

The value of a greensand (recently found near Paraparaumu) as a flux for incorporating with phosphate rock by the fusion process has been investigated, and a works trial is under way.

Samples of glass-sands from the deposits at Mount Somers and Parengarenga are being tested.

Other studies have included the following: raw materials for tilemaking, New Zealand diatomite as a filtering agent, brickmaking and refractory clays.

A considerable amount of work has been devoted to analyses, &c., of radio-active isotopes.

FOOD AND DRUGS

Milk.—The supply to Wellington City was very satisfactory in quality, but other supplies in the Wellington Province were not so good.

In Auckland the milk-supply in several districts has continued to be unsatisfactory.

The milk supplied to Christchurch City is generally of very satisfactory quality, but some of the supplies continue to be low in solids other than fat.

In the Otago District there has been a marked improvement in the fat content and fewer watered milks were recorded. The proportions of stale and improperly pasteurized milk increased greatly, but this position has now improved. The question of staleness and of visible dirt needs attention.

Water.—Regular examinations were made of water-supplies throughout the Dominion to keep a check on their purity for domestic use. Bacteriological examinations are regularly carried out by the Christchurch Branch of the Laboratory, but in the other centres only chemical analyses are made.

Determinations of fluorine in New Zealand waters have been made and the amount present is generally low. A low fluorine content may possibly have an adverse effect on the formation of sound teeth.

Food and Drug Samples other than Milk.—A very large number of samples covering practically all kinds of food were analysed in the four laