasted with the two other C4 deficient individuals who both lacked Chido and Rodgers antigens on their red cells and in their sera.

#### Acknowledgements

I wish to acknowledge the help of Dr D.G. Woodfield and Mrs L. Pinder in the preparation of this paper.

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## TECHNICAL COMMUNICATION

### An I-negative Blood Donor

S.R. Khull, A.N.Z.I.M.L.T.

Immunohaematology Laboratory, Blood Donor Service, Wellington

#### Abstract

I-negative individuals are rare, but may be detected by careful investigation of anomalous results.

#### Introduction

Since 1956<sup>1</sup>, it has been known that some rare individuals have little or no I antigen on their red cells; these are known as i adults. Many i adults have anti-I in their serum. Careful investigation can differentiate these allo-anti-I antibodies from the common cold auto-agglutinin of normal individuals.

#### Case History

Mr P.B. is a regular blood donor in the Wellington region and has donated eleven units since 1976. He is group A Rh(CDE) Negative; K-; M+N+; P, +; Le (a-b+).

On his first donation, on 13/12/76, a weak cold-reacting agglutinin was detected in antibody screening tests, but attempts

at identification were unsuccessful. Similar results were found on the second donation and the antibody was identified as anti-I. Although the auto control was negative while all other adult red cell samples were at least weakly positive with this donor's serum, this was not pursued at the time.

No anomalies are recorded for any subsequent donations until 12/11/85, when the room temperature antibody screen was again positive. The antibody was again identified as anti-I, reacting to a temperature of 30°C with all adult red cells tested except the donor's own cells. A commercial anti-I was available, and the donor's I group was determined as I-negative. This was kindly confirmed by the Auckland Blood Transfusion Service and the National Reference Centre in Oxford, England.

Contact with the donor's family yielded blood samples from both parents and one of his three sibs. All were found to be I-positive. Results of an attempt to demonstrate weakened I



antigen in the obligate heterozygotes were unconvincing.

**Conclusion**

The elucidation of this donor as an I-negative individual resulted from the followup of positive results in routine antibody screening tests. The finding of a negative auto control with a strong anti-antibody was an important clue to the correct interpretation.

This donor is now registered on the national panel of rare donors.

**References**

1. Wiener A.S., Unger L.J., Cohen L. and Feldman J. Type-specific cold auto-antibodies as a cause of acquired hemolytic anemia and hemolytic transfusion reactions: biologic test with bovine red cells. *Ann. intern. Med.* **44**, 221-240, 1956.

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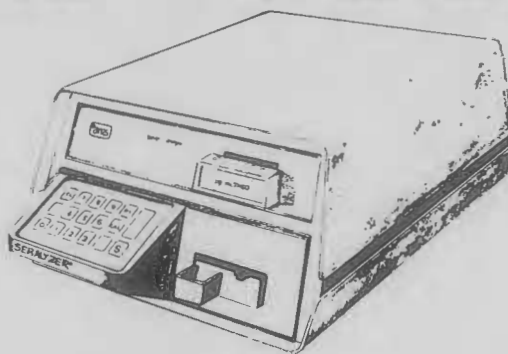
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# The Pacific Way

## International Health and the Pacific Paramedical Training Centre

### Bridget Gunn, Medical Officer, International Health

In 1965 the Director-General of Health confirmed long standing administrative arrangements in the Department of Health for handling international health work. At first the International Health Section of the Department of Health consisted of an executive officer directly responsible to the Director-General of Health, but it subsequently became necessary to appoint two clerical administrators and a medical officer. Present staff consist of the Medical Officer, Dr John Mills, the Senior Executive Officer, Mrs Bridget Gunn and the Executive Officer, Mrs Margaret Chamberlain.

One of the main objectives of the Section is to advise and assist the Ministry of Foreign Affairs in the effective administration of the health aspects of the New Zealand Overseas Development Assistance programme. It was in the context of this objective that the Section became closely involved with the establishment of the Pacific Paramedical Training Centre in the late 1970's. The then Medical Officer International Health, Dr A.J. Sinclair, and Executive Officer, Mr M. Cumming, encouraged the provision of a facility which would provide training in medical laboratory technology at a level appropriate to the facilities and needs of developing countries.

The P.P.T.C. is seen by International Health as one of the more practical and effective ways of helping developing countries to improve their health services. New Zealand is a small country and even in times of affluence, the resources that can be directed to helping developing countries are fairly limited. In the health field it is felt that these limited resources are best used in training personnel or the export of professional and technical expertise. The fact that training must be relevant and appropriate to the work trainees will be doing on the return to their own countries is a simple and obvious concept but it can be difficult to achieve implying as it does:

1. that the trainees have jobs to return to and that they are able to implement at least part of what they have learned;
2. that there is the necessary administrative and staff structure, and equipment, for them to work to some purpose; and
3. that there is a need for the additional knowledge and expertise that they will hopefully have acquired.

For many years New Zealand had accepted for training, either through the World Health Organisation or the New Zealand Development Assistance Programme administered by the New Zealand Ministry of Foreign Affairs, some 5-6 laboratory technologists every year for "on the job" training. However, this training was often less than appropriate due to the wide differences in practices and technology between New Zealand and less developed countries. The department was therefore very supportive of the P.P.T.C. initiative in spite of the fact that it runs contrary to the policy of training within the region and not within a developed country, the reasons being:

- : there was an excellent facility available at no cost;
- : the proposed group training was immeasurably superior to the attachment of an individual to a busy service department;
- : the availability of a high volume of relevant clinical material at a hospital such as Wellington would provide trainees with a maximum of experience in a very short time compared with their likely exposure in their own countries.

International Health was subsequently able to persuade the New Zealand Government, through the Ministry of Foreign Affairs, to provide the salary of a tutor/director for three years beginning in December 1980.

Since the inception of the Centre in 1981 International Health has continued to be involved. The Senior Executive Officer, Mrs B. Gunn, is a member of, and secretary to, the P.P.T.C. Steering



Margaret Chamberlain (left) Executive Officer and Bridget Gunn, Senior Executive Officer, International Health, discussing the next intake of trainees for "on the job" training. Bridget Gunn is Secretary to the P.P.T.C. Steering Committee.

Committee and the Executive Officer, Mrs M. Chamberlain, liaises with the Centre, the World Health Organisation and the Ministry of Foreign Affairs, over arrangements for World Health Organisation and/or New Zealand Government sponsored students from the Pacific Island countries who attend the laboratory course. All staff in the Section try to attend annual PPTC meetings and presentation of diploma ceremonies. Working relationships with the Centre have been friendly and informal as has the environment in which the laboratory students train so successfully.

In short, the Centre has been a very worthwhile and imaginative project which International Health has been proud to be associated with.

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## Clinical Biochemistry Examination Review

Jan Parker, ANZIMLT, BSc, Dip Bus Admin

Sections C and D missed the Journal publication date and were sent out to Charge Technologists in the main centres. If any candidates missed out they could write to me at the address below for additional copies. Again each section is designed to take one hour and it is suggested candidates study the relevant section of the syllabus (1985 edition) then attempt the questions under examination conditions. All scripts returned to me by the closing date will be marked and returned, together with brief model answers, approximately two weeks later. Questions will be marked to the same standard as for finals and no correspondence will be entered into.

Please ensure that scripts are clearly marked with your name and return address.

Post to: **Mrs J. Parker,  
Chemical Pathology Laboratory,  
Dunedin Hospital.**

### Certificate Candidates

Section E — Syllabus Sections 19-25

Closing date: September 12

- Q1 a) Outline the WHO guidelines for the diagnosis of diabetes mellitus  
b) Outline the classification of diabetes mellitus  
c) Discuss the major causes of hypoglycaemia in adults and neonates
- Q2 a) Compare urine albumin estimation by dry and wet reagent chemistries with reference to —  
i) chemical principles      iii) quality control  
ii) specificity and sensitivity      iv) clinical relevance  
b) Give two examples each of metabolic alkalosis and respiratory alkalosis. Describe what physiological response would occur and the subsequent effect on the blood gases.
- Q3 a) Write short notes on three of the following —  
i) Serum and urine osmolality  
ii) Physiological role of serum albumin  
iii) Gilbert's disease  
iv) Neonatal Rh incompatibility  
b) Describe a method for the estimation of serum alkaline phosphatase under the headings —  
i) Principle  
ii) Standardization  
iii) Variation in health and disease

### Certificate Candidates

Section F — Syllabus Sections 26-31

Closing date: September 19

- Q1 Outline the clinical relevance and problems associated with testing for  
a) iron binding capacity  
b) theophylline  
c) acid phosphatase  
d) lactate
- Q2 a) Describe a method to measure faecal fat in terms of  
i) principle  
ii) specimen requirements  
iii) variation in health and disease  
b) Describe the absorption of fat in disaccharidase deficiency.  
c) Describe other tests which would be useful in the diagnosis of disaccharidase deficiency.
- Q3 a) Outline the function of the parathyroids.  
b) Describe the biochemical effects of hyper and hypo parathyroidism  
c) Outline the classical clinical presentation of primary hyperparathyroidism.

### Specialist Candidates

Section E — Syllabus Sections 31-34

Closing date: September 12

Essay Question — ¾ hour

Discuss the causes and symptoms of cystic fibrosis and

describe the relevant laboratory tests which would be appropriate for diagnosis.

Short Answers — 1 hour

- Q1 a) Outline the effects of alcohol abuse on the liver.  
b) Discuss the clinical relevance of testing for alkaline phosphatase isoenzymes.  
c) Give the analytical principles of two different methods for serum bilirubin and discuss their advantages and disadvantages.
- Q2 a) Discuss a method for serum fructosamine under the headings  
i) analytic principles  
ii) specimen requirements  
iii) clinical relevance  
b) Discuss the pattern of enzymes you would expect following a severe myocardial infarct.
- Q3 Write short notes on the following  
a) high density lipoproteins  
b) ultracentrifugation  
c) sweat test sample collection  
d)  $\alpha$ 1 antitrypsin

### Specialist Candidates

Section F — Syllabus Sections 35-40

Closing date: September 19

Essay Question — ¾ hour

Discuss why a patient with hyperparathyroidism should be prone to bone fractures and to develop calcium containing kidney stones.

Short Answers — 1 hour

- Q1 a) Outline the biochemical effects of  
i) Cushing's disease      iii) Addison's disease  
ii) Cushing's syndrome      iv) Conn's syndrome  
b) Discuss the performance and interpretation of the Short Synacthen Stimulation test.
- Q2 a) Describe a method for Human Chorionic Gonadotrophin under the headings  
i) Chemical principles  
ii) Clinical relevance  
b) Discuss the following  
i) The physiological role of growth hormones  
ii) Congenital hypothyroidism
- Q3 a) Discuss the clinical relevance of testing for  
i) Melanogen      iii) Aluminium  
ii) Zinc      iv) Hydroxyproline  
b) Discuss a method for screening for amino acids with reference to chemical principles, specimen requirements and clinical relevance.

## LETTERS TO THE EDITOR

### Re: Industrial matters.

Dear Sir

Initially, let it be said that we appreciate the considerable demands placed upon Council members serving as they do in a voluntary capacity, particularly during periods of considerable change and restlessness, as well as during times of apparent apathy and disinterest by members. We believe that progress in industrial matters can be made to best effect when members given reasoned forethought to constructive change and relay this to Council.

We believe that the role of Council is to direct their efforts to affairs which affect the total Institute membership regardless of which sector they may be employed, viz education, training, codes of practice etc. Further that industrial matters need to be handled separately by a body which can adjudicate for the total membership.

Many of our current problems in relation to staffing shortages of qualified personnel and the current bout of muscle flexing by laboratory assistants stem from short term policies adopted in the



past for short term expedience rather than through sound judgement.

We feel strongly that there are certain fundamental principles which have eroded over a period of time which need to be addressed by Council and until these are adopted and communicated to the membership the present low morale and loss of esteem within the profession will deteriorate further.

Some of these principles surely must be:

1. The re-establishment of the need for and the role of the trainee as opposed to the laboratory assistant as an indispensable unit in all laboratories.

This is seen as essential to achieving:

- (a) the best quality in routine lab work
  - (b) an adequate supply of soundly trained technologists for the future
  - (c) adequate minimum standards for "on call" workers
2. The re-acceptance by senior technologists of their responsibility in management, training and setting higher standards in professional conduct. The insidious breakdown of established systems has been permitted by those who have often abdicated their responsibility and taken a lesser part. Specifically this has given rise to

- (a) few if any trainees being taken on.
- (b) an inappropriate number of laboratory assistants being employed and given premature responsibility for call and weekend work, often without supervision.
- (c) employment by some hospitals of trained and qualified staff who are being employed and paid as laboratory assistants.

Much of the disillusionment currently within our profession is symptomatic of present day society and only if a firm lead and disciplined approach by Council with the support of serious thinking senior members of the Institute will help stem this tide.

We are aware that Council are working hard with a view to bringing about change of a positive nature.

It is accepted that all too often in the past some of us have been content to largely "live with" rather than get involved with the direction of the evolution of change and it has taken the current "volcanic activity" to awaken us to the precariousness of our present position.

We suggest that urgent informed discussion is required at branch level, with input from Council members who are able to present the views held by Council together with the alternatives in a clear precise and non-threatening manner.

There is concern that the time allocation to this years AGM may be inadequate for the necessary time to be allotted to allow adequate time to evolve a consolidated platform on which to secure the future of our profession. Would a series of area seminars prompt meaningful discussion to assist council?

The current industrial holocaust has been accompanied by a lot of emotional verbiage and orchestrated by pecuniary considerations without the accompaniment of emphasis on professional responsibility and accountability.

It is our hope that the silent majority of hard working and dedicated technical staff in our laboratories will not look to the Council in vain for a disciplined lead in these important matters.

We trust that you will interpret the suggestions in this letter as constructive as this is the intent.

Be assured of our continuing interest in these developments.

Yours faithfully  
J. Rees ANZIMLT  
J.W. Finlayson ANZIMLT  
J.B. Kitto ANZIMLT  
A. Wilson ANZIMLT

**Re: Medical Laboratory Technologists:**

Dear Editor,

Having listened to recent discussions at the AGM I put it to you that as a matter of considerable urgency the Technical Assistant programme needs to be scrapped.

The whole system is totally out of hand and it is a foreseeable consequence that Technologists as we know them are being made extinct.

Over the years we have progressively taken on people with higher and higher academic skills, then offered them increasingly more difficult examinations, asked them to do an ever increasing

range of work, paid them peanuts, and sat back on our over inflated egos and said what noble souls we were.

As a consequence of this continuing action we now have a large pool of highly skilled individuals (in some cases better than their Technologist masters) who are extremely disenchanting with their lot. It's about time we reviewed our long term objectives in relation to this group and from this I would make the following suggestions:

- (1) School Certificate (or its equivalent) to be the MAXIMUM educational requirement.
- (2) A slight reduction of the examination standard but with a higher failure rate.
- (3) The virtual removal of the "General Certificate" except for laboratories where there is no resident Pathologist.
- (4) A marked reduction in the amount of lecture time that now seems to be expected.
- (5) Prohibition of the use of the Technical Assistant scheme as a stepping stone to Technology.

The end product of all this may well be the employment of a group of people who because of (1) have a greater sense of success and on passing through (2) feel that they have in fact overcome a significant hurdle.

The deletion of (3) would reduce the pool of people who are avidly sought by private enterprise to take the jobs that were once offered to Technologists.

In so far as we should require these people to carry out a lesser range of work, it would be easier for the majority of their training to be carried out at bench level which after all is the correct place for it.

Finally I would suggest if we accept registration via the technical assistant programme then we would have little or no option but to accept Science Graduates along similar lines. This has never been acceptable in the past — why now?

It's time we faced up to these problems and made the unpleasant decisions now — while we still can . . .

Regards  
IGOR

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**HS48**

**STANDARD CONDITIONS FOR HEALTH WORKERS + H.S. 19**

**PAGE**

**HOSPITAL SERVICE DETERMINATION No. H.S. 48**  
**STANDARD CONDITIONS AND ALLOWANCES**

Pursuant to the State Services Remuneration and Conditions of Employment Act 1969, the Director-General of Health hereby makes the following determination:

**APPLICATION OF DETERMINATION**

1. The Schedule to this Determination sets out standard conditions and allowances which shall apply to those Hospital Service employees whose remuneration and conditions of employment are determined by the Director-General of Health in terms of the State Services Remuneration and Conditions of Employment Act 1969.

PROVIDED however, that the conditions and allowances prescribed in this determination shall apply only when invoked in any determination for a specific class of employee.

2. This determination shall take effect on and from the fifteenth day of December 1973.

Dated at Wellington this 19th day of November 1973.

H.J.H. Hiddlestone  
Director-General of Health

**TRANSFER AND REMOVAL CONDITIONS AND EXPENSES**  
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**1 HOURS OF WORK**

- (1) Scale A  
Ordinary weekly hours of work shall be 40, consisting of five 8 hour duties worked between 7.30 am and 5 pm Monday to Friday inclusive. Each such duty shall be continuous, except for interruptions for meal periods and rest breaks provided for under Clause 2.  
Provided, however, that, in emergency circumstances, a board may require an employee to work at other times and for periods other than those specified.
- (2) Scale B  
Such other hours as may be provided in a determination or tribunal order.

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**2 MEAL PERIODS AND REST BREAKS**

- (1) Except when required for urgent or emergency work and except as provided in subclause (2) below, no employee shall be required to work for more than 5 hours continuously without being allowed a meal break of not less than half an hour.
- (2) An employee unable to be relieved from work for a meal break shall be allowed to have a meal on duty and this period shall be regarded as working time.
- (3) Rest breaks of 10 minutes each for morning tea, afternoon tea or supper, where these occur during duty, shall be allowed as time worked.
- (4) During the meal break or rest breaks prescribed above, free tea, coffee, milk and sugar shall be supplied by the board. Where it is impractical to supply tea, coffee, milk and sugar free of charge, an allowance of \$1.07 per week in lieu shall be paid. This allowance, shall continue during all periods of leave except leave without pay.

Note: Allowance is effective from 4 November 1985.

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**3 OVERTIME AND PENAL TIME**

- (1) Definitions  
(a) Normal hourly rate of pay — The normal hourly rate shall

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be one two thousand and eighty sixth part, correct to three decimal places of a dollar, of the yearly rate of salary payable.

- (b) Overtime — Overtime is time worked in excess of 8 hours a day, Monday to Friday inclusive, or in excess of 8 hours a day on a State Service holiday and all time, other than penal time, worked on a Saturday, Sunday or public holiday when such work has been properly authorised.
- (c) Penal time — Penal time is time (other than overtime) worked within ordinary weekly hours of work on a Saturday or Sunday or public holiday.

(2) Conditions

- (a) An employee who is called back to work overtime between two ordinary periods of duty, other than as an extension of a normal duty, shall be entitled to overtime rates for each such recall, both in respect of actual time worked and reasonable travelling time from the place of call to the place of duty and return to the place of call or residence. Payment for each recall shall be on the basis of a minimum payment of 3 hours at appropriate overtime rates: or for actual working and travelling time, whichever is the greater. The minimum payment prescribed shall apply to each recall, except that:
  - (i) Callouts commencing and finishing within the minimum period covered by an earlier callout shall not attract any additional payment;
  - (ii) Where a callout commences before and continues beyond the end of a minimum period for a previous callout, payment shall be made as if the employee had worked continuously from the beginning of the previous callout to the end of the later callout.
- (b) Minimum break between spells of duty:
  - (i) A break of at least nine continuous hours must be provided wherever possible between any two periods of duty of a full shift or more.
  - (ii) Periods of a full shift or more include:

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**3(2)(b) OVERTIME AND PENAL TIME** (continued)

- Periods of normal rostered work; or
- Periods of overtime that are continuous with a period of normal rostered work;
- or
- Full shifts of overtime/call-back duty.
- (iii) This requirement to provide a break wherever possible applies whether or not any additional penalty payment will apply under the provisions of this clause.
- (iv) If a break of at least nine continuous hours cannot be provided between periods of qualifying duty, the duty is to be regarded as continuous until a break of at least nine continuous hours is taken and it shall be paid at overtime rates, with proper regard to the time at which it occurs and the amount of overtime which precedes it.
- (v) The penalty payment provisions of this clause will not apply in any case where the result would be to give an employee a lesser payment than they would otherwise have received.
- (vi) Time spent off duty during ordinary hours solely to obtain a nine-hour break shall be paid at ordinary time rates. Any absence after the ninth continuous hour of such a break, if it occurs in ordinary time, shall be treated as a normal absence from duty.

Note: If a call-back of less than a full shift is worked between two periods of duty of a full shift or more a break of nine continuous hours must be provided either before or after the call-back. If such a break has been provided before the call-back it does not have to be provided afterwards as well.

- (c) If an employee is absent for any day, days or part of a day on account of annual, sick or other leave, either with or

without pay, the qualifying period for the payment of overtime shall be reduced by his ordinary or rostered hours of duty (not exceeding 8 per day) for such absences.

- (d) Any employee who, in terms of subclause (5) below is not entitled to overtime payment, shall be granted equivalent time off for authorised work performed on a public or

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**3(2)(d) OVERTIME AND PENAL TIME** (continued)

a public or State Service holiday. Equivalent time off at other times for work performed outside normal hours may be granted at the discretion of hospital boards concerned.

(3) Overtime Rates

Subject to subclause (5) below, and subclauses A.3 and B.3 of clause 4, overtime shall be paid at the following rates. In computing overtime, each day shall stand alone.

- (a) In respect of overtime worked on any day (other than a public or State Service holiday), from midnight Sunday/Monday to midday on the following Saturday at one and one-half times the normal hourly rate of pay (T1-1/2) for the first 3 hours and at double the normal hourly rate of pay (T2) thereafter except that employees working overtime between 10 p.m. and 6 a.m. will be paid at the rate of T2.
- (b) In respect of overtime worked from midday Saturday to midnight Sunday/Monday or on a public or State Service holiday at double the normal hourly rate of pay (T2).

(4) Penal Rates

Subject to subclause (5) below, penal time shall be paid at the following rates in addition to normal salary:

- (a) From midnight Friday/Saturday to midday Saturday at half the normal hourly rate of pay (T-1/2) for the first three hours and at the normal hourly rate of pay (T1) thereafter.
- (b) From midday Saturday to midnight Sunday/Monday at the normal hourly rate of pay (T1).
- (c) On public holidays at double the normal hourly rate of pay (T2).

(5) Limits of Payment for Overtime and Penal Time

The following conditions shall apply on and from 1 August 1980:

- (a) Overtime and penal time shall not be paid in respect of the same hours.
- (b) Limit to eligibility — Except as may be approved by a chief executive under delegated authority from the board, an employee in receipt of an annual salary plus higher duties allowance, of \$33,193 (10.11.85) or more is not entitled to overtime payment.

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**3(5) OVERTIME AND PENAL TIME** (continued)

- (c) Limit to earnings — Except as may be approved by a chief executive acting under delegated authority from the board, an employee in receipt of an annual salary plus higher duties, adult or dependants allowance of less than \$33,193 (10.11.85) shall not be paid overtime in excess of the following limits:

<u>Annual salary including higher duties, adult or dependants allowance</u>	<u>Annual limit of gross amount paid for salary, higher duties, adult or dependants allowance, and payment for overtime (not penal time)</u>
From 10 November 1985 Up to \$28,399	\$29,316
\$28,400 to \$32,250	An amount equal to the total of employee's annual salary plus \$943
\$32,251 to \$33,193	\$33,193

- (d) Limit to hourly rate — The maximum hourly rate for overtime and penal time shall be \$31.829 (10.11.85).
- (e) In lieu of payment for overtime and penal time an annual allowance may be provided.

(6) Night Rate

- (a) An employee whose normal hours of duty fall between 8 p.m. and 6 a.m. will be paid at time ¼ rate in addition to normal salary for all hours which so fall, provided that:
  - (i) the rate is to be calculated on the ordinary time hourly rate;
  - (ii) the minimum payment under this provision shall not be less than payment for 2 hours at time ¼ rate even if the part of a shift which falls between the hours of 8 pm and 6am is less than two hours;
  - (iii) the maximum time ¼ rate payable per hour shall not exceed \$3.991 (10.11.85).
- (b) Night rate is not to be paid when overtime is being worked.

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4 WHOLE HOLIDAYS

A Public Holidays

- (1) The following days shall be observed as public holidays:

New Year's Day  
Waitangi Day  
Good Friday  
Easter Monday  
ANZAC Day  
Sovereign's Birthday  
Labour Day  
Christmas Day  
Boxing Day  
Anniversary Day (as observed in the locality concerned)

Except that, when any of the above holidays (other than Waitangi Day and ANZAC Day) falls on a Saturday or a Sunday, a substitute public holiday shall be granted on the next succeeding day which is not itself a Sunday, a public holiday or substituted public holiday.

Provided that, in order to maintain essential services, a hospital board may require an employee to work on a public holiday.

- (2) Public Holidays Falling During Leave Or Time Off

(a) Leave on pay

When a public holiday falls during a period of annual leave, sick leave on pay or special leave on pay, an employee is entitled to that holiday which is not to be debited against such leave.

(b) Leave without pay

An employee shall not be entitled to payment for a public holiday falling during a period of leave without pay unless the employee has worked during the fortnight ending on the day on which the holiday is observed.

(c) Leave on reduced pay

An employee shall, during a period on reduced pay, be paid at the same reduced rate for public holidays falling during the period of such leave.

(d) Off duty day

Except where the provisions of subclause 4A(2)(a) above apply, if a public holiday, other than Waitangi Day and ANZAC Day, falls on a rostered employee's off duty day

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4A(2)(d) WHOLE HOLIDAYS (continued)

(such off duty day not being a Saturday or a Sunday) the employee shall be granted an additional day's leave at a later date convenient to the board.

- (3) Employees Required to Work on Public Holidays

Subject to the provisions of subclause (5) of section 3, an employee required to work on a public holiday shall at the option of the employee and the convenience of the board be granted either:

- (a) penal rates of pay at T1 in addition to his normal salary for the hours worked, plus equivalent time off at a later date convenient to the board; or
- (b) overtime rates at T2 in addition to his normal salary for the hours worked.

Except that:

- (i) A rostered employee required to work on a public holiday as part of his normal roster (ie, not as overtime) shall, at the option of the employee and the convenience of the board, be granted either penal rates at T1 in addition to his normal salary for hours worked plus equivalent time off at a later date, or penal rates at T2 in addition to his normal salary for the hours worked.
- (ii) A rostered employee required to work on a public holiday which would otherwise have been his normal day off (ie, he is required to work a sixth shift) shall be paid at the overtime rate of twice his normal hourly rate of pay (T2) for the hours worked AND IN ADDITION is to be granted a day's leave on pay at a later date convenient to the board.
- (iii) An employee who, in terms of subclause (5) of clause 3, is not entitled to payment for overtime shall be granted equivalent time off at a later date convenient to the board (refer also to subclause 2(c) of clause 3).

B State Service Holidays

- (1) The board shall prescribe two days each year as State Service holidays on days not being a public holiday, a Saturday or a Sunday.

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4B WHOLE HOLIDAYS (continued)

- (2) State Service Holidays Falling During Leave or Time Off

When a State Service holiday falls during a period of leave on pay, leave without pay, leave on reduced pay or on a rostered employee's off duty day, the rules outlined in subclause (2) of Part A above shall apply.

- (3) Employees Required to Work on State Service Holidays

- (a) Employees required to work on one of these State Service holidays (including those rostered to do so) shall be granted an equivalent day off (or proportionate part) in lieu. While overtime may be payable under certain conditions (see (b) below), a State Service holiday does not attract penal time payment.
- (b) Overtime is not to be paid for work on a State Service holiday unless hours worked exceed 9 for the day; the additional hours would then earn overtime at double time rate (T2).
- (c) A rostered worker required to work on a State Service holiday, which is observed on his normal off duty day (ie, he is required to work a sixth shift), is entitled to:
  - (i) overtime at T2 for the hours worked; AND IN ADDITION
  - (ii) a day in lieu of such holiday.

C Recreation Leave

- (1) Employees shall be granted one day (or two half days) "recreation leave" with pay per year. Subject to board convenience, this leave may be taken either for such recreational purposes as the employee wishes or during the period between Christmas and New Year.
- (2) A new employee will become entitled to recreation leave only after completion of 12 months' service and thereafter on the anniversary of his appointment each year.
- (3) Employees resigning or retiring are not to be paid for any recreation leave untaken at date of resignation or retirement.

- (4) If untaken during any particular leave year, the recreation leave is to be cancelled ie, it may not be carried forward.

**D Equivalent Time Off in Lieu of Whole Holidays**

Equivalent time off in lieu of whole holidays is to be treated the same as annual leave in respect of the rules regarding accumulation (refer to subclause 2 (d) of clause 5)

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**5 ANNUAL LEAVE**

- (1) Subject to subclauses (2) and (3) below and any particular determination or order, employees shall be granted leave of absence on full pay in respect of each leave year as follows:

With under 8 years' service — 15 working days  
With 8 or more years' service — 20 working days

**(2) Conditions**

- (a) The term "leave year" means the year ending with the anniversary date of the employee's appointment.

- (b) For the purpose of this clause, the service of an employee shall be deemed to comprise all periods of his employment either with a hospital board or with the following services and organisations:

Public Service Departments  
Post Office  
New Zealand Railways  
Regular Force Service in the NZ Armed Forces  
Teaching Service (except university teaching)  
Non-teaching service within education boards, secondary schools, tertiary education institutions (except in NZ Universities)  
Broadcasting Corporation of New Zealand  
Fire Service Commission  
Legislative Department  
Parliamentary Counsel Office  
Police Force (ie, attested constables)  
Security Intelligence Service  
Office of the Ombudsman  
NZ Foundation for the Blind  
The Nurse Maud District Nursing Association  
Royal New Zealand Plunket Society  
Other instruments of the Crown having a close relation to Public Service conditions (as identified by the department);

that are continuous one with another, provided that:

- (i) A period of non-employment of less than one month shall not constitute a break in continuous service.
- (ii) Periods of previous service in the hospital service each of which was both continuous for at least twelve months and completed not more than five years before the date of the last appointment to the hospital service may be recognised.
- (iii) Periods of previous service in other organisations in (b) above each of which was both continuous for at least two years and completed not more than five years before the date of the last appointment to the hospital Service may be recognised.

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**5(2) (b) ANNUAL LEAVE** (continued)

- (iv) Previous service may also be credited with New Zealand Government Corporations and other public bodies, including NZ Universities, outside of those in (b) above, territorial local authorities and other particular local authorities, all of whose higher salaries are subject to the jurisdiction of the Higher Salaries Commission, except for the Reserve Bank of New Zealand, Bank of New Zealand and Trustee Savings Banks.

Provided that, in all cases, this service is "like for like" and of definite value in the position to which the employee is recruited in the hospital service; and

Provided further that the employee is recruited direct and joins the hospital service within one month of ceasing his previous employment.

- (v) Service with Departments of the Central Government of another country (or State Government with a Federal System) may be credited on the same basis as in (iv) above, except that a reasonable amount of time for the journey out to and settlement in New Zealand is permitted.

- (c) A board may permit an employee to take annual leave in one or more periods.

- (d) A board may permit all or part of the annual leave accruing in respect of a leave year to be postponed to the next following year, but the annual leave entitlement at any one time shall not exceed the total of annual leave accruing in respect of two leave years.

Where an employee is on continuous leave without pay due to illness or accident s/he will be permitted to take or accumulate leave for up to 2 years. After this, an employee will not qualify for any further period of leave until duty is resumed."

- (e) Where an employee resigns from a hospital board and commences employment with another hospital board within one month, annual leave untaken at the time of resignation, to a maximum of one year's entitlement, shall be credited to his new entitlement.

- (f) Except as provided in subclause (e) above, when a hospital employee ceases duty, he shall be paid salary for accrued annual leave and the last day of service shall be the last day of such accrued leave.

- (g) Except where the Director-General of Health approves, where an employee is absent on special leave, whether with or without pay (ie, including leave for study awards but excluding sick, accident or military leave) for an intermittent or continuous period of more than 35 days (including Saturdays and Sundays) during a leave year, his annual leave shall be reduced in accordance with the scale below.

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**5(2)(g) ANNUAL LEAVE** (continued)

Note: A "study award" for the purpose of this subclause shall be deemed to be a full-time course of study at a tertiary educational institute, during which the employee is able to take advantage of the mid-term holidays available to other full-time students of that institute. It shall not include leave to attend organised classes, lectures, block courses or examinations required for the attainment of essential basic qualifications.

- (h) Days of absence (incl. Saturdays and Sundays) | Annual leave entitlement to be reduced by the number of working days shown below

	Annual leave entitlement			
	3 weeks	4 weeks	5 weeks	6 weeks
0 — 35	—	—	—	—
36 — 71	1½	2	2½	3
72 — 107	3	4	5	6
108 — 143	4½	6	7½	9
144 — 179	6	8	10	12
180 — 215	7½	10	12½	15
216 — 251	9	12	15	18
252 — 287	10½	14	17½	21
288 — 323	12	16	20	24
324 — 359	13½	18	22½	27
360 — 365	15	20	25	30

**(3) Extra Leave for Shift Workers**

**(a) Entitlement**

Full-time and other employees defined by the Director-General of Health who qualify for shift tax rebates in terms of section 45 of the Income Tax Act 1976 shall be granted additional leave according to the following scale:



<u>Number of qualifying shifts per annum</u>	<u>Number of days additional leave per annum</u>
121 or more	5
96 — 120	4
71 — 95	3
46 — 70	2
21 — 45	1

Provided however that staff who do not qualify for a full extra week's leave in accordance with the above scale may alternatively qualify under one of the following criteria:—

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**5(3) ANNUAL LEAVE** (continued)

(b) Shift workers who work alternating shifts may qualify for additional leave according to the number of shift changes occurring during the year (provided that any change from one shift to another where the span of both shifts occur wholly within the hours of 6 am and 6 pm will not count in the calculation of additional leave).

(i) Where the roster requires the shift worker to change as frequently as every week or less frequently (eg, every two weeks), the following pro rata scale will apply:

<u>Shift changes each year</u>	<u>No. of days additional leave per annum</u>
40 changes and over	5
32 — 39 and over	4
24 — 31 and over	3
16 — 23 and over	2
8 — 15 and over	1

(ii) Where the roster requires the shift worker to change more frequently than every week (ie, every day or every other day, etc), the following pro rata scale will apply:

<u>No. of weeks in leave year employed on such rosters</u>	<u>No. of days additional leave per annum</u>
40 weeks and over	5
32 — 39 weeks	4
24 — 31 weeks	3
16 — 23 weeks	2
8 — 15 weeks	1

Provided that, where circumstances require, subclauses (b)(i) and (ii) shall be applied cumulatively but not concurrently in respect of a single leave year.

(c) Shift workers who work ordinary hours of work which regularly commence up to 3 hours prior to 6 am or finish up to 3 hours later than 6 pm may also be considered for additional leave.

The amount of leave will have regard to the following pro rata scale:

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**5(3)(c) ANNUAL LEAVE** (continued)

<u>No. of weeks on "early" or "late" duties</u>	<u>Hours outside 6 am or 6 pm</u>	<u>Extra leave per annum</u>
40 or more weeks	2 hrs up to 3 hrs	5 days
	1 hr up to 2 hrs	4 days
30 — 39 weeks	2 hrs up to 3 hrs	4 days
	1 hr up to 2 hrs	3 days
20 — 29 weeks	2 hrs up to 3 hrs	3 days
	1 hr up to 2 hrs	2 days
15 — 19 weeks	2 hrs up to 3 hrs	2 days
	1 hr up to 2 hrs	1 day

(d) An employee who is regularly required to work ordinary fixed hours of work which commence after 6 pm but are not part of a rostered shift system will not qualify for additional leave.

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**6 SICK LEAVE**

(1) Conditions

(a) Where an employee is granted leave of absence on account of sickness or injury not arising out of and in the course of his employment (in this clause referred to as "sick leave"), he shall be entitled to full pay according to the scale prescribed in the schedule to subclause (2) of this clause.

(b) The length of service for the purposes of the said schedule of entitlement means the aggregate period of service, whether continuous or intermittent, in the employment of a hospital board, and/or, with the exception of service with the Government or State Government of another country, service which may be credited for annual leave as defined in subclause 5 (2), subject to:

- (i) production of a certificate of previous service;
- (ii) the debiting of sick leave already granted.

(c) The total period of sick leave with full pay, as set out under the schedule of entitlement, may consist of one or more periods. Sick leave with full pay for each period allowed shall be reckoned in consecutive days (including Saturdays or Sundays, or in the case of rostered employees their rostered days off, that may fall during a period of sick leave). Whole holidays (or substituted succeeding days) falling during a period of sick leave shall not be included in the aggregation of consecutive days sick leave except where employees are granted an additional leave entitlement in lieu of work performed on whole holidays.

(d) The total period of sick leave with full pay to which any employee of a board is entitled shall be computed in respect of his whole length of service.

(2) Schedule of Entitlement

<u>Length of service</u>	<u>Total period of sick leave with full pay during whole length of service</u>
Up to 3 months service	7 days
Over 3 months and up to 6 months service	14 days, inclusive of days previously allowed
Over 6 months and up to 9 months service	31 days, inclusive of days previously allowed
Over 9 months and up to 5 years service	46 days, inclusive of days previously allowed

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**6(2) SICK LEAVE** (continued)

Over 5 years and up to 10 years service	92 days, inclusive of days previously allowed
Over 10 years and up to 20 years service	183 days, inclusive of days previously allowed
Over 20 years and up to 30 years service	275 days, inclusive of days previously allowed
Over 30 years service	365 days, inclusive of days previously allowed

(3) Discretionary Powers of Boards to grant Leave in Excess of the Above Prescribed Limits

(a) Where, in the opinion of a board, a whole-time employee is incapacitated by sickness or injury arising out of and in the course of his employment, it shall be permissible for the board to continue to pay his full salary during incapacity.

Provided that the prior written approval of the Director-General shall be obtained for any such payment beyond a period of 3 months.

Provided further that the period in respect of which salary

is paid in accordance with the provisions of this subclause shall not be regarded as sick leave with pay for the purposes of the foregoing provisions of this clause.

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- (b) Where an employee is suffering from a minor illness which could have a detrimental effect on the patients in a board's care, the board concerned may, at its discretion, either:
  - (i) employ him on suitable alternative duties; or
  - (ii) direct him to take leave on full pay for not more than 8 days in any one year, in addition to the sick leave to which he is normally entitled.
- (c) In special cases, the board may allow an employee to anticipate sick leave becoming due on completion of a further period of service. For example, an employee with 19 years of service who has already used up his entitlement of 183 days on pay may require a further period of sick leave; the board may allow him to anticipate the whole, or part of, the further 92 days which would normally become due on completion of 20 years' service. Details of dependant family and whether sick leave has been used for one or more periods of illness or only in intermittent periods of a day or two should be considered.

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- (b) In cases where the period of sickness extended beyond the approved period of annual or long service leave, approval shall also be given to debiting the portion which occurred within the annual or long service leave period against sick leave entitlement if the total continuous period of sickness exceeds three days.
- (c) Annual or long service leave may not be split to allow periods of illness of three days or less to be taken as sick leave.

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**7 SPECIAL LEAVE**

**(1) Bereavement Leave**

**(a) Death in New Zealand**

Where circumstances warrant, an employee may be granted special bereavement leave on full pay on the death in New Zealand of father, mother, brother, sister, wife, husband, father-in-law, mother-in-law, stepfather, stepmother, grandparent, or child or in any special case where the employee is required to take full responsibility for the funeral arrangements.

The leave on full pay may extend from the day of death until the day of the funeral, with sufficient additional time, in the case of a funeral at another locality, to enable the employee to return.

Bereavement leave is not granted for time spent in attending to family matters or winding up the estate after the funeral.

**(b) Death Overseas**

Where circumstances warrant, an employee may be granted special leave on full pay to attend the funeral outside New Zealand of a father, mother, brother, sister, wife, husband, father-in-law, mother-in-law, stepfather, stepmother, grandparent, or child.

Satisfactory evidence of death is required. Leave on full pay may extend from the day of death until the day of the funeral plus one additional day's leave towards travelling time. If, however, the funeral is held on a Friday, no additional day's leave is to be granted.

- (c) If an employee is absent on annual leave, sick leave on pay, or "time off" on pay (that is, time off in lieu of overtime or a public holiday as distinct from "special leave on pay"), the leave may be interrupted and bereavement leave granted.

**(2) Maternity Leave**

- (a) Maternity leave shall be granted to a female employee as leave without pay; it is not to be granted as sick leave on pay. Providing an application for leave of absence under this heading is received at least one month before it is intended to commence maternity leave and is supported by a certificate signed by a registered medical practitioner, maternity leave shall be granted as follows:

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**7(2)(a) SPECIAL LEAVE (continued)**

- (i) Leave of up to 12 months is to be granted to employees with at least one year's service at the time of commencing leave.
- (ii) Maternity leave of up to 6 months is to be granted to employees with less than one year's service.

Provided that the length of service for the purpose of this clause means the aggregate period of service, whether continuous or intermittent, in the employment of a hospital board.

- (b) In cases of adoption of children of less than 12 months of

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**6 SICK LEAVE (continued)**

**(4) Sickness at Home**

- (a) An employee may be granted leave on pay as a charge against sick leave entitlement when the employee must, because of an emergency, stay at home to attend to a member of the household who through illness becomes dependent on the employee. This person would in most cases be the employee's child or partner but may be another member of the employee's family or household. However when an application is received for someone falling outside the employee's family, it should be referred to the department for consideration. "Family" for the purpose of this provision includes: children; spouse or person living in a recognised defacto relationship with the employee, parents or other relatives, such as grandparents, grandchildren, and relations by marriage, living with the employee.
  - (i) Approval may be given for up to three days at any one time and not more than ten days in any leave year (for cases involving 'family' members). All other cases are to be submitted to the department, together with advice of the amount of leave already approved during the current leave year. Before granting the leave a board may require the production of a medical certificate or other suitable evidence.
  - (ii) Approval is to be given only in the event of emergency illness. It must not be given when the employee has had advance notice, eg of admission to hospital, etc. Approval may not be given for absences on account of illness in an employee's family or household if another adult member of the family or household is able to care for the sick person.
  - (iii) Approval is not to be given for absences during or in connection with the confinement of an employee's spouse (including a recognised defacto wife). The employee should normally be able to make arrangements for looking after the home during his spouse's absence; and where this is not possible he is expected to take annual leave or paternity leave.

**(5) Sick Leave in Relation to Annual and Long Service Leave**

- (a) When sickness occurs during annual or long service leave the board shall permit the period of sickness to be debited against sick leave entitlement, except where the sickness occurs during leave following relinquishment of office, provided
  - (i) the period of sickness is more than three days;
  - (ii) a medical certificate is produced, showing the nature and duration of the illness.

age, maternity leave shall be granted in terms of (a) above, providing the intention to adopt is notified to the board immediately following advice from the Department of Social Welfare to the adoptive applicants that they are considered suitable adoptive parents. Subsequent evidence of an approved adoption placement shall be provided to the board's satisfaction.

- (c) Employees shall continue to be awarded increments when their incremental date falls during absence on maternity leave.
- (d) Subject to (f) below, an employee returning from maternity leave is entitled to resume work in the same position or in a similar position as she occupied at the time of commencing maternity leave.

Note: A similar position means a position at the equivalent salary and grading, in the same location or within reasonable commuting distance, and involving responsibilities broadly comparable to those exercised in her previous position.

- (d) Where, for reasons pertaining to the pregnancy, an employee, on medical advice and with the consent of the board, elects to work reduced hours at any time prior to confinement, then the guaranteed proportion of full-time employment after maternity leave shall be the same as that immediately prior to any such enforced reduction in hours.
- (f) Where a board is not able to hold the same position open or to fill it temporarily until an employee returns from maternity leave; and, at the time the employee returns to work, a similar position (as defined in (d) above) is not available, a board may approve:
- (i) an extension of maternity leave for up to a further 12 months until the employee's previous position or a similar position becomes available; or

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**7(2)(f) SPECIAL LEAVE** (continued)

- (ii) an offer to the employee of a similar position in another location (if one is available) with normal transfer expenses applying; if the offer is refused, the employee continues on extended maternity leave as in (i) above for up to 12 months; or
- (iii) the appointment of the employee to a different position in the same location, but if this is not acceptable to the employee, she shall continue on extended maternity leave in terms of (f)(i) above for up to 12 months;
- Provided that, if a different position is accepted and within the period of extended maternity leave in terms of (f)(i), the employee's previous position or a similar position becomes available, then the employee shall be entitled to be appointed to that position; or
- (iv) where extended maternity leave in terms of (i) above expires and no position is available for the employee, the employee continues on leave without pay and the board may terminate employment with three months' notice; provided that an employee whose services are terminated under this provision shall be entitled to be paid the lump sum payment calculated in terms of (i) below.
- (g) If the employee declines the offer of appointment to the same or similar position in terms of subclause (d) above, maternity leave shall cease.
- (h) An employee granted maternity leave in terms of subclause (a) above shall notify the board, in writing, of her intention to return to work or to resign at least one month prior to maternity leave expiring, and, if returning to work, report for duty not later than the expiry date of such leave.

Note: It is important that employees are advised when they commence maternity leave that, if they fail to notify the board of their intention to return to work or resign,

they shall be considered to have abandoned their employment.

- (i)(i) Where an employee granted leave in terms of subclause (a) above returns to duty at or before the expiration of leave or extended leave (subclause (f)(i)) and completes a further six calendar months' service, she shall receive a lump sum payment equivalent to 30 working days' leave on pay calculated at the rate applying for the 30 working days immediately following cessation of duty. If employment prior to confinement was part-time, however, payment shall be based on the percentage that such part-time hours bear to whole-time employment.

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**7(2)(i) SPECIAL LEAVE** (continued)

- (ii) Where, for reasons pertaining to the pregnancy, an employee, on medical advice and with the consent of the board, elects to work reduced hours at any time prior to confinement, then the calculation of the lump sum payment shall be based on the proportion of full-time employment immediately prior to any such enforced reduction in hours.
- (iii) Where an employee is absent on maternity leave for less than 30 working days, she shall receive that proportion of the payment that her absence represents in working days.
- (j) An employee returning from maternity leave may request her board to vary the proportion of whole-time employment from that which applied before the leave was taken. The granting of such a request shall be at the discretion of the board, ie, the principle of job protection cannot be guaranteed. The calculation of the lump sum payment in these circumstances shall be based on the proportion of full-time employment which applied before taking the leave (excluding any temporary reduction in hours immediately prior to confinement).

**(3) Paternity Leave**

On application, employees shall be granted up to 14 days' leave without pay as paternity leave at the time of any confinement, subject to board convenience and provided reasonable notice is given.

**(4) Jury Service Leave**

- (a) Employees called on for jury service are required to serve. Where the need is urgent, hospital boards may apply for postponement because of particular work needs, but this may be done only in exceptional circumstances.
- (b) An employee called on for jury service may elect to take annual leave, leave on pay, or leave without pay. Where annual leave or leave without pay is granted or where the service is performed during an employee's off duty hours, the employee may retain the juror's fees (and expenses paid).
- (c) Where leave on pay is granted, a certificate is to be given to the employee by the board to the effect that he has been granted leave on pay and requesting the Court to complete details of juror's fees and expenses paid. The employee is to pay the fees received to the board but may retain expenses.
- (d) Where leave on pay is granted, it is only in respect of time spent on jury service, including reasonable travelling time. Any time during normal working hours when he is not required by the Court, he is to report back to work where this is reasonable and practicable.



**8 ALLOWANCES**

(1) Adult Allowance

An allowance necessary to bring the minimum remuneration payable to a 20 year old to \$13,307 on and from 10 November 1985 except that a person whose current date of appointment was on or before 31 December 1981 and who had attained the age of 20 on or before 31 December 1981 shall receive an allowance necessary to bring the minimum remuneration to \$14,448 on and from 10 November 1985.

(2) Dependant's Allowance

Where a hospital board is satisfied that an employee is responsible for supporting a dependant wife, husband or child, that employee shall be paid an allowance to bring the annual minimum remuneration payable to \$13,993 on and from 10 November 1985.

(3) Lodging Allowance

A junior employee who is, for the convenience of a board, stationed away from home shall be paid a lodging allowance in addition to normal salary as follows:

Annual salary not exceeding on and from 10 November 1985	Lodging allowance annual rates on and from 10 November 1985
\$7644	\$368
\$8194	\$299
\$9352	\$194

(4) Isolation Allowance

- (a) In this clause, "isolation" means a locality for the time being designated by the Health Service Personnel Commission as an isolated locality for the purposes of this clause.
- (b) An employee for the time being employed and living in an isolated locality shall be paid an allowance as follows:

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Category 1	Basic Rate with Spouse/Dependant	Basic Rate
Localities 60-100 km from a population centre	\$ 424 p.a.	\$ 212 p.a.
Category 2		
Localities 101-150 km from a population centre	\$ 713 p.a.	\$ 356 p.a.
Category 3		
Localities 151-200 km from a population centre	\$1066 p.a.	\$ 533 p.a.
Special Category		
Haast	\$2090 p.a.	\$1045 p.a.
Harihari	\$ 424 p.a.	\$ 212 p.a.

Note: Allowance is effective from 1 December 1984.

(c) Remote Locality Allowance

Employees who received payment of the Remote Locality Allowance as at 1 April 1982 but who reside in localities where they will not now be eligible for Isolation Allowance will continue to receive Remote Locality Allowance payments until they move from their present locality. Appointees taking up duties at these localities after 1 April 1982 will not qualify for Remote Locality Allowance payments unless the payment of Remote Locality Allowance was a condition of employment at the date of their appointment. The Remote Locality Allowance rates will remain fixed at the 11 June 1981 rate of \$103.74 p.a. (for employees with dependants) and \$51.87 p.a. (for employees without dependants).

**8 ALLOWANCES (continued)**

(5) On Call Allowance

Where an employee is instructed by his controlling officer to be on call during normal off duty hours, he shall be paid an on call allowance at the following rates in addition to other remuneration:

- (a)(i) Monday to Friday (other than a public holiday):
  - 7.00 am to 5.00 pm \$0.948 an hour
  - 5.00 pm to midnight \$3.03 for the whole or any part of this period.
  - midnight to 7.00 am \$1.51 for the whole of any part of this period.
- (ii) Saturday, Sunday and public holidays:
  - 7.00 am to 5.00 pm \$1.25 an hour
  - 5.00 pm to midnight \$3.03 for the whole or any part of this period.
  - midnight to 7.00 am \$1.51 for the whole of any part of this period.

(a) Where the number of employees capable of being on call duty is less than four, the following allowances shall be paid instead of those set out in (a) above:

- One available employee \$1,474 a year
- Two available employees \$1,178 a year each
- Three available employees \$884 a year each

The on call allowance payable to employees in accordance with this paragraph shall continue during periods of annual leave, and during other periods of leave not exceeding 7 days at any one time.

(c) Payment of on call allowance under this clause shall not be taken into account in determining his maximum total earnings under subclause (5) or clause 3.

(d) The on call allowance rates as specified above shall apply on and from 10 November 1985.

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**8 ALLOWANCES (continued)**

(5) Transport Allowance

(a) A transport allowance at the rates specified in subclause (b) below is payable to staff employed by the Auckland, Wellington, Canterbury, Otago, Northland, Waikato, Cook, Tauranga, Taranaki, Hawke's Bay, Wanganui, Palmerston North, Nelson, South Canterbury and Southland Hospital Boards, subject to the following conditions:

- (i) Except as prescribed in subclause (d) below, the allowance is payable only to employees who are residents of Whangarei, Auckland, Hamilton, Tauranga, Rotorua, Gisborne, New Plymouth, Napier, Hastings, Wanganui, Palmerston North, Wellington, Nelson, Christchurch, Timaru, Dunedin and Invercargill, who are required to travel more than 2 kilometres from their place of residence to their place of duty within the city boundary.
- (ii) The allowance is payable only to employees in these centres who are required to travel to and from work outside the times when public transport, which is available to staff working normal daily or weekly hours (defined for the purposes of this clause as 8 am to 5 pm Monday to Friday), has not begun, or has ceased to operate.

(b) Rates

Shortest distance between employees' home and place of employment (one way)	Allowance payable for each return trip (on and from 3 May 1985;
Up to and including 2 km	Nil
Over 2 km and up to and including 4 km	\$1.23
Over 4 km and up to and including 6 km	\$1.78
Over 6 km and up to and including 8 km	\$2.40
Over 8 km and up to and including 10 km	\$2.97
Over 10 km and up to and including 12 km	\$3.58
Over 12 km and up to and including 14 km	\$4.17
Over 14 km and up to and including 16 km	\$4.74
Over 16 km	\$5.06

(c) General Conditions

- (i) No allowance should be approved when public transport would enable the employee to arrive at work within 30 minutes before the time he is required to commence duty and when public transport is available within 30 minutes after the time he ceases duty.

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**8(6)(c) ALLOWANCES** (continued)

- (ii) Where the allowance is approved, it is for a return trip although public transport may be available one way, ie, public transport may be available when the employee is required to commence duty but not when he ceases; or vice versa.
- (iii) Where the allowance is approved, it is payable to the employee irrespective of what mode of transport he uses when public transport is not available, eg, his own car, motor cycle, bicycle, taxi, etc. No allowance will be paid, however, if free hospital board transport is available to the employee.
- (iv) No allowance will be approved for an employee who has declined to occupy suitable permanent accommodation at his place of work. Notwithstanding this provision, however, boards shall not unreasonably require an employee to live in board accommodation when this would disrupt his normal domestic circumstances, or in the case of single employees where the board was unable to offer suitable permanent accommodation at the time a transport allowance for the employee was initially approved.
- (v) Where the allowance is approved and the employee is required to travel over the Auckland Harbour Bridge, the toll charge shall be refunded.
- (d) Employees who reside outside the city boundaries of Whangarei, Hamilton, Tauranga, Rotorua, Gisborne, New Plymouth, Napier, Hastings, Wanganui, Palmerston North, Nelson, Timaru and Invercargill, and who travel to and from their place of duty located within the city boundaries may be paid an allowance calculated on the shortest practical distance between the city boundary nearest to their residence and the place of duty provided of course this exceeds 2 kilometres and that all other conditions are met.
- (e) Employees who reside a distance of more than 2 kilometres outside the city boundaries of Whangarei, Hamilton, Tauranga, Rotorua, Gisborne, New Plymouth, Napier, Hastings, Wanganui, Palmerston North, Nelson, Timaru and Invercargill but whose place of work is within the boundary but less than 2 kilometres from it, are to be paid at the minimum rate of transport assistance, providing that all other conditions are met.

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**8 ALLOWANCES** (continued)

(7) Higher Duties Allowance

- (a) Subject to the conditions prescribed in subclause (c) below, a higher duties allowance shall be paid to an employee who, in the board's opinion, is substantially performing the duties and carrying the responsibilities of a position of a class or grade higher than his own.
- (b) The higher duties allowance payable shall be the difference between the current salary of the employee acting in the higher position and the minimum salary he would receive if appointed to that position provided that any increase shall not exceed a maximum of three salary steps.

(c) Conditions

- (i) To qualify for payment of a higher duties allowance an employee must perform the duties of the higher position for at least 21 working days in 12 months. This may be one continuous period or any combination of periods of 5 continuous working days or more totalling 21 working days exclusive of annual or any other leave taken. In either case, days worked as overtime days (ie, sixth shifts) may count as long as the higher duties are being performed.
- (ii) Leave (including whole holidays and annual leave during the Christmas/New Year break) taken during the qualifying period does not itself count in the qualifying period and higher duties allowance is not to be paid for any such period of absence. On the other hand, such absence is not deemed to interrupt the aggregation of qualifying service for higher duties allowance if the employee goes back to the same, or other, higher duties on return from leave.
- (iii) The period for which higher duties allowance will be paid commences on the first working day on which the higher duties are performed. It ends on the day (which may be a Saturday, Sunday or whole holiday) before the previous incumbent or the new appointee takes up the duties of the higher position.
- (iv) A higher duties allowance is not payable where a person is performing the duties of an employee on annual leave except where the annual leave is taken in a single spell of 21 working days or more.

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**8(7)(c) ALLOWANCES** (continued)

- (v) No more than two positions may be eligible for a higher duties allowance at any one time as a consequence of one employee's absence unless the written approval of the Director-General of Health is obtained.
- (d) Leave taken while higher duties allowance is being paid
  - (i) Except during the qualifying period, the allowance is payable during a period of annual leave or sick or special leave on pay, provided the employee goes back to the same or other higher duties on return from leave. In no case, however, is the allowance to be paid for a period in excess of one month's continuous absence on leave. If the employee does not return to higher duties on return from leave, the allowance is not to be paid during leave, except as provided in subclause (d)(ii) hereunder.
  - (ii) When an employee has been in receipt of a higher duties allowance for at least 12 months immediately preceding the date when he goes on annual leave or sick or special leave on pay, payment of the allowance may be continued even though he does not take up higher duties again on return from leave. This allowance is not to be continued for a period longer than one month's absence.
  - (iii) When an employee in receipt of a higher duties

allowance takes leave on reduced pay, the provision as outlined in subclause (d)(i) above shall apply at the appropriate reduced rate.

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- (iv) The allowance is not to be paid during any period of leave without pay.

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(8) Meal Allowance

- (a) A shift worker who works a qualifying shift of 8 hours or more and who is required to work more than one hour beyond the end of the shift (excluding any break for a meal) shall be paid a meal allowance of \$2.28 or, at the option of the board, be provided with a meal.
- (b) For the purposes of this clause, a qualifying shift is that defined in subsection (b)(i) and (b)(iii) of section 45 of the Income Tax Act 1976.
- (c) Exempt where an employee qualifies under this clause, the provisions of subsection 8(3) of the Ministerial Determination relating to Rental, Board and Lodging, Meal Charges shall apply.

Note: Allowance is effective from 11 June 1981.

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9 MISCELLANEOUS PROVISIONS

(1) Protective Clothing

Suitable clean protective clothing shall be made available by the board where the nature of a particular duty or duties would either continuously or intermittently render an employee's personal clothing or uniform liable to excessive soiling or damage or expose the employee's person to injury or excessive discomfort through biological, chemical or physical hazards. Such protective clothing shall remain the property of the board and, as such, shall be laundered or otherwise cleaned free of charge.

(2) Refund of Annual Practising Certificate Fees

Where a member of an occupational group is required by law to hold an annual practising certificate in order to practise his profession or trade with a hospital board, the cost of the certificate shall be refunded to the employee provided that:

- (a) It must be a statutory requirement that a current certificate be held for the performance of duties.
- (b) The employee must be engaged in duties for which the holding of a certificate is a requirement.
- (c) The employee must be a member of the particular occupational class to whom the requirement applies.

(3) Redundancy Pay

(a) Definitions — The following definitions shall apply in this subclause:

- (i) "Permanent employee" includes a whole-time employee working the ordinary or normal hours as defined in the determination applying to his occupational group, and a part-time employee working a lesser number of hours which are pre-arranged and pre-rostered and which normally involve the same number of hours over a given roster cycle.
- (ii) "Redundant employee" shall have the same meaning as that defined in regulation 45A of the Wage Adjustment Regulations 1974.

(b) Redundancy payments shall be made to redundant employees who have been on the permanent staff for not less than 3 years; such payments to be calculated on the basis of one current week's pay for each year of service with the board which declares the employee redundant up to a maximum of 20 current weeks' pay for 20 or more

9(3)(b) MISCELLANEOUS PROVISIONS (continued)

years of service; including proportionate payments in respect of part years of employment. Connected service with other hospital boards or employers shall not be taken into account in making this calculation. Provided that the amount of any redundancy payment shall be deducted from any retiring gratuity paid to an employee under section 52A of the Hospitals Act 1957.

48/43/2261  
August 1983

SECOND SCHEDULE — PART 1

1 TRANSFER AND REMOVAL — CONDITIONS AND EXPENSES

Hospital Service and State Services employees who are taking up an appointment on promotion with a hospital board, transferring on promotion between hospital boards or transferring on promotion within a hospital board shall be entitled to the following provision:

- (1) Definitions: For the purpose of this clause, the following definitions shall apply:

(a) Promotion means an employee's appointment to a position in another location carrying a higher rate of salary which necessitates his/her removal to that other location; and excludes normal increments.

(b) State Services means Post Office, NZ Railways, Public Services, Education Service, Legislative Department, NZ Armed Forces, Broadcasting Corporation, Fire Service Commission, Parliamentary Counsel, Police, Security Intelligence Service, Ombudsman or NZ Foundation for the Blind.

(c) Hospital Service means service in the employment of any hospital board constituted under the Hospitals Act 1957 other than service as a medical officer in that employment.

(d) Family means all children up to the age of 16 and all children between the ages of 16 and 18 for whom the parents are receiving family benefit;

a spouse, or person living in a recognised de facto relationship with the employee (provided that no transfer expenses are being paid from another quarter);

all other persons for whom the employee can be shown to be financially responsible, either for legal or moral reasons, provided that any income they receive is in total, less than the Adult Minimum Wage as set by the Minimum Wage Act.

special consideration will be given by the Director-General to any cases where an employee can show that a person living with him/her in the old location and moving with him/her to the new location is in some way in need of the said employee's shelter and support and should thus be considered to be a member of the family for the purposes of transfer provisions despite the fact that their income exceeds the stated figure.

- (2) Hospital boards shall grant removal and related expenses to appointees to a whole time position where the appointee will be taking up the position on promotion and it is reasonable for the appointee to move his household.

48/44/2262  
July 1984

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- (3) Where an appointment does not involve promotion, but is in the interests of the hospital service or where it is on promotion but within a hospital board, the approval of the Health Service Personnel Commission is required. Full details must be provided.



(4) Movement of employee and family

- (a) The actual cost of conveyance of the employee and family shall be met by the board. The employee may use his/her own car on an equivalent rail/road fares basis or private car allowance (see section 4 of Part II of this schedule), whichever is the lesser. Whenever possible, public transport should be used. Travel at first class fares may be refunded.
- (b) Equivalent fares may include the employee's spouse and children and reservation costs.
- (c) Incidental expenses such as meals, accommodation, etc, which would not have been incurred, had public transport been used, are not to be paid.
- (d) Payment shall be made on the basis of distance by the shortest route.
- (e) If the driver of a second car or motor cycle which is being driven from the previous location to the new location is a member of the employee's family whose fare would otherwise be paid by the board, an equivalent surface fare will be paid but private car allowance is not to be paid in such cases.

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(5) Personal expenses on transfer

- (a) When an employee transferring from one locality to another at board expense had accommodation almost immediately available at the new location and is accompanied by the family the employee may be granted the following assistance:
- (b) Personal expenses to cover meals, accommodation etc, for self and family at the start, during, and at the end of the journey as follows:
- (i) At commencement of journey; up to two days if necessary.
- (ii) On arrival at destination; up to seven days if necessary.
- (iii) Expenses during the journey.
- (c) The personal expenses in (b) above are to be reimbursed in accordance with the travelling allowance prescribed in Section I, Part II of this schedule. The allowance for meals and the incidentals allowance are payable for children 12 years and over at the full rate and at half rate for children under 12 years. (Special provisions apply if employees stay at a motel and prepare their own meals — see clause 1(17) below.)
- (ii) An extension may be approved where furniture is delayed in transit.
- (iii) An employee's spouse (or person living with the employee in a recognised de facto relationship) does not qualify for accommodation assistance if transfer expenses are being paid from another source.

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(6) When staying privately

If an employee and family stay privately for the periods authorised in clause 1(5)(b) they may claim reimbursement of their expenses in accordance with section 3 — Staying Privately, Part II of this schedule. (The allowance for meals and the incidentals allowance are payable for children 12 years and over at the full rate and at half rate for children under 12 years.)

(7) When staying at a motel

- (i) When an employee and family stay at a motel and purchase and prepare their own food for the periods authorised in clause 1(5)(b) the allowance for meals will be payable for each adult and child over 12 years at half rate and at quarter rate for children under 12 years.

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- (ii) The Incidentals Allowance may also be paid to cover incidental expenses not otherwise recoverable for the

employee and each member of their family (for children under 12 years the Incidentals Allowance is payable at half rate). However, in certain circumstances, there may be no occasion to pay the allowance eg, if laundry charges are included in total charges, the allowance is not payable.

- (iii) Motel charges will be reimbursed on an actual and reasonable basis.

(8) Expenses when maintaining home at former location

- (a) Employees with a family on transfer at board expense who are required to maintain their home and family at the former location until suitable housing is obtained at the new location (including those whose family is prevented from moving because of an appeal), may be granted a refund of their expenses for board and lodging;
- (i) for the first month, employees may claim reimbursement of their expenses on the same basis as employees performing relieving duty and continuing on this basis for an employee who is unable to move the family because of an appeal — until a month after the appeal decision is known;
- (ii) for the second month, the amount refunded to employees per week is to be calculated on the basis of  $\frac{2}{3}$  of the amount reimbursed to the employee in their fourth week; and
- (iii) for the third month, the amount refunded to employees per week is to be calculated on the basis of  $\frac{1}{3}$  of the amount reimbursed to the employee in their fourth week.
- (b) Employees are to avoid staying at expensive hotels and make every effort to obtain board and lodging elsewhere. Employees will be allowed a reasonable period to find cheaper accommodation but boards are to ensure hotel expenses are not paid for more than one month other than in exceptional circumstances.
- (c) An extension beyond three months may be made where an employee who has made genuine efforts to find alternative accommodation, has not been successful.

(9) Expenses when family moves

When an employee finally obtains suitable accommodation in his/her new location and moves the family, he/she may then be granted the assistance set out in subclauses (5) to (7).

(10) Leave and expenses to visit family

- (a) An employee on transfer and in receipt of an accommodation allowance, may be granted permission to visit his/her family at the end of each month up until and including the seventh month of separation. Wherever possible, the employee should book out of his/her hotel or other accommodation while visiting his/her family.
- (b) In special cases, the visits may be adjusted at the discretion of the board, either side of the entitlement period to give some flexibility. If convenient to the employee and the board, trips may be arranged to fit in with public holidays.
- (c) If it is necessary to complete the arrangements for a sale of the former home, provision may also be made for one working day on full pay at home.

(11) Time off for travel

- (a) If the employee intends to arrange or complete the sale of his/her house, travelling may be done in the board's time. Otherwise the employee is to travel in his/her own time for the visits at the end of the first, second, fifth and sixth months. Travelling for the visits at the end of the third, fourth, and seventh months may be done in the board's time.

# THROMBOSIL\* I

## Activated PTT Reagent

A unique reagent with increased sensitivity to heparin and intrinsic clotting factor deficiencies

### Easy to use

- Silica activator in colloidal suspension eliminates the need to mix before and during use.
- Ready-to-use liquid reagent requires no reconstitution.
- Easily used in automated or manual tests to monitor heparin therapy, screen for factor deficiencies and assay factor concentrations.
- Flexible to meet your contact activation time (C.A.T.) and maximum endpoint needs.

### Reliable

- Increased sensitivity to heparin allows more effective heparin monitoring. (See heparin response curve at right.)
- Increased sensitivity to intrinsic clotting factor deficiencies removes doubt in testing, more clearly defining normal and abnormal plasmas. (See Factor VIII and Factor IX assay curves at right.)
- Accurate test results on samples with varying degrees of optical density reduces unnecessary repeat testing.
- Stability for eight hours at 37°C assures optimal reagent performance.

### Cost-effective

- Eliminates cost and inconvenience of reconstitution: labor, pipetting errors, waiting time and use of water.
- Nonsettling reagent does not clog tubing. Saves on disposable costs by reducing the number of tubing changes.
- Open vial stability for 30 days at 2° to 8°C reduces the total number of vials needed for APTT testing.
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for the activated partial thromboplastin time (APTT)

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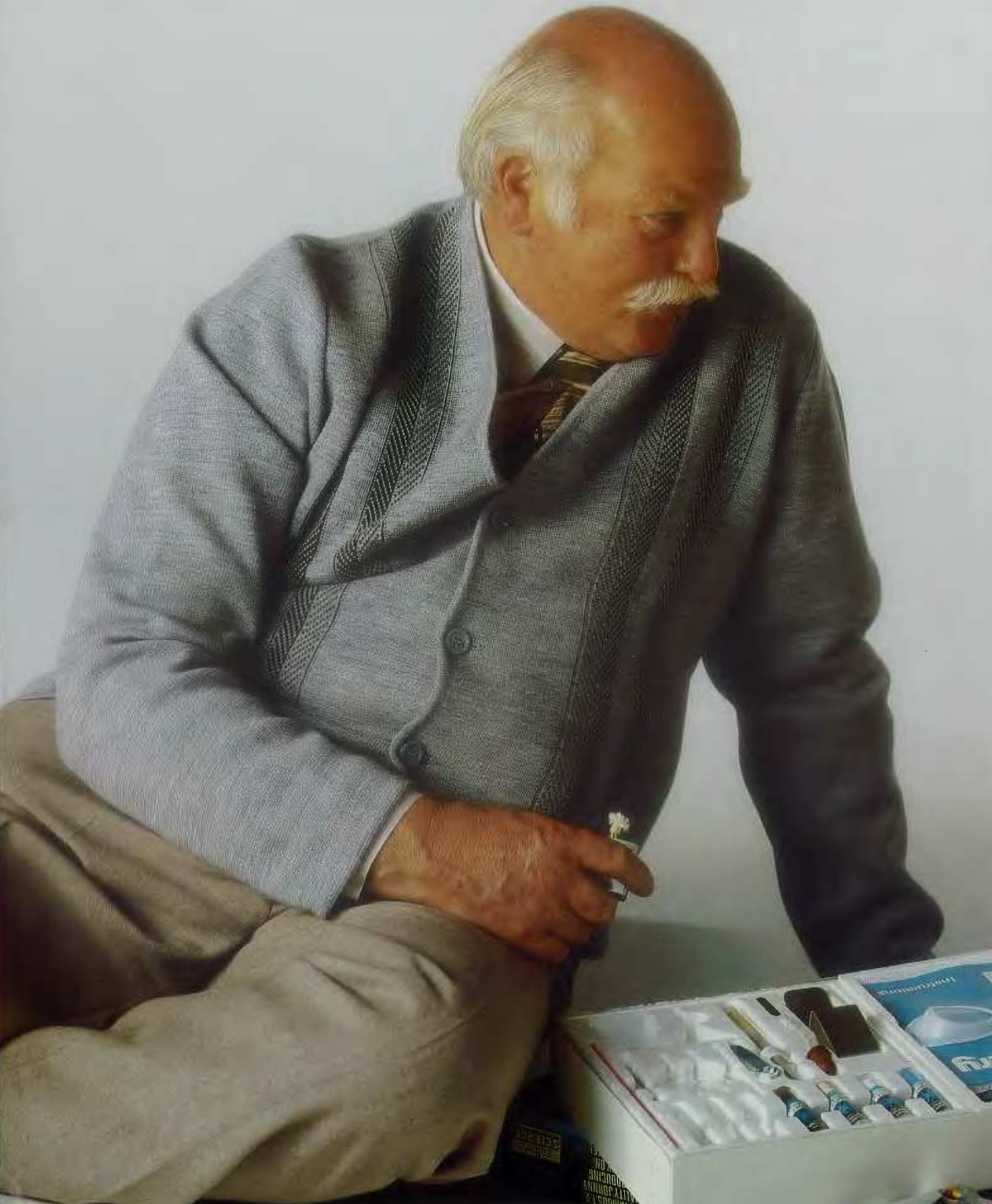
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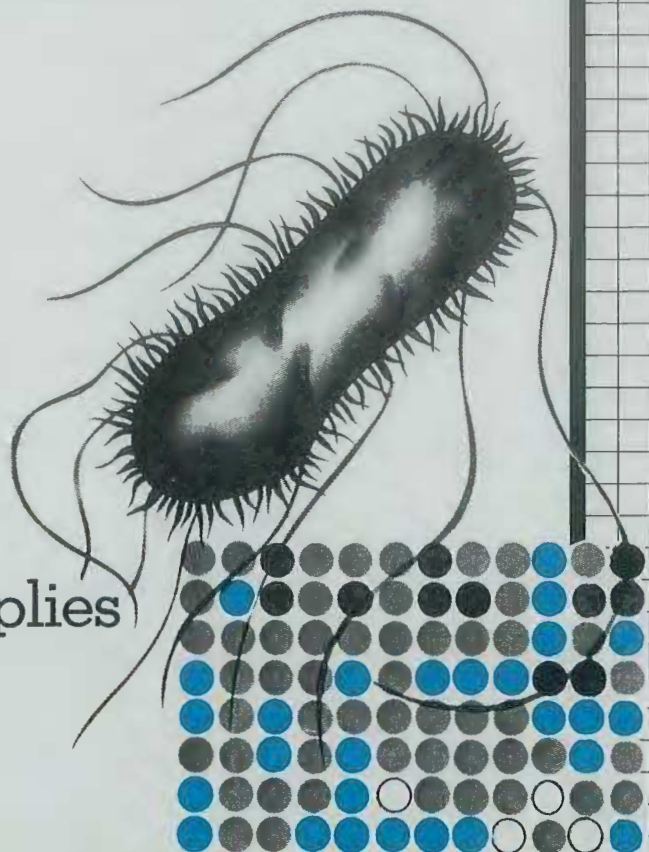
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- (b) Employees permitted to return home to visit their families may travel at the board's expense, except that the cost of meals and other incidental expenses incurred while travelling are not to be refunded. Normal public means of transport are to be used and, in general, surface travel, not air travel, is to be used. In special cases, however, air travel may be approved by the board if it is the most economical and efficient method taking into account the localities involved, the fares and the amount of working time lost.

(12) Leave to remove family and effects

- (a) When an employee on transfer at the board's expense has left his/her family at the former location until suitable housing has been found, he/she may be granted special leave on pay by the board to permit him/her to return to his/her old centre to assist with the transfer of the family and effects. Such leave may be granted to cover actual travelling time plus two working days, and may be taken all or in part at either the former or the new location.
- (b) An employee granted leave to return to assist with the transfer of his/her family and effects may travel at the board's expense. His/her own car or motor-cycle may be used, but, in this event, he/she will only be entitled to claim motor vehicle allowance or equivalent fares, whichever is the lesser. Otherwise, normal public transport is to be used. Air travel is not to be paid for unless specially authorised by the board.
- (c) A refund of actual and reasonable expenses may be approved by the board for meals en route, but not for meals taken before departure or on arrival. Other incidental expenses incurred while travelling are not to be refunded.

(13) Fares home in lieu of accommodation expenses

An employee on transfer at the board's expense, and in receipt of an accommodation allowance, may be granted permission by the board to return home to his/her family each weekend having his/her fare paid at the board's expense but subject to:

- (a) The cost of the fare not exceeding the amount which would otherwise have been paid as accommodation allowance for the weekend. The fare is to be paid for in cash and claimed on the same voucher as the accommodation allowance for the balance of the week.

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- (b) The cost of the fare being regarded as payment for accommodation for the purposes of calculating the amount of accommodation allowance payable and details of it being shown on the payment voucher.
- (c) All travel being done in the employee's own time and no time being lost from official duty.
- (d) Any expense other than the fare is to be borne by the employee.

(14) Expenses when family is boarding

The family of an employee should not move to the new location until housing is available, except where there are special circumstances making this essential or when an allowance in terms of this paragraph approximates the allowance payable to the employee alone under subclause (8). When an employee and family are boarding, either together or in different localities, and are no longer maintaining a home at the former location, assistance may be granted as follows:

- (a) In the first instance, a refund of personal expenses set out in subclauses (5) to (7).
- (b) At the expiration of the period under (a) above, accommodation allowance at the amount by which

actual and reasonable board and lodging expenses exceed 45% of gross remuneration. In this context "gross remuneration" means classified salary plus any allowance in the nature of salary. This is calculated on the consecutive day basis.

(c) Expenses when Staying at a Motel

If an employee and family stay at a motel and food is purchased and prepared by the employee, a rent subsidy of an amount by which the rent exceeds one-sixth of gross salary may be paid.

When meals must be taken in a restaurant, payment of the amount by which the total rent and meals exceed 45% of gross salary may be paid.

- (d) Employees are to make every effort to secure accommodation in other than an expensive hotel.

(d) Incidentals Allowance

The incidentals allowance may also be paid to cover incidental expenses not otherwise recoverable. However, in certain circumstances there may be no occasion to pay an incidentals allowance, eg, if laundry charges are included in total charges, the allowance is not payable. The allowance is not payable to both the employee and another member of his/her family (as defined in 1(1)(d)).

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- (f) The allowance in (b) may be approved for up to one calendar month. Boards may approve an extension for up to a further two calendar months. However, in doing so boards are to have regard to the employee's efforts to secure housing.

(15) Rent subsidy

When an employee on transfer is experiencing difficulty in finding permanent housing, it is often cheaper and more convenient for the employee to take a temporary tenancy of a house or flat as an interim measure. In these circumstances boards may grant, on the merits of each case, assistance with the rental for a limited period as an

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alternative to having the family separate or living in a hotel. If possible, employees should avoid entering into commitments for fixed periods and should, in any event, consult their boards before concluding any tenancy arrangements. The following conditions should be noted:

- (a) The subsidy is to be granted only in respect of a short term tenancy at a rental which is higher than the employee could normally be expected to afford.
- (b) The amount of the subsidy is to be the excess of the rental over one-sixth of the employee's gross salary.
- (c) The period for which the subsidy may be granted is not to exceed three months.
- (d) Rent subsidy is a form of accommodation allowance. It will usually be paid for furnished accommodation and boards may pay storage charges on an employee's furniture while on rent subsidy.
- (d) If the employee and family are occupying temporary accommodation at the new location and are receiving rent subsidy, pending sale of the former home and purchase of another, then interest, rates and insurance on the former home may be taken into account while it remains unsold and unoccupied. In these circumstances, the outgoings on the employee's house may be added to the rent and the subsidy calculated on the combined total on the basis of (b) above. Care must be taken to ensure that only mortgage interest is included, not principal repayments.



(f) If assistance beyond the initial period of one month is required, boards may approve an extension for a further two months. Boards should be satisfied that the employee has made genuine efforts to find more reasonable board. Only in exceptional circumstances should an extension beyond three months be granted.

(16) Incidental allowance

An allowance as per section 3 of Part II may also be paid for a day or part of a day to cover incidental expenses not otherwise recoverable. However, in certain circumstances, there may be no occasion to pay incidentals allowance, eg if laundry charges are included in the total expenses, the allowance is not payable. Receipts are not required.

The allowance commences on and from the day the employee arrives at his new headquarters.

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(17) Expenses when travelling

An employee in receipt of an accommodation allowance and required to travel on official business is not to be paid both accommodation allowance and travelling allowance (or a refund of actual expenses in lieu) in respect of the same period. In these circumstances, the employee should book out of the accommodation but, where this is not possible or a "retaining" fee is necessary, the board may consider payment of some allowance.

(18) Removal of furniture and effects

Where it is necessary to move an employee's furniture and effects from one locality to another, reasonable costs of such removal shall be met. Receipts are to be produced for all amounts over \$3. The cost of removal is not to be allowed on the following effects:

- (a) All articles not part of the employee's own household.
- (b) Buildings (other than small dismantlable structures, such as garden sheds (but not garages)), materials connected with buildings and structures generally, large wireless poles and large television masts.
- (c) Large workshop machinery, large engines, large cultivating machinery, garden rollers, caravans and trailers.
- (d) Boats
- (e) Wood, coal and fuel in excess of 250 kg.
- (f) Livestock (excluding household pets), beehives.
- (g) Motor-vehicles, including motor-cycles and motor-scooters.

NOTE: Refer to subclause 1(20) regarding inter-island transport of vehicles and towed vehicles.

(19) Transport of bicycle

Freight charges (including inter-island freight) on a bicycle owned by an employee on transfer at board expense may be met as an official charge.

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(20) Inter-island transport of vehicles and towed vehicles

(a) The cost of inter-island transport and marine insurance (but not wharfage) for up to two vehicles (ie cars or motor-cycles) and one towed vehicle (ie boat trailer, caravan, etc) owned by an employee moving at board expense, may be met as an official charge. Transit will be at the owner's risk. No other removal costs in respect of vehicles are payable.

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(b) Before taking out marine insurance cover, employees who have a comprehensive insurance policy for their

cars and are having the cars conveyed by inter-island ferry should enquire whether the comprehensive policy will be effective during the trip. If it will be effective, marine insurance should not be taken out.

(21) Storage of and damage to furniture on transfer

- (a) Employees on transfer are sometimes prevented from taking immediate delivery of their furniture, mainly on account on accommodation problems. In such cases, arrangements for the storage of furniture and effects are the employee's own responsibility but storage charges may be met as an official charge for the period during which the employee is in receipt of or qualifies for an accommodation allowance or a rental subsidy. Receipts are to be attached.
- (b) Employees are expected to take all reasonable steps to safeguard their interests. When furniture is stored, and is not covered by insurance during the period of storage by the carrying agency, the employee should take out insurance cover; and premiums above normal costs may be met as an official charge for the period during which the employee is in receipt of an accommodation allowance. Receipts are to be attached.
- (c) The board should not meet claims for damage when insurance cover could have been obtained. If furniture is exposed to undue risks, the employee should bring the fact to the notice of the board, which should extend all possible assistance to overcome difficulties.
- (d) Any claim for damages which is the liability of the carrying agency is a matter of settlement directly between the employee and the carrier.

(22) Transfer Grant

An employee required to shift his/her household from one locality to another may be paid (without production of receipts) a transfer grant of:

- (a) \$714 where an employee:
  - (i) purchases own accommodation; or
  - (ii) rents or leases board or private accommodation which has no floor and window coverings.
- (b) \$488 where an employee rents or leases board or private accommodation which has some floor or window coverings.

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(c) \$357 where an employee rents or leases board or private accommodation which has floor and window coverings in all rooms.

Note: In the above definitions the furnishings referred to are those owned by or installed at the expense of the board concerned or the existing owner, where rented or leased private accommodation is concerned.

(d) \$135 for each child who is attending a secondary/intermediate school prior to the date of transfer, who attends another secondary or intermediate school after the transfer and for whom a different uniform is required to be purchased because of change of school. This item is intended to cover the cost of providing replacement uniforms and is not payable if this type of expenditure is not incurred or would normally have been incurred for example, at the end of a school year when a child would progress from intermediate to secondary school.

(e) Payment is not to be made before the household is moved. An employee claiming under this subclause is to certify that the household has been moved, and, where applicable, certify that the requirements specified as to children at secondary school or intermediate school have been complied with.

Note: The above rates are effective from 4 November 1985.

(23) Sale or Purchase of a House — Legal and Estate Agent Fees

(a) When an employee sells the house he/she was

occupying at the former location and buys a house at the new location within two years of the date of transfer or sells at the former location and builds and takes occupation of a house at his/her new location within two years: actual aggregated maximum refund of legal and estate agents expenses up to \$7,814 may be refunded. Evidence must be produced that the employee has occupied and sold a house at the former location. The provisions of subclause (25) concerning the effective dates for payment will apply.

- (b) When an employee sells the house he/she was occupying at the former location within two years of the date of transfer, but does not buy another; actual legal expenses up to \$649 may be refunded.
- (c) When an employee has not sold a house at the former location, but buys one at the new location within two years of the date of transfer or builds one within two years, actual legal expenses up to \$2,774 may be refunded. To qualify under this provision, the employee must provide evidence of his/her having previously owned and occupied a house.

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- (d) For the purpose of paragraphs (b) and (c) above, "house" may include a "licence to occupy" as defined in the Companies Amendment Act 1964. This refers to cases where an employee buys shares in a flat-owning company, and thereby acquires the title and right to occupy a flat.

Note: Allowances are effective from 4 November 1985.

#### (24) Purchase and Sale of Land

- (a) A refund of legal fees and estate agent's commission may be made in connection with land on which it is intended to build a house for the employee's normal and immediate use.
- (b) When a house or land has not been owned previously, and the employee subsequently purchases land at one locality, and transfers again before building a house for his/her own use, assistance will be granted towards the cost of legal fees and estate agent's commission incurred in the sale of land.
- (c) When an employee has previously owned a house or land, and purchases land following a transfer to another locality with the intention of building a house for his/her own use and transfers again before the house is built, assistance will be granted towards the cost of legal fees and estate agent's commission incurred in both the purchase and sale of the land. Evidence of previous ownership is to be produced.
- (d) Evidence of genuine commitment to build is to be produced before any refund is made (eg. plans of a dwelling prepared specifically for the land).
- (e) The maximum amounts of refund are:
  - (i) For the aggregated maximum for purchase and sale of the land; actual expenses up to \$2,624.
  - (ii) For selling only, actual expenses up to \$1,386 for estate agent's commission; and for legal fees, actual expenses up to \$336.

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- (f) These points are to be noted:
  - (i) Sale of the land in the previous locality must be effected within two years of the date of transfer.
  - (ii) The provisions of (25)(a) concerning the effective date for payments will apply.
  - (iii) Previous ownership of land will not qualify as previous home ownership for a subsequent house purchase.

Note: Allowances are effective from 4 November 1985.

#### (25) Effective dates

- (a) From 1 April 1976, the amount of refund for both legal fees and estate agent's commission will be determined by the date of settlement for selling a house and that for buying or building a house at the new location. The maximum refund of expenses will be those operative at each date of settlement.
- (b) In respect of aggregated refunds for purchase and sale of houses, in terms of paragraph (23)(a), the maximum for these refunds may be averaged when one date of settlement occurs on or after a change in the rates.
- (c) Where both transactions are finalised after the date of an increase in rates, the maximum refunds will be entirely at the higher rates, even though the date of transfer occurred before the increase in the rates.

#### (25) General

- (a) Receipts or a solicitor's receipted statement covering expenses incurred must be produced. The refund may include stamp duty, valuation fee payable for securing an advance or mortgage, and, subject to (b) below, costs of registration of a joint family home, but not Housing Corporation Reserve Fund contribution.
- (b) The costs of registration of a joint family home are refundable only when:
  - (i) A house which was registered as a joint family home was owned at the former location.
  - (ii) Action to register the house at the new location is initiated at the same time as it is purchased or erected.

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- (c) The provisions of (25)(a) concerning the effective date for payment will apply.
- (d) For both legal fees and estate agent's commission, the Health Service Personnel Commission will consider cases where, because of exceptional circumstances beyond the employee's control, the two-year limit cannot be met. If an extension is desired, full details are to be submitted to the department within 18 months of the transfer.

#### (27) Estate Agents' Commission

- (a) Subject to the conditions below, a refund of estate agent's commission may be made to employees with family responsibilities. For refunds to employees without a family see clause 2.
- (b) When an employee sells the house that he/she was occupying at the former location within two years of the date of transfer, actual expenses up to \$4,390 may be refunded.

Note: Allowance effective from 4 November 1985.

- (c) No special publicity costs or other extras in respect of the sale are to be refunded, nor are any fees in respect of the house purchased to be refunded.
- (d) If the employee sells the house without the services of an estate agent, the full costs of advertising with a maximum of \$315 subject to the production of receipts may be refunded.

Note: Allowance effective from 11 June 1981.

- (e) Approving officers are to check that the agent's commission does not exceed \$100 basic charge plus 3% up to \$125,000 plus 1.5% over \$125,000.
- (f) Receipts are to be produced.
- (g) The provisions of subclause (25) concerning the effective date for payment will apply.

Note: Limit effective from 20 December 1980.

#### (28) Television Aerial

- (a) Employees may be refunded the actual cost of dismantling and re-erecting their television aerial with a combined maximum refund of \$23.
- (b) The refund is to be made only when an employee is

required to have the aerial at the home at the former location dismantled and then have an aerial erected at the home at the new location.

- (c) Receipts and a statement of expenses sufficient for the approving officer to identify labour costs are required.

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same period. In these circumstances, the employee should book out of his/her accommodation provided that, where this is not possible or a "retaining fee" is necessary, the board may consider payment of some allowance.

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(29) Refund of Telephone Re-connection Charges

- (a) Employees transferring from one locality to another at board expense may, on production of receipts, be refunded the cost of the telephone installation fee at the new locality. The maximum refund will be \$71.
- (b) To qualify for reimbursement, the employee must have had a private telephone installed in the home at the locality from which he/she transferred, and certify accordingly.
- (c) Employees may be refunded only one installation charge in a new locality, eg if temporary accommodation and later permanent accommodation is obtained in the new locality and the employee has the telephone installed at each address, only one refund of telephone installation fee will be made.

Note: Allowance effective from 11 June 1981.

(30) Removal within same town to Permanent Accommodation

- (a) When, as a result of 'transfer', an employee has taken the temporary tenancy of a house or flat (this does not include a board house tenancy unless at the time of occupancy the tenancy is specified as temporary); pending the availability of permanent accommodation and the moves into permanent accommodation, removal expenses involved up to \$200 may be refunded provided the removal takes place within two years of the date of 'transfer'.

Note: Allowance effective from 11 June 1981.

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2 SPECIAL PROVISIONS RELATING TO EMPLOYEES WITHOUT A FAMILY (ALREADY EMPLOYED BY A HOSPITAL BOARD OR THE STATE SERVICES)

(1) Accommodation Allowance

- (a) If an employee (without a family) on transfer at board expense has difficulty in finding suitable permanent accommodation at the new headquarters, an accommodation allowance may be granted for a period of up to one month in addition to the initial period mentioned in subclauses (5)(b)(i) and (ii) of clause 1 and subclauses (6)(a) and (b) of clause 3.

Employees are to make every effort to secure accommodation in other than an expensive hotel.

The following points should be noted:

- (b) The accommodation allowance is to be the amount by which actual and reasonable board and lodging expenses exceed \$7 per week with a maximum refund of the difference between \$7 per week and the scale travel allowance in section 2 of Part II.

(c) Incidentals Allowance

An allowance as per section 3 of Part II may also be paid for a day or part of a day to cover incidental expenses not otherwise recoverable. However, in certain circumstances, there may be no occasion to pay an incidentals allowance, eg if laundry charges are included in total expenses, the allowance is not payable. Receipts are not required.

(d) Expenses when travelling

An employee in receipt of an accommodation allowance and required to travel on official business is not to be paid both accommodation allowance and travelling allowance (or a refund of actual expenses in lieu) for the

3 TRANSFER REMOVAL EXPENSES FOR APPOINTEES FROM OVERSEAS

(1) General

- (a) Expenses shall be refunded to appointees from overseas to enable boards to recruit persons who are normally resident outside New Zealand. Such expenses shall not be payable to appointees who, at the time of appointment, have already come to New Zealand of their own volition or to New Zealanders who would be returning to this country in any case.

A commitment to pay expenses is not to be made if there is any doubt on these points, and, in any special case where a board considers there is justification for a refund of expenses, a full explanation of the circumstances is to be referred to the Department of Health for a decision before any commitment is made.

- (a) Special conditions exist for vacancies where no suitably qualified applicant from within New Zealand can be found, and the appointee is from overseas but not eligible for recruitment under (a) above. In these circumstances the Department of Health may authorise the payment of one-way economy class air fares only (or a cheaper rate, if one is available) for the appointee, his or her spouse, and dependent children; provided that the appointee:

- (i) Is a New Zealand citizen and has spent at least 2 years of his or her time outside New Zealand in following a relevant course of study and/or gaining relevant experience.
- (ii) Has skills and experience which it is in the national interest to acquire, and
- (iii) Enters into a bond to remain in the service of the sponsoring board for at least 2 years.

Note: Boards have no authority to pay expenses under this instruction.

- (c) The provisions set out in this clause apply to all whole-time appointees only.

(2) Medical Examinations

As it is not recommended practice to require medical or X-ray examinations of staff on appointment, the cost of such examinations is not refundable unless required as part of immigration formalities.

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(3) Passports

The cost of passport and passport photographs for appointee only may be refunded.

(4) Fares

Actual fares incurred by the appointee, spouse and dependent children from the country of residence to port of arrival in New Zealand may be refunded, subject to the following conditions:

- (a) The refund is not greater than the economy class air fares by the cheapest or most direct route to New Zealand. Full advantage is to be taken of any concession of excursion rates available. Any additional expenses and all bookings involved in a stopover are the appointee's own responsibility.

- (b) Where sea travel is used (either because it is the most convenient form of travel from some location or because the appointee is not prepared to travel by air) fares should be at the minimum rate (by the shortest or most direct



route to New Zealand), necessary to provide two berth tourist class accommodation for a married couple and/or four berth tourist class accommodation for single persons or children. If an appointee elects to travel at a higher fare rate, the excess must be borne as a personal charge.

- (c) The amount claimed has been actually paid for fares only.

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(5) Removal Expenses

Reimbursement for the cost of transporting effects from the home overseas to the home in New Zealand is based on freight capacity subject to the following limits:

	Limit of Reimbursement Expressed in Freight Capacity (m <sup>3</sup> )
For the appointee	7.0
Plus additional capacity for:	
Spouse	3.5
One child	1.5
Two children	3.0
Three or more children	4.5

and also subject to:

- (a) surface transport only being used (by the shortest and most direct route); and
- (b) reimbursement up to the above maximum freight capacities, refunds being made in New Zealand currency;
- (c) motor cars, scooters, bicycles, etc do not come under this heading. (The cost of voluntary insurance cover taken out by the appointee is not to be refunded, nor is the cost of trunks etc.)

(6) Temporary Accommodation Expenses

Boards may refund temporary accommodation expenses incurred in taking up appointment in New Zealand on the following basis:

- (a) Actual and reasonable accommodation expenses for up to two nights for married persons, and one night for single persons prior to departure.
- (b) Actual and reasonable accommodation expenses for up to 14 days for married persons, and seven days for single persons on arrival at destination.
- (c) Incidental expenses are not payable during the periods specified in (a) and (b) above.
- (d) In cases where a married appointee finds difficulty in obtaining suitable permanent accommodation, assistance may be given for a further period of up to three months. During this extended period, the

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accommodation allowance is the amount by which actual and reasonable board and lodging expenses exceed 45 percent of gross remuneration. In this context "gross remuneration" means classified salary plus any allowance in the nature of salary. In exceptional circumstances boards may approve an extension beyond the three month period.

- (d) The board and lodging expenses for the appointee should not exceed the appropriate scale travel allowance in section 2 of Part II.
- (f) Employees should make every effort to obtain accommodation within the approved scale rate in section 2 of Part II but, if this is not obtainable on arrival, boards may consider payment of an allowance at a higher rate until less expensive accommodation is obtained, but in no case exceeding one calendar month.

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(7) Expenses when staying at a motel

If an employee and his family elect to stay at a motel and food is purchased and prepared by the employee, a rent subsidy of an amount by which the rent exceeds one-sixth of gross salary may be paid. In this context, "gross salary" means classified salary plus any allowance in the nature of salary. When meals must be taken in a restaurant, payment of the amount by which the total rent and meals exceed 45 percent of gross salary may be paid. Rent and meal charges for each adult are not to exceed the appropriate scale travel allowance in section 2 of Part II.

(8) Incidentals Allowance

An allowance, as in section 3 of Part II, may also be paid for a day or part of a day to cover incidental expenses not otherwise recoverable. However, in certain circumstances, there may be no occasion to pay an incidentals allowance — eg if laundry charges are included in total expenses, the allowance is not payable. Receipts are not required. The allowance is not payable to both husband and wife.

(9) Rent Subsidy

(a) In some cases, when permanent accommodation is difficult to locate, it will be preferable for a married appointee to take residency of a house or flat as an interim measure. In these circumstances, assistance may be granted with the rental during the initial three month period as an alternative to having the family separated or living in a hotel. Appointees should consult their employing boards before concluding such tenancy arrangements. The amount of the subsidy will be the excess of the rental over one-sixth of the employee's gross salary. In exceptional cases, boards may extend the approval to twelve months on the merits of each case.

(b) Rent subsidy is a form of accommodation allowance. It will usually be paid for furnished accommodation and boards may pay storage charges on an employee's furniture while on rent subsidy.

(10) Expenses when travelling

Where an employee travelling on official business is in receipt of an accommodation allowance, he should not also be paid travelling allowance (or a refund of actual and reasonable expenses) where he can book out of his place of "residence" for the period. Where a retaining fee is necessary, the board may approve a reduced allowance for the period.

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(11) Sale and Purchase of House

If an employee recruited overseas under these conditions sells his/her house before departure and buys one in New Zealand within two years of arrival, boards may, subject to the production of receipts, refund actual legal expenses up to \$2,774. On the granting of any such refund, the amount is to be added to the total of the bond and a fresh bond entered into.

Note: Allowance effective from 4 November 1985.

(12) Bonding

- (a) Appointees (married and single) receiving a refund of expenses under this clause are required to enter into a bond to remain in the service of the employing board for a period of at least three years.
- (b) All bonds should be drawn up in New Zealand and the fares and expenses, where appropriate, subsequently refunded in New Zealand currency. See also the provisions covering an amended bond in (11).
- (c) In any special case where an appointee cannot take up duty without prior assistance, it may be possible for a board to deposit its contributions towards fares with New

Zealand travel agents, but this is subject to:

- (i) Prior completion of a bond by the appointee overseas through the nearest New Zealand Government Office for the amount deposited.
  - (ii) Completion of an amended bond on arrival in New Zealand for the amount of all assistance to be granted by the board.
- (d) Attestation fee for the execution of a bond, if any, is refundable.
- (e) Every necessary action, including Court proceedings if need be, is to be taken to recover expenses which have been refunded to a person who later defaults on his/her obligations under the bond of service with the board. The rule to be applied is that the amount to be recovered will be proportionate to the period of uncompleted service; for example, an employee who defaults after six months' service under a bond for two years, is liable to refund three quarters of the amount originally paid to him/her by the board.
- (f) Where a female employee defaults on service under a bond, eg due to pregnancy, it may not be considered desirable or expedient to go to the extent of proceedings, for recovery of the amount due. A board is not, however, to waive liability, but is to report the circumstances fully to the commission and obtain a decision in any such case.

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(13) Appointments for less than three years

Where appointments are for a period of less than three years, boards may pay expenses under the standard conditions set out above in proportion to the period of service to be given, ie one year — one-third expenses; two years — two-thirds expenses and the bond adjusted accordingly.

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4 APPOINTEES FROM OUTSIDE THE HOSPITAL SERVICE OR THE STATE SERVICES

(1) Definitions

For the purpose of this clause, the terms 'State Services' and 'Hospital Service' shall have the same meaning as those expressed in subclause (1) of clause (1) of the Second Schedule.

(2) Removal and Related Expenses

Boards may grant a refund of removal and related expenses to married whole-time appointees taking up an appointment with a board from a different locality in New Zealand on the following basis:

- (a) Half surface fares for self and family.
- (b) Half cost of removal of furniture and effects.
- (c) Actual and reasonable accommodation expenses as for a married person in clause 1, subclauses (5)(a)-(7).
- (d) Actual legal expenses up to \$868 if an appointee has to shift the family to a new location and sells the house and buys one within 12 months of appointment.

Note: Allowance effective from 4 November 1985.

(3) General

The following points should be noted:

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- (a) The conditions applying to payment of accommodation expenses to married employees taking up an appointment from one board to another board should be complied with — refer to clause 1, subclauses (5)(1)-(7).
- (b) All payments in excess of \$20 are contingent upon the appointee signing an agreement to remain in the service of the board for two years. No agreement is necessary if

the refund is less than \$20. The amount of the agreement will be the estimated sum to cover expenses.

- (c) Receipts are to be produced.
- (d) No other expenses are to be paid, eg, Transfer grant.
- (e) A new appointee is not entitled to visit his former home at board expense.

5 RECEIPTS TO BE PROVIDED FOR EXPENDITURE

(1) Production of Receipts

Receipts are to be produced for all payments on which a refund is claimed, except for:

- (a) Petty disbursements under \$5.00.
- (b) Fares on scheduled train or bus routes where the cost can be readily identified.
- (c) Meals taken at motels under the provisions of paragraphs 1(7) or 3(7).

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SECOND SCHEDULE — PART II

ALLOWANCES

Section 1

Travelling Allowance

- (1) (a) Employees may claim reimbursement of their accommodation costs on an actual and reasonable basis on presentation of receipts.
- (b) In addition, employees will be paid an allowance to cover their meal costs (no receipts will be required). The rate will be \$35 per day.
- (c) The allowance will be payable at the standard rate for each full 24 hour period spent in travelling, and at the following rates for any additional period of less than 24 hours:
  - (i) \$15 for periods up to 10 hours;
  - (ii) \$35 for periods over 10 hours.
- (d) Employees may also claim the Incidentals Allowance (as specified in Section 3 below) for each full 24 hour period and for any additional part of less than 24 hours (no receipts will be required).
- (e) There are no different rates of allowance based on salary.
- (2) In exceptional situations where the allowance for meals will not cover reasonable costs employees may claim an actual and reasonable refund of meal costs (on production of receipts).
- (3) Employees must claim an actual and reasonable refund of their expenses where the accommodation tariff includes all or some meal costs (receipts will be required). The allowance for meals will not be paid.
- (4) Employees who claim an actual and reasonable refund for their expenses may also claim the Incidentals Allowance (Section 3).

Section 2

Relieving Allowance

- (1) Reimbursement of accommodation, meal and incidental expenses for employees performing relieving duty will operate in the same manner as specified in Section 1 above.
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- (a) Employees may claim reimbursement of their accommodation expenses on an actual and reasonable basis (on production of receipts).
  - (b) Employees will be paid an allowance to cover their meal costs (no receipts are required). The rate for employees performing relieving duty will be \$26.25 per day.
  - (c) Employees may also claim the Incidentals Allowance.
  - (2) For the first 14 days (of relieving duty) employees may claim

a refund of their expenses based on the transfer allowance provisions. That is, they may claim the higher rate of the allowance for meals (\$35 per day).

- (3) Employees receiving a relieving duty allowance are to avoid staying at expensive hotels and make every effort to obtain board and lodgings elsewhere. Employees will be allowed a reasonable period to find cheaper accommodation but boards should ensure that hotel expenses are not paid for more than one month other than in exceptional circumstances.

**Section 3**

Staying Privately

Employees eligible for travelling allowance may claim an allowance of \$17.50 per day or part thereof for meals when staying privately. Employees eligible for relieving allowance may, when staying privately claim \$13.13 per day or part thereof for meals (no receipts will be required). Employees may also claim the Incidentals Allowance. In addition employees who stay privately may claim up to \$20 per night for accommodation (no receipts will be required).

**Section 4**

Incidentals Allowance

Incidentals allowance of \$5.00 a day or part of a day.  
(Allowance effective from 4 November 1985.)

**Section 5**

Private Car Allowance on Transfer

	\$ Allowance Per km
(1) <u>Motor Cars</u>	
Up to 1000 cc	0.2500
1001 — 1350 cc	0.2645
1351 — 2000 cc	0.2835
Over 2000 cc	0.3755
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(2) <u>Motor Cycles</u>	
Up to 60 cc	0.0770
61 cc — 349 cc	0.1435
350 cc and over	0.1845

When more than two passengers are carried, these rates are increased by one cent a kilometre.

(Rates effective from 8 May 1985.)

**HEALTH SERVICE DETERMINATION HS19  
LABORATORY WORKERS OCCUPATIONAL CLASS**

- 1. The effect of Health Service Deterination No HS2307 attached is to apply negotiated increases to current 10 November 1985 salary scales and conditions of employment.

**2. Salary Scales**

The First Schedule Part A is amended as follows:

(1) Graded Scale

Grade 6 is to become a substantive grade. Persons currently on this grade shall retain the grade as personal to them. A review of senior gradings will be undertaken shortly.

(2) Staff Scale

Qualification for entry into this scale from the trainees scale has been redefined to ensure that only fully qualified people are paid as Staff Medical Laboratory Technologists, ie where both examination and practical work requirements have been fulfilled.

(3) Trainee Scale

The Basic Training Certificate is no longer issued and has been superseded by the General Training Certificate for the purposes of clauses 2(2)(a), (b) and (c).

(4) Supervising Laboratory Assistant

This additional scale has been included to recognise additional job content and responsibility of Laboratory Assistants or Senior Laboratory Assistants who supervise other Laboratory Assistants.

Guidelines to the establishment of these positions will be issued shortly by the Health Service Personnel Commission.

(5) Laboratory Assistant's Scale

- (i) The bottom 3 steps of this scale have been deleted.
- (ii) Minimum commencing rates for School Certificate and University Entrance have been updated.
- (iii) In addition, a minimum rate for a Laboratory Assistant who is employed as a Mortuary Attendant is included which is \$14,707. These people are generally expected to be mature adults because of the unpleasant nature of the job so a higher starting rate should reflect this.
- (iv) A Laboratory Assistant should now receive a double salary increment for the first QTA gained (after 10 November 1985) and a single salary increment for each additional QTA gained after that.

(6) Graduate Scale

Boards should note that this scale is only applicable to Graduate Technologists employed before 1 September 1978 and no new appointments should be made to this scale.

(7) Translations

Translations to the salary scales are attached in appendix A to this circular.

**3. INTERPRETATIONS**

The First Schedule Part B has been amended as follows:

- (1) The definition of, and all other references to the "Grading Committee" have been deleted as this function is now undertaken by the Health Service Personnel Commission.
- (2) Adding "and who was appointed to a position of Graduate Technologist before 1 September 1978" to the definition of Graduate Technologist reflects the changes described in 2(6) above.
- (3) The definition of "Medical Laboratory Technologist" is altered to allow for Technologists who only hold limited registration.  
Please note that Department of Health Circular Letter No (HOSP) 1982/152 is now revoked.
- (4) The definition of "Senior Laboratory Assistant" has been altered to distinguish between a Senior Laboratory Assistant and a Supervising Laboratory Assistant.
- (5) A definition for the new position of Supervising Laboratory Assistant is inserted which reads:

"Supervising Laboratory Assistant" means a person filling an established position where they are required to undertake the day to day supervision of a group of laboratory or senior laboratory assistants".

**1.4. CONDITIONS OF EMPLOYMENT**

The Second Schedule — Conditions of Employment are amended as follows:

- (1) A shoe and stocking allowance is included under "protective clothing".
- (2) The provision for meal periods and rest breaks has been



amended to read:

"Standard HS48 provided that any Laboratory worker unable to take a meal break after 5 hours duty shall be paid at time half rate in addition to normal salary from the expiry of five hours until the time the meal break can be taken".

- (3) The Amendments to HS19 covering part-time employees call duties and damage to personal clothing which were set out in HSPC Circular 1985/32 are now added to the determination.

#### 5. NURSES IN BLOOD BANKS

Boards should note that a separate scale for nurses in blood banks was not agreed to in negotiations. However, where a board thinks it is appropriate to have a nurse in a blood bank and they are carrying out full nursing duties, application can be made to the Health Service Personnel Commission to have those positions reclassified as nursing positions under HS21. It is not envisaged that all nurses currently employed in blood banks will be reclassified.

#### 6. TRANSPORT ALLOWANCE

Boards should be aware that the current transport allowance does not preclude a Board from supplying taxis for staff outside of the hours when public transport operates.

#### 7. SEXIST LANGUAGE

Instances of language which could have appeared to have been sexist have been removed.

#### 8. EMPLOYEES WHO HAVE RESIGNED

Employees who have resigned since 10 November 1985 should, on application to the board, be paid any arrears due.

#### 9. COSTS

A board may claim by way of supplementary grant the nett cost of the increases only if the board makes payments from its base allocation for salaries and wages. Such a claim should be recorded against the appropriate item on the monthly accounting statement making reference to this circular. Other costs arising from these amendments should be met from the board's base allocation.

10. Any matters of doubt or difficulty should be referred to this office for decision.

Yours faithfully

T.J. Neilson  
for Chief Executive

### **HEALTH SERVICE DETERMINATION No HS2307 HS19 LABORATORY WORKERS OCCUPATIONAL CLASS**

Pursuant to the State Services Conditions of Employment Act 1977, the Health Service Personnel Commission hereby makes the following amending determination.

#### **APPLICATION OF AMENDING DETERMINATION**

1. Health Service Determination No HS19 as amended from time to time is further adjusted as follows.
2. The First Schedule, Part A is revoked and is replaced by the First Schedule, Part A attached to this amending determination which has the effect of:
  - (a) Applying the negotiated increases to current 10 November 1985 salary scales.
  - (2) Making Grade 6 substantive so the sentence: "A grade laboratory officer may be paid . . . other Grade 5 officers." has been deleted and Grade 6 has been put on the top of the scale.

- (3) Replacing note 2(1)(a) with the following:  
"PROGRESSION FROM TRAINEE TO STAFF MEDICAL LABORATORY TECHNOLOGIST: Newly qualified Staff Medical Laboratory Technologists

(i) Where practical work requirements have been completed prior to passing the written examination, the promotion to the staff scale will be made from the first day of the month immediately succeeding the day on which was held the last part of the written examination, the passing of which together with the associated practical examinations, whenever held, entitles him/her to his/her Diploma of Medical Laboratory Technology (previously known as the Certificate of Proficiency) or other recognised qualification.

(ii) Where practical work requirements have not been completed prior to passing the written examination, the appointment to the staff scale will be made from the first day of the month immediately succeeding the last day on which the practical work requirement was completed.

- (4) Amending note 2(2)(b) by

(i) replacing the basic Training Certificate with the General Training Certificate

(ii) deleting the words: "the passing of which together with the associated oral and practical examinations whenever held," and inserting the word: " or the last day of completion of any practical experience requirement, whichever is the latter," in its place.

- (5) Deleting old note 2(2)(d) and consequently renumbering old note 2(2)(e) to new note 2(2)(d).

- (6) Inserting an additional scale for Supervisory Laboratory Assistants at two levels. It reads:

#### Supervising Laboratory Assistant

Positions may be established by the board, the level of which depends upon job content and responsibility and is subject to the approval of the Health Service Personnel Commission.

Level	10.11.85
1	22,207
2	19,909

Subsequent scales are renumbered accordingly.

- (7)(i) Deleting the bottom 3 steps from the Laboratory Assistants' Scale.

(ii) Updating the minimum University Entrance commencing rate in note 2(5)(a) to \$9,830 (previous 10.11.85) and \$11,207 (final 10.11.85).

(iii) Updating the minimum School Certificate commencing rate in note 2(5)(b) to \$8,993 (previous 10.11.85) and \$10,223 (final 10.11.85).

- (iv) Inserting note 2(5)(c) which reads:

"a minimum commencing rate of \$14,707 for a Laboratory Assistant employed as a Mortuary Attendant."

Subsequent notes are renumbered accordingly.

- (v) Amending old note 2(4)(c) (new note 2(5)(d) to begin: "notwithstanding (a), (b) and (c) above . . .".

- (vi) Amending old note 2(4)(e) (new note 2(5)(f)) to read:

"a laboratory assistant who obtains the 'Certificate of Qualified Technical Assistant' (and/or the 'Certificate of Qualified Technical Officer' prior to 1981) issued by the New Zealand Institute of Medical Laboratory Technology shall be granted a double salary increment for the first qualification, and a single salary increment for every additional qualification on the first day of the month immediately following the date on which he/she completed the examination and his/her incremental date will not be changed."

- (8)(i) Deleting the preamble to the Graduate Technologist scale and replacing it with:

"Note: this scale is only applicable to graduate technologists appointed before 1.9.78.

No further appointments to this scale shall be made.  
A graduate technologist employed before 1.9.78 shall be paid one of the following rates:"

(ii) Deleting old note 2(5)(a).

(9) Deleting instances of sexist language where it occurs.

3. The First Schedule Part B is amended as follows:

(1) The definition of, and other reference to the "Grading Committee" is deleted.

(2) The phrase "and who was appointed to a position of Graduate Technologist before 1.9.78" is added to the definition of "Graduate Technologist".

(3) The definition of "Medical Laboratory Technologist" is amended to read:

"'Medical Laboratory Technologist' means a person employed in hospital laboratory work who holds registration of limited registration with the Medical Laboratory Technologists' Board."

(4) The definition of "Senior Laboratory Assistant" is amended by replacing the words "is acting beyond the level of a laboratory assistant" with the words "has been designated by the Health Service Personnel Commission as a senior laboratory assistant."

(5) A definition for "Supervising Laboratory Assistant" is included which reads:

"'Supervising Laboratory Assistant' means a person filling an established position where they are required to undertake the day to day supervision of a group of laboratory of senior laboratory assistants."

4 The Second Schedule is amended as follows:

(1) A shoe and stocking allowance is inserted under Protective Clothing. It now reads:

"Protective Clothing Standard HS48 except where a board requires:

(i) a Lab Worker to wear a particular type of shoe, two pairs shall be supplied free of charge to every whole-time Lab Worker or an allowance of \$88.41 pa (1.10.85) shall be paid in lieu.

(ii) Six pairs of duty socks, stockings or pantyhose shall be supplied free of charge or an allowance of \$20.46 pa (1.10.85) be paid in lieu.

(iii) In the case of a Lab Worker who is employed part-time, a proportionate part of those allowances shall be paid as applicable."

(2) The provision for Meal Periods and rest breaks is amended to read:

"Meal Periods and Rest Breaks

Standard HS48 provided that any Lab Worker unable to take a meal break after 5 hours duty shall be paid at time half rate in addition to normal salary from the expiry of five hours until the time the meal break can be taken."

(3) The provisions covering damage to personal clothing and part-time employees on call, as included in HSPC Circular 1985/32 are inserted.

(4) Instances of sexist language have been deleted where appropriate.

5 Replacement pages incorporating the amendments prescribed in paragraphs 2, 3 and 4 above are attached.

6 The revised salary scale prescribed in the First Schedule and the amendments in the Second Schedule shall apply on and from 10 November 1985.

Dated this

30th day of April 1986.

J.R. Martin

Chairman

R.H. Kerr

Member

R. McEwan

Member

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April 1986

**FIRST SCHEDULE — PART A**

SALARIES AND WAGES OF HEALTH SERVICE  
LABORATORY WORKERS

Grade Laboratory Officer

1 A grade laboratory officer shall receive an annual rate of salary according to the grade approved by the Health Service Personnel Commission for the position held.

<u>Grade</u>	<u>Previous 10.11.85 \$</u>	<u>Final 10.11.85 \$</u>
6		43,500
5	35,335 33,744	41,000 39,500
4	32,646 31,299	38,000 36,500
3	30,201 38,854	35,000 33,500
2	27,753 26,654	32,000 31,000
1	25,433 24,331	29,800 28,800

2 The scale of salaries applicable to laboratory workers other than grade laboratory officers shall be:

(1) Staff Medical Laboratory Technologist

<u>Previous 10.11.85 \$</u>	<u>Final 10.11.85 \$</u>
23,549	27,000
22,738	25,600
22,133	24,400
21,350	23,200

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(a) PROGRESSION FROM TRAINEE TO STAFF MEDICAL LABORATORY TECHNOLOGIST: Newly qualified Staff Medical laboratory Technologists

(i) Where practical work requirements have been completed prior to passing the written examination, the promotion to the staff scale will be made from the first day of the month immediately succeeding the day on which was held the last part of the written examination, the passing of which together with the associated practical examinations, whenever held, entitles him/her to his/her Diploma of Medical Laboratory Technology (previously known as the Certificate of Proficiency) or other recognised qualification.

(ii) Where practical work requirements have not been completed prior to passing the written examination, the

appointment to the staff scale will be made from the first day of the month immediately succeeding the last day on which the practical work requirement was completed.

(b) Progression within the scale shall be by automatic annual increment.

(2) <u>Trainee</u>	Previous	Final
	<u>10.11.85</u>	<u>10.11.85</u>
	\$	\$
	19,785	20,762
	19,067	19,967
	18,369	19,186
	17,849	18,607
	17,256	17,946
	16,156	16,802
	15,134	15,739
	14,142	14,707
	13,108	13,632
	11,942	12,419
	10,887	11,207
	9,830	

Provided that:

(a) a trainee who holds a New Zealand Certificate of Science in a relevant discipline or the Medical Laboratory Technologists Board General Training Certificate shall receive a minimum salary as from time to time advised by the Health Service Personnel Commission.

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(b) the minimum salary rate (as advised by the Health Service Personnel Commission) for a trainee medical laboratory technologist who attains a NZ Certificate of Science in a relevant discipline or the Medical Laboratory Technologists Board General Training Certificate shall commence on the first day of the month immediately succeeding the day on which was held the last part of the written examination or the last day of completion of any practical experience requirement, whichever is the latter, which entitles him/her to the certificate.

(c) a trainee who holds a New Zealand Certificate of Science in a relevant discipline or the Medical Laboratory Technologists Board General Training Certificate, but does not attempt to qualify for the Diploma of Medical Laboratory Technology, will be reclassified as a laboratory assistant whereupon he/she will be paid according to subclause 2(5) of the schedule.

(d) a trainee may be paid a commencing salary higher than the first year salary, subject to the prior approval of the Health Service Personnel Commission, having regard to the age, educational qualifications, and experience of the person to be appointed as a trainee.

(3) Supervising Laboratory Assistant

Positions may be established by the Board, the level of which depends upon job content and responsibility and is subject to the approval of the Health Service Personnel Commission.

Level	10.11.85
1	22,207
2	19,909

(4) Senior Laboratory Assistant

Previous	Final
<u>10.11.85</u>	<u>10.11.85</u>
\$	\$
20,835	21,668
20,270	21,081
19,707	20,495
19,144	19,909

Entry to the senior laboratory assistants scale shall be restricted by the Health Service Personnel commission to

laboratory assistants who hold an appropriate qualification and/ or have achieved an exceptional level of competence in developmental or specialised service. Progression within the grade shall be by automatic annual increment.

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(5) Laboratory Assistant

Previous	Final
<u>10.11.85</u>	<u>10.11.85</u>
\$	\$
18,369	19,186
17,849	18,607
17,256	17,946
16,567	17,230
15,524	16,145
14,142	14,707
13,136	13,632
12,034	12,419
10,932	11,207
9,830	10,223
8,993	9,352
8,325	
7,362	
6,836	

The salary scale for laboratory assistants specified in subclause 2(5) shall be subject to the following general provisions:

(a) a minimum commencing rate of \$9,830 (previous 10.11.85) and \$11,207 (final 10.11.85) for a laboratory assistant holding University Entrance in one or more subjects relevant to laboratory work.

(b) a minimum commencing rate of \$8,993 (previous 10.11.85) and \$10,223 (final 10.11.85) for a laboratory assistant holding School Certificate (or entry to form VI) in one or more subjects relevant to laboratory work.

(c) a minimum commencing rate of \$14,707 for a laboratory assistant employed as a mortuary attendant.

(d) notwithstanding (a), (b) and (c) above, subject to the prior approval of the Health Service Personnel Commission, a commencing salary higher than the first year salary may be paid, having regard to the age, educational qualifications and experience of the person to be appointed as a laboratory assistant.

(e) subject to the 'prior approval of the Health Service Personnel Commission', special advancement may be granted to a laboratory assistant having regard to his special merit or responsibilities or educational qualifications attained.

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(f) a laboratory assistant who obtains the "Certificate of Qualified Technical Assistant" (and/or the "Certificate of Qualified Technical Officer" prior to 1981) issued by the New Zealand Institute of Medical Laboratory Technology shall be granted a double salary increment for the first qualification, and a single salary increment for every additional qualification on the first day of the month immediately following the date on which he/she completed the examination and his/her incremental date will not be changed.

(6) Graduate Technologist

Note: This scale is only applicable to graduate technologists appointed before 1.9.78.

No further appointments to this scale shall be made. A graduate technologist employed before 1.9.78 shall be paid one of the following rates:



	Previous <u>10.11.85</u> \$	Final <u>10.11.85</u> \$
(i)	28,124	30,047
	26,430	28,162
	24,791	26,339
	23,157	24,521
	22,340	23,612
(ii)	21,526	22,706
	20,711	21,800
	19,883	20,879
	19,144	20,057
	18,421	19,252
	17,874	18,643
Provided that:	17,118	17,803

on the recommendation of the board and subject to the prior approval of the Health Service Personnel Commission, accelerated advancement may be granted within either scale (i) or (ii), regard being had to special merit or special responsibilities, special academic qualifications, or such other special factors as may be recognised by the Health Service Personnel Commission.

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**HS19: LABORATORY WORKERS — FIRST SCHEDULE:  
PART B**

INTERPRETATIONS

In this determination unless the context otherwise requires:

“Grade Laboratory Officer” means a principal or sole medical laboratory technologist in any hospital, a tutor medical laboratory technologist and any other medical laboratory technologist;

who by reason of his/her special duties or responsibilities is for the purposes of this determination designated by the Health Service Personnel Commission as a grade laboratory officer.

“Graduate Technologist” means a university graduate in science who has majored in a subject related to the work of a medical laboratory and who was appointed to a position of Graduate Technologist before 1.9.78.

“Laboratory Assistant” means a person who is employed in a medical laboratory in manual or technical work ancillary to that of a medical laboratory technologist, but who is not a medical laboratory technologist, or a trainee.

“Laboratory Worker” includes a medical laboratory technologist, a trainee and a laboratory assistant.

“Medical Laboratory Technologist” means a person employed in hospital laboratory work who holds registration or limited registration with the Medical Laboratory Technologists’ Board.

“Senior Laboratory Assistant” means a laboratory assistant who by virtue of an appropriate qualification and/or an exceptional level of competence in developmental or specialised service has been designated by the Health Service Personnel Commission as a senior laboratory assistant.

“Staff Medical Laboratory Technologist” means a medical laboratory technologist who is not a grade laboratory officer.

“Supervising Laboratory Assistant” means a person filling an established position where they are required to undertake the day to day supervision of a group of laboratory or senior laboratory assistants.

“Trainee” means a person who is undergoing a course of training prescribed by the Medical Technologists Regulations 1982 for the purpose of obtaining registration as a medical laboratory technologist.

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“Tutor Medical Laboratory Technologist” means a medical laboratory technologist who is responsible for the teaching of trainees (in a training school recognised by the Health Service Personnel Commission) and is wholly or mainly employed in that work.

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**HS19: LABORATORY WORKERS**

SECOND SCHEDULE — CONDITIONS OF EMPLOYMENT

Hours of Work Ordinary weekly hours of work shall be 8 hours per day worked on 5 consecutive days. Each daily duty shall be continuous except for interruptions for meal periods and rest breaks.

Overtime & Penal Time Standard HS48

Part-time Employees Call Duties

Overtime rate will only apply where the part-time worker has worked in excess of 8 hours per day or 80 hours per fortnight. Where part-time workers are part of an official on call roster and are called out from their place of residence in emergency circumstances, then they shall be paid on the basis of a minimum of 3 hours at appropriate rates. The length of the call would be measured in respect of actual time worked only, except that outside of the normal hours of duty (ie 8.00 am to 5.00 pm Monday to Friday) the length of the call would be measured in respect of actual time worked and reasonable travelling time from the place of call to the place of duty and return to the place of call or residence. The minimum payment prescribed shall apply to each recall, except that:

- (1) call-outs commencing and finishing within the minimum period covered by an earlier call-out shall not attract any additional payment;
- (2) where a call-out commences before and continues beyond the end of a minimum period for a previous call-out payment shall be made as if the employee had worked continuously from the beginning of the previous call-out to the end of the latter call-out.

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SECOND SCHEDULE — CONDITIONS OF EMPLOYMENT (Cont)

Whole Holidays	Standard HS48
Annual Leave	Standard HS48
Sick Leave	Standard HS48
Bereavement Leave	Standard HS48
Maternity Leave	Standard HS48
Paternity Leave	Standard HS48
Jury Service Leave	Standard HS48
Adult Allowance	Standard HS48
Dependant’s Allowance	Standard HS48
Lodging Allowance	Standard HS48
Remote Locality Allowance	Standard HS48
On Call Allowance	Standard HS48
Transport Allowance	Standard HS48 except that where a laboratory worker is called back to duty outside his/her normal hours of work, he/she shall be reimbursed actual and reasonable expenses incurred in transport to and from call duty.
Higher Duties Allowance	Standard HS48 except that an allowance is payable only to a staff medical laboratory technologist or a grade laboratory officer who is temporarily discharging the duties and responsibilities of a higher graded appointment.

Meal Allowance Standard HS48  
 Refund of Annual Practising Certificate Fees Standard HS48

TRANSLATIONS

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Trainee

10.1.85

Previous  
10.11.85

Final  
10.11.85

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SECOND SCHEDULE — CONDITIONS OF EMPLOYMENT (Cont)

Fees for Lectures In addition to the yearly rate of salary determined in accordance with this determination, any medical laboratory technologist may be paid a fee at the rate of \$5.73 for each approved formal lecture given to laboratory workers outside his normal hours of work; provided that each such lecture is approximately 1 hours duration.

17,130	19,785	20,762
16,508	19,067	19,962
15,904	18,369	19,186
15,454	17,849	18,607
14,940	17,256	17,946
13,988	16,156	16,802
13,103	15,734	15,739
12,244	14,142	14,707
11,349	13,108	13,632
10,340	11,942	12,419
9,426	10,887	11,207
8,511	9,830	

Laboratory Assistant

Redundancy Pay Standard HS48  
 Transfer & Removal Conditions & Expenses Standard HS48  
 Protective Clothing Standard HS48 except where a board requires:  
 (i) a lab worker to wear a particular type of shoe, two pairs shall be supplied free of charge to every whole-time lab worker or an allowance of \$88.41 pa (1.10.85) shall be paid in lieu.  
 (ii) Six pairs of duty socks, stockings or pantyhose shall be supplied free of charge or an allowance of \$20.46 pa (1.10.85) shall be paid in lieu.  
 (iii) In the case of a lab worker who is employed part-time, a proportionate part of those allowances shall be paid as applicable.

15,904	18,369	19,186
15,454	17,849	18,607
14,940	17,256	17,946
14,344	16,567	17,230
13,441	15,524	16,145
12,244	14,142	14,707
11,349	13,136	13,632
10,419	12,034	12,419
9,465	10,932	11,207
8,511	9,830	10,223
7,786	8,993	9,352
7,207	8,325	
6,374	7,362	
5,920	6,836	

\* All other scales have a point to point translation

19/36/2307  
 April 1986

4

SECOND SCHEDULE — CONDITIONS OF EMPLOYMENT (Cont)

Meal Periods and Rest Breaks Standard HS48 provided that any lab worker unable to take a meal break after 5 hours duty shall be paid at time half rate in addition to normal salary from the expiry of five hours until the time the meal break can be taken.

Damage to Personal Clothing A laboratory worker may at the board's discretion be compensated for damage to personal clothing worn on duty, or reimbursed dry cleaning charges for excessive soiling to personal clothing worn on duty, provided the damage or soiling did not occur as a result of the employee's negligence or failure to wear the protective clothing provided.



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Membership fees for the year beginning April 1, 1986 are:

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Members wishing to receive their publications by airmail should contact the Editor to make the necessary arrangement.

## PRESIDENTIAL ADDRESS.

### Colvin Campbell

It was tempting to title this address "The Summer of our Discontent". 1986 — the year of the Mikhail Lermontov, Halleys Comet and the Chernobyl disasters — also a year which no New Zealand farmer will remember with affection. However, it was also the year when the NZIMLT came of age politically and industrially. I am sure no one will be surprised after the momentous events which affected most of us in the early part of this year that I should choose to speak on:—

#### Politics and Health

I have no intention of discussing the "Nut and Bolts" or justice of the wage round; these are well known to most of you and are covered more than adequately in the Negotiations Committee report and other documents which have been made available to you.

To set the scene, a brief quotation from the New Zealand Medical Journal 26th March 1986.

"Laboratory technicians, whom Dr Bassett admits provide indispensable back-up support for detection work, treatment and a form of service guarantee, threatened action over their pay claim when it came up for consideration in the New Year.

Nobody thought they would carry out their threats, including the government. Against that background they became the first paramedical group to carry out threatened industrial action in general hospitals with a two day national strike in February.

Their reasons for striking were much the same as junior doctors and nurses, namely that their wages had slipped behind markedly because of the 82-84 freeze and staff shortages had worsened. Laboratory workers are paid pretty miserable wages".

Two important points from the quote are that despite all the media exposure we are still technicians and not technologists to the public at large, and secondly that for the first time the government became involved in our salary and conditions negotiations. It became obvious early in the piece that the Health Service Personnel Commission had no power or authority to negotiate positively with us, any more than they were previously able to improve the situation for the nursing profession.

It is fair to make some comparisons between nursing and ourselves — nursing gained major media exposure and tremendous public sympathy in their fight for adequate remuneration for what is a responsible, demanding and stressful occupation — I know, my wife is a registered nurse. However, remember about 20,000 nurses belong to NZNA and their annual subscription is indexed to a second year staff nurse's salary. It will be more than \$150/pa

by the end of this year. This income allowed them to spend up to \$100,000 on wage negotiations which included obtaining professional research by management consultants. In addition, a permanent headquarters with a paid full time executive officer, industrial officer and various regional officers, i.e., a total paid staff of more than ten people. This means they have the resources to devote full time to industrial and professional matters while the executive deals with policy.

The same type of structure applies to police, teachers and Post Office workers. For many years the expectations of medical technologists has been to have a highly professional, active, responsive national organisation providing continuing education, regular communication, higher salaries, aid to the Pacific islands, a regular professionally produced journal, examinations annually for as many as 20 different groups of laboratory assistants and also to solve any problems which arise between members and employing hospital boards or private pathologists. It is only because of the selfless efforts and true dedication to their profession by a limited number of people that something approaching your expectations have been reached. The past few months have seen some misdirected waves of emotionalism and criticism of your national council, when in the trade union sense more support and solidarity — rapid dissemination of information and checking that everyone knows what is going on — would have been more appropriate. You can provide information and concrete support for your elected representatives who have the legal and constitutional power to represent you.

Council have moved to set up laboratory representatives to help in gathering and disseminating information. We have learnt a tremendous amount about the sharp end of political negotiation — and I emphasise the word political. Never before has the NZIMLT had nationwide exposure, released numerous press statements or been discussed at meetings of caucus for five consecutive weeks. Now is the time for us to build together a higher profile for medical technology — not necessarily in industrial matters but preferably in those other areas where a political awareness can contribute to this profession.

Make no mistake, health is an extremely political activity — in allocating resources, in demanding appropriate technology (e.g. dry chemistry v/s expensive analysers), area health boards, primary health care, contracting out of services, service development groups, privatisation of medicine — the list goes on.

All who work in laboratories can have a role to play in these areas and if we don't get up and do something about it our profes-



sion will not attain the place it should have in the health care services of this country. It's up to you — not the fellow on the next bench, or in the other lab or your member of council. Council are only 10 — two from private laboratories and only one from a medium sized lab — you are nearly 2000.

I enjoyed the following conclusion to a recent letter to the editor of the NZ Nursing Journal.

"Let's go at it like diplomats with knife-like precision and perfect timing rather than naively like spoiled children stamping and screaming — I want, I want, I want".

This statement sums up succinctly what I have been trying to say about politics and health.

The Institute has two major roles — professional and industrial; to be credible we must perform both roles well. The events of the last few months have convinced me that the industrial role looms large in the minds of many members — the "what's in it for me" syndrome.

For many years the Institute has belonged to CSU (Combined State Unions). Many of the improvements to conditions of work like hours, leave, 9 hour break etc. etc., have been negotiated by CSU — in many cases after long years of negotiation. For example, Housing Corporation loans to health care workers on transfer took eight years following many approaches by NZIMLT. You will all be aware that CSU and FOL are in the process of forming a marriage of convenience under the NZ Council of Trade Unions.

Within the next year the Institute will need to decide whether it is going to become affiliated to the new body. A discussion paper will be circulated outlining the pro's and con's, and in due course a poll of members will be held.

#### ADVANTAGES

- Influence on policy and decision making.
- Access to current information.
- Access to industrial relations, specialist services — education, legal and research.
- Assistance with negotiation, conciliation and arbitration as need arises.
- Affiliation with ILO.
- Representation of public and private sectors.

#### DISADVANTAGES

- Difficulty of being elected to positions of influence at local, regional, and national level.
- An expectation that NZIMLT supports policies of NZCTU in both a tacit and active way.
- Cost — about \$6000 pa for NZIMLT.

It is the view of Professor Alan Williams, Massey University, an authority on industrial relations in the health field, that the next decade will see on-going industrial unrest in the New Zealand health care service.

If the Institute is to maintain a high profile in its professional and industrial roles and maintain or improve the conditions of all laboratory workers, both state and private, increased resources in terms of professional assistance, time, money and energy will be required by and from all in the profession.

In concluding — surely our current goals must be 1) at least equivalent pay and conditions in the health service between occupations that offer services equivalent in value and, 2) an organisation that is responsive to the needs of its members.

Equal pay for men and women has been a reality for some years in New Zealand. However, it is possible that because health care delivery has traditionally been provided by a predominately female work force in this country, there still remains a bias towards lower pay. A recent study in the United States reported that women's occupations were traditionally paid less than men's, and that there is a systematic underpayment of jobs held mainly by women.

It was concluded in the study that neither the value of the work done, the education of the workers nor prior experience was sufficient to explain the earnings gap. *After all possible causes were ruled out the sex factor remained. Doesn't it always?*

#### References:

- Parliamentary Correspondent Politics and Health. *New Zealand Medical Journal* 1985, **99**: 203-204.  
 Walton, J.A. Letter to the Editor. *Kaitiaki N.Z. Nurses Journal* 1985; **78**: 24.  
 Styles, M.M. The Uphill Battle for Comparable Worth. *Nursing Outlook* 1985; **33**: 128-132.

## Congratulations, Sandy

In the recent Queen's Birthday honours, one of New Zealand's senior technologists was awarded an MBE. Alexander (Sandy) Milne received this honour in recognition of his work in convincing the establishment that Hepatitis B is a problem in New Zealand, and the implementation of a vaccination programme of children in the eastern Bay of Plenty.



Alexander (Sandy) Milne

Sandy was born in Aberdeen, Scotland, on the 9th July 1934. He left school at 15; although he was dux of the school, Sandy had no opportunity to receive a University education as his family was too poor. He trained at the University of Aberdeen Medical School from 1949-52, then joined the Royal Army Medical Corps from 1952-55, serving in Kenya during the Mau Mau uprising. For the next ten years Sandy worked in general laboratories. He obtained his Fellowship of the Institute of Medical Laboratory Technology (UK) with Diplomas in Bacteriology (1956), Haematology/Blood Transfusion (1958) and the Royal Institute of Chemistry Nat. Cert. Chem. (1963). During this period, Sandy spent 3 years in a research laboratory.

In 1965, Sandy came to New Zealand and worked at Thames Hospital under Alf Johnston for two years before taking up his current position as Chief Technologist at Whakatane Hospital. Then, in 1976, he commenced his research into Hepatitis B. Sandy has been a leading investigator in many trials and studies since then, too many to list individually, and he has been the author or co-author of 9 papers. Another major achievement has been the direction of a low dose community funded immunisation programme of children in the community of Kawerau which has been extended to elsewhere in the Bay of Plenty Hospital Board area. This programme has been so successful that by May 1986 eight thousand children had been vaccinated. In Sandy's spare time, what little there is of it, he enjoys scuba diving, trout fishing, marathon running and is a keen conservationist.

Sandy, this honour is richly deserved and the whole Institute congratulates you. It is fitting that the last words should be his. There is much in them that technologists should not lose sight of.

"I did not choose the path to an MBE. I believe I was nominated and supported by overseas workers, not for my skills in research, nor hepatitis serology, nor management, but because I refused to be diverted from my path by doctors and others who resented my intrusion into 'their patch'. There are many people who think that a good technologist is still not as good as an indifferent graduate. We must take some of the blame for that as we lack assertiveness.

We have much to contribute. We should not be satisfied with the role of factory hands. We should have more control of our own destinies and we should not allow ourselves to be dictated to by others who often know less. We should also take our eyes off the clock!"



# Report of the National Council of the N.Z. Institute of Medical Laboratory Technology on Extra Laboratory Testing in N.Z. Public Hospitals

## A summary of the findings and conclusions

Prepared by Paul McLeod

### Background

Extra Laboratory Testing (ELT) is described as those diagnostic tests usually performed in medical laboratories, being carried out by unregistered personnel outside the laboratory. These ELT tests are generally carried out by medical or nursing staff in hospital ward side rooms, however, some testing is also carried out by these unregistered persons using equipment located in the laboratory after hours.

Over recent years concern has been expressed from various quarters in our profession over the growing practice of ELT. In addition, over the next few years numerous new procedures will be marketed which have the potential to increase to a significant degree the range of ELT tests.

The N.Z. Institute of Medical Laboratory Technology carried out an extensive survey in late 1984 to establish the current situation of ELT in our public hospitals. Not all hospitals were included but rather a representative selection was chosen. The following hospitals participated.

Auckland Hospital	Wellington Hospital
National Womens Hospital	Wairau Hospital
Wanganui Base Hospital	Nelson Hospital
Waikato Hospital	Christchurch Hospital
Palmerston North Hospital	Dunedin Hospital

The questionnaire was extensive and was divided into five parts:

1. Equipment and ELT consumables available in the hospital.
2. Maintenance of ward side room analysers.
3. Quality control programmes available for ELT personnel.
4. Training programmes available for ELT personnel and patients.
5. The role of the laboratory in the future developments in ELT

### QUESTIONNAIRE FINDINGS

#### 1. Equipment and consumables available

The two predominant consumables were urinalysis test strips and blood glucose estimation strips. The ward side room annual usage of these strips was calculated amongst the hospitals as follows:

Urinalysis strips	2,261,400
Glucose strips	581,500

The Department of Health publication "Management Data" to the year March 1983 details the financial costs involved in supplies and expenses to hospital board laboratories. The hospitals involved in this study were shown to have a "Drugs and Chemicals" and "Other Materilas and Expenses" totalling \$4,106,168. The estimated cost for the urinalysis and glucose strips used in ward side rooms was \$684,880 or 16% of the total laboratory services offered in these hospitals.

The other finding of note in this section of the questionnaire was that it was the hospital pharmacies who dispensed these consumables. Consequently, the laboratory management have no control over the usage or variety of the products available to medical and nursing staff.

#### 2. Maintenance of ELT equipment

The conclusion from the questionnaire was that there is not a standard policy in regard to maintenance of ELT equipment. Opinion varied as to who should be responsible for the maintenance programmes and to whether or not "outside" nursing and medical staff should have access to "in house" laboratory equipment after hours.

#### 3. Quality Control of ELT Procedures

Although laboratories have little input into the types of ELT consumables used, they were shown to be the only group who attempted to establish quality control programmes for the ELT procedures. This reflects the attitude of laboratory professionals, that such quality control programmes are essential. At the same time, it shows the lack of awareness for the necessity of quality control by medical and nursing staff.

#### 4. Training Staff and Patients in ELT Procedures

As with the quality control programmes, the questionnaire showed again that it is the laboratory staff who recognise the necessity for adequate training in ELT procedures. The large majority of the available training programmes existed, due to the enthusiasm of the laboratory staff. In regard to patient training, the attitudes were variable. In fact, of the laboratories surveyed none considered themselves the instigator of existing patient training programmes. Interestingly, it has been the nurses and health groups who have taken up the role as trainers of patients in ELT procedures.

#### 5. The Future Role of the Laboratory in ELT Procedures

The main conclusions drawn from this section of the questionnaire were:

- a. Laboratories should be responsible for choosing the appropriate ELT consumables and their purchase.
- b. Laboratories should take control of dispensing ELT consumables.
- c. Maintenance of ELT equipment should be under the control of the laboratory.
- d. Quality control programmes are very important and this responsibility should fall to laboratory personnel.
- e. The training of outside staff to use ELT consumables and equipment should be the responsibility of the laboratory.
- f. Patient training should also be the ultimate responsibility of the laboratory.

### Conclusion

The questionnaire illustrated that very high numbers of ELT procedures are being carried out in the public hospitals. The questions of whether or not these were all necessary, or who authorised the tests or whether or not they were useful to the management of the patient were not addressed in this study. However, what has been demonstrated is that this type of testing is very expensive when compared to the cost of performing the equivalent tests in the laboratory. In the laboratory, quality, accuracy and recording of the results are assured.

A consideration must be given to the imminent arrival of more sophisticated and expensive ELT procedures. These will be marketed as simple to perform tests. The present policies and attitudes in our hospitals will allow for these procedures to be available in ward side rooms. The cost of these procedures is very high and unless their introduction is controlled (by the laboratories) their usage will get out of control. The cost will be immense, the quality of the results will be inferior and patient management will consequently deteriorate.

The NZIMLT would very much like to become involved with the Department of Health in establishing policy and protocol which will allow for better control of the ELT procedures. We recognise that there is a place for ELT but at the same time we feel that the hospital laboratory should ultimately be responsible for the production of any diagnostic test result, regardless of who and where the result was achieved in the hospital.

If it is so considered that our involvement in establishing a national approach to ELT procedures is appropriate, we would be more than willing to offer our expertise and comment should it be so invited.

## COUNCIL BRIEFS.

### NZIMLT Associate Certificates

An enormous effort has been made to clear the backlog of associate certificates. All Institute members eligible for associateship should have received them by the first of September. Anyone who is eligible and has not received their certificate by then should write to the Secretary, NZIMLT, Haematology Dept, Christchurch Hospital, Christchurch.

Please do not confuse the NZIMLT certificates with those issued by the Medical Laboratory Technologists Board for the Specialist or Certificate examinations or those of the A.A.V.A. for NZCS.

Those members who may have mislaid their associate certificates may obtain a duplicate copy from the Secretary at the above address at a cost of \$10 (plus \$1 GST after 1st October 1986).

### From the Negotiating Committee

As a further step in improving the awareness of members of the Health Service Determinations that govern both their working conditions and their pay rates, H.S. 48 and H.S. 19 are published in liftout form in this issue of the journal. Please read it and keep it at hand. In future issues of the journal a list of all Health Service Personnel Commission circulars and Health Department circulars that affect laboratory workers will be published.

These circulars should be available from Hospital Managers or Personnel Officers on request. Laboratory workers should therefore be able to keep an up to date version.

## CORRESPONDENCE

### Re: A.C.C. and Hepatitis B

The Director  
Accident Compensation Corporation  
Private Bag  
WELLINGTON

Dear Sir

As a result of earlier correspondence it is our understanding that Hepatitis B is classified as a work related accident when it is contracted by medical laboratory workers.

As you are no doubt aware there is a vaccine available against Hepatitis B and in some Hospital Boards this is now being offered to laboratory staff. Because of the fear of other contaminants some laboratory workers have indicated their unwillingness to receive the vaccine and I have been asked to write and clarify the situation regarding cover if these people should subsequently develop Hepatitis B. In other words if a laboratory worker elects not to be vaccinated against Hepatitis B and subsequently develops that disease are they still covered under the Accident Compensation provisions.

Yours sincerely  
B. T. Edwards  
Secretary NZIMLT

Dear Mr Edwards

#### *Vaccination Against Hepatitis B*

Thank you for your enquiry of 26 March 1986. I apologise for the delay in this response but your letter has only recently been referred to me.

I am writing to confirm that if a laboratory worker elects not to be vaccinated against Hepatitis B and subsequently develops that disease, then that person is still covered under the accident compensation provisions. Obviously the Corporation cannot comment on your members' willingness or otherwise to be so vaccinated after weighing up the pros and cons. However, it is worth noting that other contaminants to which you refer would also attract compensation (if they developed).

Yours sincerely  
J.M. Collins  
SUPERINTENDANT OF CLAIMS  
Accident Compensation Commission

## Aids Task Force Report

The terms of reference for the Task Force were established by the Council.

1. To gather information on AIDS as it effects laboratory workers.
2. To establish safety codes for laboratory workers.

3. To liaise with the Department of Health on the disease.
4. To negotiate with the Accident Compensation Commission over classifying the disease as an accident for laboratory workers.
5. To negotiate with the Department of Health regarding the supply of safety equipment.
6. To do all other things in the interest of laboratory workers regarding the disease.

1. One of the major problems has been the vast amount of literature being presented from other countries (U.S.A., U.K., Europe, Australia). Because of this countries late entry into the AIDS race it has given the Task Force an opportunity to review the information and benefit from overseas experience. It certainly appears that the risk of Health care workers being infected is low but can nevertheless occur.
2. The Committee quickly initiated a basic document listing the minimum of requirements for workers, published in the NZIMLT Journal.
3. The Committee has been represented on the Health Departments Advisory Committee on AIDS who indicated their interest in working with our Task Force.
4. Previous correspondence (Aug. 1985) has shown the views of ACC regarding compensation.
5. A report regarding Safety equipment has been presented to the Council.
6. The Task Force has circulated many specific paramedical groups in order to present a well balanced constructive report on Safety measures. To date very few have taken the opportunity of supplying information. Shortly the Committee will be presenting a report of guidelines as they apply in New Zealand.

B. Cornere  
Chairman.  
AIDS Task Force Committee.

## Centrifuge Accident Report

### Heraeus Christ Centrifuge-Haemofuge A Serial No. 118511

This centrifuge was received in the laboratory at St Helens Hospital on Friday 9 May 1986. It had been previously checked by Medical Electronics, St Helens Hospital. It was used satisfactorily approximately twenty times on 9 May. The next time it was used was Monday 12 May. Initially the centrifuge appeared to be running normally but it rapidly developed a major problem causing excessive vibration. When opened it was found that the rotor, with its lid in place, had come off the drive shaft, the rotor securing nut was lying in the rotor chamber and the plastic hub of the rotor had been badly damaged by the drive pin. The centrifuge lid remained locked.

The incident was discussed with Mr T.B. Martin, Principal Technologist, Princess Mary Laboratory and Mr P. Bailey, Sales Manager, Salmund Smith Biolab Ltd, the New Zealand agents for Heraeus Christ. The centrifuge was taken to the agents workshop for inspection. A new rotor was fitted, the direction of rotation confirmed as indicated and the centrifuge returned to St Helens laboratory. At the request of the laboratory staff the centrifuge was brought to Auckland Hospital for further checking before being put into routine use at St Helens.

After discussion with Mr Martin it was decided that as there was no apparent basic design fault, a series of runs with checking of tightness of rotor securing nut between runs, would be the most appropriate test. It was noted that the securing nut engaged only four threads on the drive shaft leaving an estimated gap of approximately 3mm between the face of the securing nut and the top of the unthreaded section of the drive shaft. Auckland Hospital engineers were asked to manufacture a brass securing nut 2mm longer than the original and provide a key for tightening the nut.

The following tests were carried out:

1. With original securing nut.
  - rotor removed, plastic hub inspected, replaced and securing nut tightened "firmly" with screwdriver.
  - centrifuge run for five minutes.
  - rotor lid removed and securing nut checked with a screwdriver.



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— repeated five times.  
 There was no detectable movement of the nut.  
 2. With original securing nut.  
 — securing nut firmly tightened with key.  
 — position of nut slot marked on rotor.  
 — centrifuge run for five minutes.  
 — rotor lid removed and nut position observed.  
 repeated fifty times.  
 There was no detectable movement of the nut.  
 3. With long brass securing nut.  
 — as for test 2.  
 — repeated ten times.  
 There was no detectable movement of the nut.  
**Conclusion**  
 There is no evidence of any fault with this centrifuge. The rotor remained securely in place with either securing nut. It is recommended that the nut be checked regularly. It is assumed

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Do you have a serviceable Radiometer GMA 3 Precision Gas Supply surplus to requirements? If so, please contact  
**Principal Technologist, Laboratory Services,**  
**Kenepuru Hospital, Rahia Street, Porirua.**  
**Tel. 370-179 ext. 871.**

that the original incident occurred because the securing nut had not been firmly tightened after replacement of the rotor during pre-installation inspection.  
 A.D. Nixon,  
 Charge Technologist  
 Department of Haematology  
 Auckland Hospital

## NEW ZEALAND INSTITUTE OF MEDICAL LABORATORY TECHNOLOGY 1986 TECHNICAL ASSISTANT'S EXAMINATION RESULTS

**Q.T.A. In Clinical Biochemistry.**

AHKIAU Camille Selina, BLACKIE Dianne Beverley, BOYER Helen Rosemary, COLCORD Robyn Lisa, GANLEY Michele Erin, STOVOLD Julie Louise, TAYLOR Kenneth Charles, WEASTELL Sharon Maree.

**Q.T.A. By General Certificate.**

CORKILL Robyn Lynette, KAPTEIN Kathleen, PRESS Maria Jodie, RUTHERFORD Susan, TOCKER Teresa Joyce, WEBBER Maura.

**Q.T.A. In Haematology.**

AFFLECK Jayne Maree, BAKER Andrea Helen, CHRISTENSEN Helen Mary, CORBETT Jillian Margaret, HARRIS Lee Marie, HIGHAM Jane Louise, HULL Catherine Patricia, LE BAGGE Marie Leonora, LEACH Colleen Ella, MACKAY Deborah Anne, GLASS nee MEEUWESSEN, Belinda Christine, MELROSE Nicola Jane, RENDELL Donna Marie, SOWMAN Sandra Marie, STAPLES Alison Margaret, VALLANCE Denise Margaret, WILSON Irene Elizabeth.

**Q.T.A. In Histological Technique.**

CASSELS Lisa Ann, KENA Allison Lorna, KIDMAN Lisa Maree, PEARCE Wendy Margaret.

**Q.T.A. In Medical Cytology.**

JONES Robin, SMEATON Elizabeth.

**Q.T.A. In Medical Microbiology.**

BLAYNEY Wendy Patricia, CLARKE Amanda Mary, COOPER

Stacey Margaret, EARLEY Susan Jean, GRIMWOOD Georgina Anne, GUY Tracey Leigh, GUY Wendy Margaret, HORE Deidre Lee-Anne, SMITH Michelle Lisa, TETAJ Reremoana, VAN ASSENBRUGGEN Annette Corry, WARN Kristin Joy, WELLER Joanne Denise.

**Q.T.A. In Mortuary Hygiene & Technique.**

CROSADO Brynley Scott, HARRISON Lois May.

**Q.T.A. In Immunology (Immuno-haematology).**

ANDERSON, Lynn Marise, BEAMISH Nicola Anne, DUFFIN Wendy Patricia, GEN Teresa Anne, SMITH Lee-Anne Margaret, WALES Sharon Margaret, WELCH Darren Victor.

**Q.T.A. In Immunology (Microbiology).**

BARK Karen Ruth, KLAASSEN Michelle Theresa, THORBY Lynley Jane.

**Q.T.A. By Special Certificate — Immunology.**

CLARKIN Ann Marie.

**Q.T.A. By Special Certificate — Tissue Typing.**

ALDCROFT Marie Louise, KIRWAN Susy.

**Q.T.A. By Special Certificate — Public Health Microbiology.**

PATERSON Maree Anne, TWEED Joanne Marie.

**Q.T.A. By Special Certificate — Blood Products.**

KARAKA Janice Bessie, MACKAY Tracey Anne.

### N.Z.I.M.L.T. Technical Assistants Examination Committee 1986 Technical Assistants Exam Result Summary

Examination	No.		No. with each grade					Aegrotat		%	Av
	Enrol	Sat	A	B	C	D	E	P	F		
QTA in Clinical Biochemistry	12	10	4	1	3	1	1	0	0	80.0	64.3
QTA by General Certificate	7	6	3	3	0	0	0	0	0	100.0	72.5
QTA in Haematology	18	17	7	6	4	0	0	0	0	100.0	70.0
QTA in Histological Technique	6	6	0	1	3	2	0	0	0	66.7	56.0
QTA in Medical Cytology	2	2	0	1	1	0	0	0	0	100.0	60.3
QTA in Medical Microbiology	18	16	0	6	7	3	0	0	0	81.2	60.5
QTA in Mortuary Hygiene & Technique	4	2	1	1	0	0	0	0	0	100.0	77.5
QTA in Immunology (Immuno-haematology)	8	8	0	4	3	1	0	0	0	87.5	60.2
QTA in Immunology (Microbiology)	3	3	1	0	2	0	0	0	0	100.0	69.0
QTA by Special Certificate — Immunology	1	1	1	0	0	0	0	0	0	100.0	74.5
QTA by Special Certificate — Tissue Typing	2	2	0	2	0	0	0	0	0	100.0	70.3
QTA by Special Certificate — Public Health Microbiology	2	2	2	0	0	0	0	0	0	100.0	82.3
QTA by Special Certificate — Blood Products	2	2	0	1	1	0	0	0	0	100.0	66.5
<b>TOTAL</b>	<b>85</b>	<b>77</b>	<b>19</b>	<b>26</b>	<b>24</b>	<b>7</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>89.6</b>	<b>65.6</b>

## OBITUARY

**Douglas Hastings "Stalky" Adamson** died after a short illness on 20 April 1986. Except for war service he spent his life in Christchurch, being educated at Medbury School and Christ's College. In 1935, he started his career as a bacteriological trainee under Dr A B Pearson in the Pathology Department at Christchurch Hospital. Lectures in chemistry, zoology and psychology for a BSc were attended at Canterbury University College 1937-39, but pressure of work in the hospital laboratory forced him to abandon the course. However his student days were rewarded by New Zealand University Blue for cross country running in 1937-38 and for athletics in 1938.

On the outbreak of World War II he volunteered for overseas service in first the infantry and then the air force, but in each case he was manpowered back to his job in the laboratory. Release to the Medical Corps came in 1941, when he had obtained his COP in Bacteriology and Clinical Pathology, and on his arrival the next year in Egypt he was claimed for the laboratory under Captain D T Stewart at INZ General Hospital, then at Helwan outside Cairo. His qualifications gave him the rank of Sergeant. Work at Helwan gave Stalky experience in the diagnosis of tropical diseases which proved so useful back in civilian life. Working conditions in an old hotel basement with meagre standard RAMC equipment were always trying, but comic relief came through such happenings as the eating of typhoid and gonococcal culture plates by prevalent ants.

In May 1944 he was commissioned as a Lieutenant and was posted to take charge (following Jack Peddie) of the laboratory of 3NZGH, then at Bari, Italy. His concern for fairness to staff is shown in a report he made proposing a scheme of promotion in relation to experience and length of laboratory service in the three army hospitals. He returned to New Zealand later in 1944 to Christchurch Hospital. He was married in 1946.

From 1947, when Mr T A Ross died and until his retirement in 1979, Stalky was Senior Charge Technologist, latterly known as Principal Technologist, in the North Canterbury Hospital Board Pathology Service. Until 1966 he was in charge of the Microbiology Section. He played an important role in the training of technologists and always insisted upon strict attention to detail in methods and techniques. He was always thinking of and producing innovative small items of equipment for laboratory use. Staff members at all levels found him helpful, easy to get along with and he had a most thoughtful and considerate attitude towards people around him.

He had published four papers on: the diagnosis of amoebic dysentery; the Kaikoura typhoid epidemic; the uncontrolled use of antibiotics and a method of concentrating hydatid hooklets.

When Dr GCT Burns retired in 1965 many of his administrative duties fell on Stalky's shoulders. These included the organisation of training, rostering of duties, the ordering of supplies and laboratory maintenance. These were times of continuing increase in laboratory work. From 1970 until his retirement his time was largely occupied in matters of supply. Bulk buying meant great savings in "disposables" and there were problems with import licensing, shipping delays and storage. He devised a filing system which greatly facilitated this important part of laboratory management.

Stalky was much involved in the early days of the New Zealand Association of Bacteriologists, later the NZIMLT. Between 1946 and 1956 he was a council member, treasurer, secretary and vice-president. In 1965 he was admitted as a Foundation Fellow of the NZIMLT.

Outside interests for Stalky were centered largely upon his house and garden on Clifton Hill, an area where he had lived all his life. Over the years he continually made improvements to his garden, in which early spring bulbs formed a large part. This interest he continued on his retirement.

He will be missed by many old colleagues and friends. Our deepest sympathy goes to his wife Felicity.

*We are indebted to Mr G R Rose and to Dr D T Stewart for this notice.*

## OBITUARY

On March 4 this year **David Macdonald** died suddenly in Auckland at the age of 38. David had spent all of his adult life associated with Medical Laboratory Technology. He commenced his training at Wanganui Hospital after leaving school and gained his 0 level (Part 2) qualifications in Microbiology and Biochemistry.

Shortly after qualifying, David and his wife Lucie, moved to Canada in 1969. During their stay in Canada David worked as a Laboratory Technologist at the Sudbury Royal Hospital in Ontario. While in Sudbury he also gave lectures in Microbiology to trainee Technologists.

On returning to New Zealand in 1973 David joined the Microbiology Department at Greenlane Hospital. In May 1976 he accepted a position as a Sales Representative in the expanding diagnostic division of EBOS Dental and Surgical Supplies. He soon advanced to a position as a Product Manager and in August 1980 he was appointed as Diagnostic Division Manager. This meant yet another shift, this time to Christchurch.

David remained with EBOS until April 1983 when he resigned to form Med-Bio Enterprises in partnership with Warren Dellow, another former Technologist. David, ably assisted and supported by Lucie, set up the Auckland office and established the new company in the North Island. The hard work that had been put into this ensured that the Company was one of the fastest growing companies within the industry.

During the period 1974-1976 David was Chairman of the Auckland Branch of the N.Z.I.M.L.T. He was also chairman of the organizing committee for the 1979 Institute conference in Auckland. He had always maintained a strong interest in the Institute and actively supported their activities, particularly at conference time.

David was a member of Jaycees since 1976. At the time of his death he was Vice-President of the Pakuranga Chapter. He was an active leader in Boys Brigade. The sporting interests that he pursued were jogging, badminton, and gliding.

Amongst laboratory people throughout New Zealand, David will probably be best remembered for his distinctive and infectious laugh.

David is survived by his wife Lucie and their three sons Douglas, Gregory, and Jeremy.

## Membership Sub-Committee Report — June 1986

Since our March meeting there have been the following changes:

	27.6.86	5.3.86	13.2.86	12.11.85
<b>Membership:</b>	1792	1753	1527	1495
less resignations	78	1	5	8
less G.N.A.	32	—	15	7
less deletions	9	—	—	4
less deceased	1	1	—	—
	1672	1751	1507	1476
plus applications	62	40	246	47
plus reinstatements	1	1	—	4
	<u>1735</u>	<u>1792</u>	<u>1753</u>	<u>1527</u>

### Applications for Associateship

Miss Fay CRUICKSHANK, Oamaru; Mrs Wendy STODDART, Christchurch; Mrs Gwenda YOUNG, Wellington; Mr B. McLEAN, Wellington; Mr Dean STEWART, Wellington; Mr Darrell MONK, Wanganui; Mrs Bronwyn FROMONT, Wanganui; Ms Dianne BROADLEY, Nelson; Mrs Vivian McCALLUM, Dunedin; Mr Christopher KENDRICK, Palmerston North; Mr Bruce ANDREW, Auckland; Mr Horst STUNZNER, Auckland; Mrs Ann HANLEY, Dunedin; Ms Linda SMITH, New Plymouth; Mr Michael BROKENSHIRE, Auckland; Mrs Julie KEARSE, Wanganui.

### Applications for Membership

Mr Stephen EDMUNDS, Auckland; Mrs Marjorie BRIDLE, Auckland; Miss Suzanne BARKER, Auckland; Mr Boon Ping HEAH, Wellington; Mr Warren JACKSON, Auckland; Miss Carmel WALSH, Auckland; Miss Corene HUMPHREYS, Auckland; Miss Jennifer CASTLE, Auckland; Miss Janine PETERS, Auckland; Ms



Heather DACRE, Palmerston North; Miss Robyn PALMER, Dunedin; Miss Sonja DILLON, Dunedin; Miss Angela SIME, Invercargill; Miss Iona DONALD, Christchurch; Miss Judy BAKER, Auckland; Miss Jane KERRIDGE, Palmerston North; Mrs Gayle McKINNEY, Auckland; Mr Ian McDONALD, Wanganui; Miss Michelle CLARKSON, Dunedin; Miss Leanne HICKMOTT, Palmerston North; Miss Sharon WALES, Auckland; Miss Alison BELL, Auckland; Mr Darren WELCH, Auckland; Ms Kirstie CORBETT, Wellington; Miss Linda KENSINGTON, Auckland; Miss Jane COSGROVE, Christchurch; Miss Sheryl RUTHERFORD, Auckland; Mr Stephen SILK, Wanganui; Mrs Wendy SILK, Wanganui; Mrs Gladys BULLOCK, Taupo; Miss Coral SMITH, New Plymouth; Miss Fiona LEGGOTT, New Plymouth; Mrs Helen COOK, Christchurch; Miss Janine BARNETT, Tauranga; Ms Vicki-Jayne GRANT, Auckland; Mrs Sandra SOUTHBY, Christchurch; Ms Barbara TILYARD, Lower Hutt; Ms Catherine RUSSELL, Hamilton; Mrs Elizabeth THOMPSON, Gisborne; Mrs Wendy TAYLOR-HAYHURST, Christchurch; Mr Michael SIDDELLS, Auckland; Miss Susan JARRETT, Christchurch; Mr Ian MATHESON, Palmerston North; Mrs Joan EAGLE, Hastings; Miss Leigh ROBINSON, Palmerston North; Miss Raylene ALLAN, Dunedin.

**Resignations**

J. KENNY, Palmerston North; B. LITTLE, Invercargill; E. BENNETT, New Plymouth; F. JACKSON, Palmerston North; S. BECKETT, Auckland; S. PAUL, Wanganui; V. NEAL, Blenheim; E. LONGSON, Auckland; C. DYER, Auckland; J. KENNY, Hamilton; B. POSTLEWRIGHT, Auckland; N. BURKE, Whakatane; G. GEORGE, Rotorua; M. NAHNA, Te Kuiti; J. PHILLIPS, Nelson; P. WESTRUPP, Nelson; N. TABB, Blenheim; J. BISHOP, New Plymouth; B. McLENNAN, Auckland; J. WYLIE, Auckland; S. SEXTON, Dunedin; J. DOWNS, Hamilton; C. McLEAN, Auckland;

C. HARRIS, Dunedin; J. KRAMER, Whakatane; N. BALL, Dunedin; P. MAYON, Auckland; J. WATSON, Auckland; K. ANDERSON, Christchurch; J. SISSON, Christchurch; J. MAYES, Auckland; M. ROPE, Auckland; A. McANDREW, Auckland; N. DENT, Auckland; R. BRIDGER, Christchurch; S. McINTYRE, Auckland; B. HOBSON, Christchurch; S. HUGHES, Hamilton; F. KERSHAW, Dunedin; J. AITCHESON, Auckland; R. McKAY, Wellington; M. FORD, Ashburton; H. CHILD, Auckland; M. GILBERT, Auckland; C. STEWART, Wellington; T. HENSCH, Wellington; K. MILES, Wellington; T. MARTEL, Wellington; Z. POCZWA, Dunedin; M. PHIPPS, Tauranga; D. KENNEDY, Invercargill; T. CROSBY, Tauranga; A. BREWER, Auckland; L. TIMPANY, Invercargill; J. WEIR, Tauranga; R. REILLY, Hawaii; T. SWAGER, Auckland; B. PEMBERTON, Rotorua; D. BARNFATHER, Auckland; V. BRYANT, Tokoroa; J. AFFLECK, Invercargill; L. REEVE, Gisborne; M. KENNEDY, Dunedin; J. WATT, Auckland; S. O'BRIEN, Auckland; O. McCABE, Dunedin; M. COMPTON, Palmerston North; J. ALLEN, Hamilton; N. McWHINNIE, Nelson; H. WOODS, Wellington; M. RILEY, Lower Hutt; C. BROWN, Auckland; L. BONNE, Whakatane; D. ROMAIN, Wellington; C. WHITE, Kaitaia; M. HUYMANS, Auckland; R. McCULLOCH, Auckland; S. WOOD, Dunedin.

**Gone No Address:**

J. SHAW, Auckland; M. LE BAGGE, Tauranga; F. HEARES, Dunedin; H. VOS, Palmerston North; F. TINLING, Stratford; H. VAN DER MARK, Auckland; J. MARSHALL, Auckland; J. BEATTIE, Auckland; J. NIXON, Auckland; J. JUNGE, Auckland; R. CHRISTMAS, Gisborne; J. ANDREW, Gisborne; J. PLUNKETT, Auckland; J. WRIGHT, Christchurch; M. FERGUSSON, Auckland; A. THOMPSON, Rotorua; S. KETTLE, Napier; P. FRAWLEY, Tauranga; S. TREVATT, Tauranga; M. KILBY, Tauranga; D. BONHAM, Christchurch; A. THORNTON, Christchurch; P.

**Registered Medical Laboratory Technologist' Badge**

At the 1984 Annual General Meeting Council was requested to investigate introducing a badge for Registered Medical Laboratory Technologists who are Fellow or Associates of the Institute.

It was the view of Council that the badge should carry the logo of the Medical Laboratory Technologists Board rather than the Institute and subsequently approval was granted by the Board subject to the provision of awarding a badge be incorporated into the rules of the Institute.

This requirement was met at the recent General Meeting by amending Rule 7 as follows:-

- 7 (c) Every Fellow or Associate who is registered with the Medical Laboratory Technologists Board, shall be entitled upon proof of registration and payment of the appropriate fee, to receive a Registered Medical Laboratory Technologists badge' from the Institute.
- (d) Every diploma and badge shall be issued under the seal of the Institute and shall be in such form as the Council may from time to time determine, and shall be the property of the Institute, and upon the member ceasing to be a member shall be recoverable on demand.



A badge (above) has been approved by Council and is now available for purchase in accordance with the above rules. The badge is blue with gold print and measures 35 x 30mm. The cost of the badge is \$5.00 including postage.

If you wish to make application for a badge then please complete the form below:-

**APPLICATION FOR REGISTERED MEDICAL LABORATORY TECHNOLOGIST BADGE**

NAME (Block letters): .....

MAIDEN NAME: .....

ADDRESS: .....

YEAR QUALIFIED: .....

"I certify that I am a) A Fellow or Associate of the New Zealand Institute of Medical Laboratory and b) I am registered with the New Zealand Medical Laboratory Technologist Board"

SIGNED: ..... DATE: ..... Fee enclosed: \$5.00 payable to the NZIMLT.

Forward to Mr B. T. Edwards, Hon. Secretary, NZIMLT, Haematology Department, Christchurch Hospital, Christchurch.

HAMPTON, Auckland; L. TAYLOR, Auckland; M. CLOTWORTHY, Auckland; F. MASSEY, Wellington; B. BODGER, Australia; M. SWINDERS, Nelson; P. EDWARDS, Dunedin; R. BARNETT, Wellington; H. LAL, Auckland; S. SMITH, Christchurch.

#### Reinstatements

K. SCOGGINS, Nelson.

#### Deceased

D. ADAMSON, Christchurch.

## NEW PRODUCTS AND SERVICES —

PROJECTED IMAGE VIEWING AT X1000 MAG. PROJECTED IMAGE COMPOUND MICROSCOPE DYNASCOPE SCREEN DISPLAY HEAD FITS TO OTHER MICROSCOPES

VISION ENGINEERING of England have perfected the Dynascopic projection system to such a degree that screen images are now possible at up to x1000 magnification. Previously, microscope screen images were projected on to fresnel screens. The resolution was very limited as was the brilliance of the image. x20 magnification was about the highest possible and the room had to be darkened before an image could be seen.

To experienced microscopists and lay people alike, the Dynascopic image is a break through — highly resolved, stable and easily seen in normal room lighting. A screen image of this quality gives advantages an eyepiece image cannot. Relaxed, fatigue-free viewing over long periods; ability for small groups to view and discuss the image; the image is completely flat. No parallax error. Accurate measurements can be made at any point on the field. It's not necessary to centralise your subject to minimise error. Images of graticules are seen on the screen by both eyes.

The Dynascope head is able to be fitted to existing microscopes of various makes and models. So if you want to increase the efficiency and comfort of your microscopists yet retain your existing optics this is the way to go. Let us fit a DYNASCOPE head to one of your microscopes for a trial period.

For further information and a demonstration contact Australasian Agents, South West Pacific Equipment Ltd, Phone 598-881, P.O. Box 12-862, Penrose, Auckland.

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BGH BIOCHEMICAL COMPANY PREGNANCY TEST KIT

- \* Uses monoclonal antibody technology
- \* Sensitivity less than 20mIU/L
- \* No interference from LH, FSH, TSH, protein, haemoglobin, bacteria, common drugs or turbid urine.
- \* Simple procedure, easy to read, only ten minutes reaction time
- \* Uses two to four times the amount of antibody than some other kits available to avoid hook effect.
- \* Uses four clones of monoclonal compared with two of most other brands for increased sensitivity.
- \* Full control system included, negative control, positive control 20mIU/L and 150mIU/L.
- \* Very compact kit, uses individual snap off antibody coated microtiter wells for assay. Holder provided.
- \* Pricing is very competitive.

Ngaio laboratories, P.O. Box 4015 Nelson South  
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#### FEATURES:

- \* Colorimetric fully enzymatic endpoint, single reagent.
- \* Stability at least 6 weeks at 2-8 C.
- \* 5 minute 37 C incubation.
- \* Linear to at least 15.5 mmol/L.
- \* Excellent between run CV's.
- \* No ascorbic acid or bilirubin interference.
- \* Based on Universal Reference method of Allain et. al.
- \* Standard included in kit.
- \* Easily adapted to analyzers.
- \* Two sizes — 6 x 50 mL and 12 x 12.5 mL.
- \* Competitive pricing.

BGH TRIGLYCERIDE KIT.

- \* State of the Art GPO methodology — single reagent.
- \* Reagent stable 14 days at 2-8 C.
- \* 5 minute incubation at 37 C.
- \* Linear to greater than 11.3 mmol/L.
- \* No ascorbic acid or bilirubin interference.
- \* Easily adapted to analyzers.
- \* Standard included in kit.
- \* No problems with formazan dyes.
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- \* Competitive pricing.

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#### FEATURES:

- \* Complete kit for HDL-Cholesterol comprising precipitating reagent, cholesterol reagent and standard.
- \* Buffered PEG-6000 precipitating reagent gives excellent correlation with ultracentrifugation and other separation techniques.
- \* State-of-the-Art sensitive, single vial, enzymatic cholesterol reagent formulated for HDL-Cholesterol quantitation.
- \* Working reagent stable 6 weeks.
- \* 5 minute reaction at 37 C.
- \* Cholesterol quantitation step easily automated.
- \* Pack size 10 x 12.5mL.
- \* Competitive pricing — Compare.

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## NEW CENTRIFUGE ROTOR DEVELOPMENTS

Rotors don't have to be made heavier in order to be stronger. This is born out in the latest rotor development from Heraeus. Faced with the Challenge of attaining a g force in excess of 8000 for their blood-banking centrifuge, Heraeus devised a new way to make the rotor.

Most open-style rotors are made in two parts, a forged steel body plus trunnion pins which are screwed or pressed into the body. Naturally this produces a series of weak points on the rotor, as well as being places where corrosion or contamination can build up. Heraeus's solution was to make the rotor in one piece.

One piece rotors are only possible to make because of the advent of numeric controlled machine tools. Instead of holding the tool steady and turning the trunnions, one piece rotors call for holding the rotor steady and rotating the tool which forms the trunnions. A combination of lateral thinking and modern technology. The result is a very solid, yet lightly streamlined rotor which looks as strong as it really is.

So popular has the new design proved, that Heraeus are extending it to other models in their range. Initially it was the big blood-banking Cryofuge 8000 that was designed with a one piece rotor. However, the bench top Minifuge T refrigerated centrifuge had also been built with lots of muscle, so the one piece rotor was a natural for this model too. Only difficulty has been keeping up with demand, but this is rapidly improving with waiting time for the Minifuge T now down to two months, and soon to be available ex stock.

Marketed By: Scientific Products Division Salmond Smith Biolab. or **Circle 64 on Readers Reply Card.**

## SIGMA DIAGNOSTICS USA

Accustain is a term now applied to a new group of "Sigma Diagnostics liquid stains" that exhibit superior features. Accustains for hematology and histology include special formulations of Wright Stain and Giemsa Stain for manual and automated applications. Each step of their manufacture is precisely monitored. For total quality control, extinction coefficients are used to verify specific dye component



concentrations.

The active ingredients in Wright and Giemsa Stain have been identified as xanthenes and thiazines. These components have been isolated, highly purified and combined in exact proportions. This produces a new class of liquid stain formulation, with unrivalled dye-binding and requires no adjustment to staining times each time a new batch of material is used.

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#### COAGULATION CONTROL

Norm-Trol and AB-Trol are available and plasma is pretested for HTLV III. The control for Prothrombin Times (PT), Activated Partial Thromboplastin Times (APTT) and Fibrinogen determinations. AB-Trol is also lyophilized, absorbed plasma designed to give prolonged clotting times in the PT and APTTA procedures.

Norm-Trol may also be used as a reference plasma to prepare the standard curve for Fibrinogen assays. The controls are internationally standardized, have valves for automated and manual systems and border within the therapeutic range.

One year shelf life and one lot number available for one drop deliveries.

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#### DIODE-ARRAY SPECTROPHOTOMETER FROM NORTHROP INSTRUMENTS & SYSTEMS LIMITED OFFERS LOW-PRICED BASIC SYSTEM — MANY CONTROLLER OPTIONS AVAILABLE

The new Hewlett Packard 8452A UV/Vis diode-array spectrophotometer from Northrop Instruments & Systems Limited features a choice of controllers, software and accessories that extend the capability of diode-array spectrophotometry.

The low price of this entry-level unit now makes diode-array technology accessible to laboratories in industry and education where budgets are tight.

Introduction of the HP 8452A marks the third generation of spectrophotometers from Hewlett Packard since it announced the first commercial diode-array spectrophotometer in 1979.

Users may choose from three controller options, depending on their needs. HP has designed application software for a number of computers, making it easy for users to take advantage of the speed and simultaneous multi-wavelength measuring capabilities that are built into the new spectrophotometer. Controller options include the UV/Vis ChemStation or a number of MS<sup>tm</sup>-DOS-based computers including the HP Vectra PC or IBM PC.

In addition to end-user applications Northrop anticipates that it will sell the smart, stand-alone HP 8452A to OEMs and to laboratories that wish to use their own computers. A programme-interfacing guide is available for these customers.

#### UV/Vis Technology

For high throughput, diode-array technology is much faster than conventional UV/Vis systems. The new instrument scans its wavelength range, from 190 to 820 nm, in 0.1 second. Conventional instruments can take 30 seconds or more to scan their full wavelength range.

Reproducibility and confidence in measurements anywhere on the absorption curve also are higher because the optics are fixed and stable. There are no moving parts, such as a lead-screw drive, to affect the reproducibility of measurements.

The ability to measure anywhere on the absorption curve provides more options for quantitative analysis and can be used to increase the linear dynamic range of an analysis.

Since it can take simultaneous multiple-wavelength measurements, the HP 8452A has a number of special capabilities. One can measure and monitor simultaneously a sample for impurities, use internal referencing in kinetics measurements and trace quantitation to increase sensitivity, or quickly quantitate up to 12 components in a mixture.

#### MS-DOS UV/Vis Software

The MS-DOS UV/Vis software, a subset of the HP Chemstation software, allows users to connect their HP Vectra PC or IBM PC,

XT, or AT with an HP-IB interface to provide fast data transfer from the spectro-photometer.

The MS-DOS software includes programmes for quantitation and kinetics, in addition to general scanning of samples.

Depending on the MS-DOS controller, full wavelength spectra may be acquired and plotted on the CRT in as little as three seconds, and single wavelength values may be monitored at interval times as short as 0.1 seconds.

#### UV/Vis ChemStation

Based on the new HP 9000 Series 300 computer, which was designed for instrument control and data handling, the ChemStation offers the broadest selection of application software for the HP 8452A UV/Vis spectrophotometer. The 12 inch monitor, bit-mapped for graphics, is available in monochrome or colour.

ChemStation software includes sophisticated programmes for multicomponent analysis, general purpose scanning, quantitation and kinetics.

The software for the UV/Vis ChemStation makes it simple to normalise and compare spectra. With a single keystroke, two spectra can be overlaid, normalised, subtracted (or divided), and the difference plotted. Users can compute and display rapidly a value that indicates how well two spectra match, check conformance to Beers' Law, or obtain other useful information.

All set points and control settings for an analysis can be saved on disc for future recall and automatic use. Results and raw data from an analysis also can be saved on disc, eliminating the need to rerun a sample.

With other software available from Hewlett Packard, the ChemStation can be used alternatively to control other HP instruments including GC, LC, GC/MS, LC/MS, MSD and the new infra-red detector (IRD). With another software package, the ChemStation can handle data from multiple chromatographic instruments at once.

For further information, contact: Wayne Sprosen Northrop Instruments & Systems Limited, P.O. Box 2406, Wellington, Telephone: 856-658

or **Circle 61 on Readers Reply Card.**

#### NEW PRODUCTS FROM MED-BIO ENTERPRISES

Med-Bio Enterprises is pleased to announce that it has been appointed as the New Zealand Distributor for Micro-Bio-Logics. Micro-Bio-Logics have developed a number of innovative products for use in diagnostic microbiology. These range from rapid (2-4 hour) identification methods for the common Enterobacteriaceae. 5 different Neisseria species and B. catarrhalis, to specially developed systems for the collection, transportation and culture of N.gonorrhoeae. They also have lyophilized microorganisms for use in quality control. This range covers in excess of 100 strains of ATCC or CDC isolates.

Pacific Hemostasis has appointed Med-Bio Enterprises as a distributor for its Thromboscreen coagulation reagents. Their range of reagents enables laboratories to detect and monitor both intrinsic and extrinsic coagulation disorders. In the past, Pacific Hemostasis has been best known in New Zealand for its human based normal and abnormal reference plasmas. Both of these plasmas have accurately defined values. This means that the user is provided with known values in both the normal and abnormal range. These can then be used for standardising quantitative assays for specific coagulation proteins. The quality of the other thromboscreen reagents is equal to these two better known products.

Med-Bio Enterprises is pleased to announce that it has been appointed as the New Zealand distributor for Data Medical Associates Inc. DMA produce diagnostic chemistry reagents covering 26 common assays. These range from acid phosphatase to uric acid. The kit sizing and reagent life are such, that all laboratories can use the appropriate package size to suit their needs, without having to waste reagent. DMA also produce instrument application sheets for their reagents for all of the different discrete analysers used in New Zealand.

Med-Bio Enterprises now has available a rapid test for the identification of Neisseria species, including B.catarrhalis. The results obtained, parallel traditional carbohydrate determination, but the test only requires a 3 hour incubation in a non-CO2



enriched incubator. Micro-Bio-Logics have called this test Neisseria Kwik, and have packaged it in both 10 and 50 test packs. The shelf life of the product is 18 months from the date of manufacture.

Med-Bio Enterprises can now supply microbiology laboratories with more than 100 different strains of lyophilized bacteria. The organisms are supplied as a freeze-dried gelatin disk. The disks are produced by Micro-Bio-Logics and are packed in vials of 10 or 100. These Lyfo Disks provide a single bacterial strain with known, and reliable characteristics for use in quality control procedures. The strains used are from recognized culture collections such as ATCC and CDC. These disks are a reliable and cost-effective alternative to propagating and maintaining stock cultures in your laboratory for use in microbiology quality control.

Wampole Laboratories has recently released its latex kit for Herpes. Virogen Herpes has a 92% sensitivity for direct testing of wet-lesion specimens with 98% specificity. The sensitivity for culture I.D. is 98%, with 100% specificity. The protocol is simpler than either EIA or IFA, and the hands-on time is only 5 minutes. Results are available in 30 minutes. These advantages are coupled with the cost advantages of a latex method. For further information contact Med-Bio Enterprises

or **Circle 60 on Readers Copy Card stating which product.**

#### vonWILLEBRAND FACTOR CALCULATED AUTOMATICALLY

The vW Program,<sup>TM</sup> a new data reduction capability of the Platelet Aggregation Profiler,<sup>®</sup> Model PAP-4, expedites and simplifies the performance of vonWillebrand factor (ristocetin cofactor) assays. This new software enhancement reduces material costs and technologist time by enabling the PAP-4 to automatically construct log-log standard curves and determine percent vonWillebrand factor activity.

The vW Program is activated by simple push button operation. When the program is selected, the PAP-4 display panel indicates the appropriate standard or test sample to be placed into each aggregation channel. Following development of the agglutination patterns, the instrument automatically calculates each slope value and produces a "best fit" standard curve. All data, including slope, plot of test results on standard curve, and percent vonWillebrand factor activity, are printed out on a log-log chart.

The vW Program provides operator instruction throughout the assay procedure and warns of errors which could lead to inaccurate results. Microprocessor calculation of the standard curve increases assay precision by eliminating manual approximation of the best fit line. Assay costs are reduced through elimination of the time and materials required for the manual construction of the vonWillebrand factor activity curve.

This new software feature is standard on all new instruments and is available through a retrofit program to all current PAP-4 owners. For further information on the vW Program, or the Platelet Aggregation Profiler,<sup>®</sup> Model PAP-4, contact Wiltons Scientific or **Circle 59 on Readers Reply Card.**

#### "UNIQUE SYSTEM FOR STERILIZATION, STORAGE AND TRANSPORT OF SAMPLES AND PIPETTE TIPS."

The "Titertek Micronic System" from Flow Laboratories, provides for the first time a complete system of products to add ease and convenience to sample handling and pipetting.

#### MICRONIC STERILIZATION/STORAGE SYSTEM FOR PIPETTE TIPS

Constructed of Rigid autoclavable Polycarbonate the Micronic Tip Carrier is designed to hold 96 single tips in the 8x12 format of a standard microplate. It is ideal for the rapid loading of single, 4, 8 and 12 channel pipettes.

#### MICRONIC TUBE STORAGE SYSTEM

Constructed of tough Polycarbonate, the Micronic Tube Storage System is also autoclavable at 121°. The system, in common with the Tip-Carrier has two parts. The base forms the holder for 96 polypropylene (PPN) tubes again in the 8x12 format found in microplates. The cover attaches to the lower block by means of two moulded clasps ensuring a tight fit over the PPN tubes, and is supplied complete with an identification label.

With a gross volume of 1 mL, the PPN tubes allow secure storage of small amounts of liquids, e.g., serum or plasma at temperatures down to -80°. The tubes are sealed using 8 cap sterile sealing strips, i.e., 12 strips to seal all 96 tubes.

#### MICRONIC STORAGE BLOCK

A covered autoclavable polypropylene block that shares the 96-well format of the other two systems.

Ideal for storage of small samples of serum or plasma, these blocks will withstand the temperatures encountered in refrigerators and low temperature storage units (-80°C). Once thawed, multiple transfer of the samples to a microplate or Micronic PPN tubes for dilution procedures is possible using the Titertek Multichannel Pipette. Each well has an individual capacity of 1.4 mL.

Once more, the block can be sealed this time utilising either a sterile 96-well cap mat of flexible lupoline or the capbands described with the Micronic Tube Holder. The cover has moulded clasps for a secure fit to the block, comes with identification label and is stackable.

#### MICRONIC EXTENDABLE STORAGE (E.S.) HOLDER.

Designed to hold any of the Micronic storage and sterilization systems or 4 standard 96 well microplates, this versatile Micronic E.S. Holder facilitates transport of Micronic systems and microplates in the laboratory and economizes use of freezer space. Use singly or build up multiple units with the unique locking tabs.

For further information contact KMS P.O. Box 1234, Auckland or **Circle 58 on Readers Reply Card.**

#### NEW CONSTANT HIGH-FLOW SAMPLE PUMP

Northrop Instruments & Systems Limited has expanded its line of high-flow sample pumps with the introduction of the AIRCHECK VIII from SKC Inc, USA. This is a high performance constant flow pump at moderate cost. It has a flow range of 500-3500 mL/min and handles all high flow applications, including dust and particulates by filter sampling, chemicals and aerosols by filter sampling, and impinger sampling with liquid media.

AIRCHECK VIII includes battery pack, see-through pump filter housing, built-in flowmeter calibrator and heavy duty belt clip. It is available as pump only or as a single or five pump air sample kit.

The AIRCHECK series is intrinsically safe and UL listed for the following locations: Class I, Groups A, B, C and D; Class II and Class III, Groups E, F and G.

For further information, contact: Wayne Sprosen, Northrop Instruments & Systems Limited P.O. Box 2406, Wellington. Telephone: 856-658

or **Circle 58 on Readers Reply Card.**

#### NEW PORTABLE MULTI-GAS CALIBRATOR

Northrop Instruments & Systems Limited introduce the Insta-Flo Multi-Gas Calibrator from SKC Inc. for lab analyzers, area and process monitors and research applications. The portable calibrator generates a known ppm concentration of any one of 50 toxic gases. A pump pulls air through a purifier and past a gas source that releases a known amount of toxic gas into the air stream. Special gas sources are used which are independent of temperature and last one year.

Battery operated from rechargeable battery, the calibrator is completely portable and ready for use. Unit offers a dilution of 100-1000 mL/min and a flow rate which gives a 10:1 change in hazard concentration.

For further information, contact: Wayne Sprosen, Northrop Instruments & Systems Limited, P.O. Box 2406, Wellington, Telephone: 856-658.

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In response to worldwide requests for a lower-capacity analyser of the same quality and sophistication as the RA1000, Technicon proudly announces the RA500.

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random-access mode. And with no loss of productivity through wash cycles.

The RA500 has an extensive menu of over 75 chemistry methods, 12 of which are available at the one time. Simply select the tests to be carried out and press the 'Operate' button. The RA500 is so versatile, there's no need for batching samples or chemistries. Just walk away and the RA500 does the rest. And test results are ready in as little as 2.5 minutes.

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The RA Data Manager can be connected online to your RA500 to provide extensive data handling for biochemistry results, including full QC,

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Technicon's new RA500 analyser is ideal for laboratories looking for the proven performance and technological sophistication of the RA1000, without the cost.

For additional information about the RA500 and how it can revolutionise your current laboratory testing procedures and performance, contact Technicon Auckland 89 5120.



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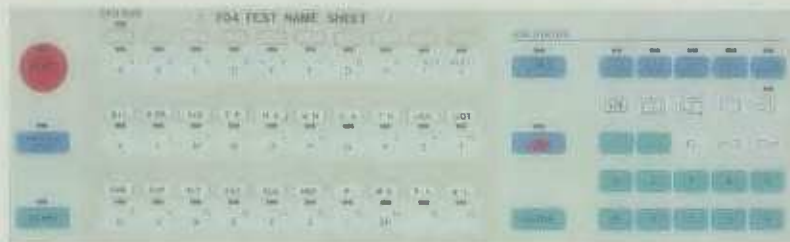


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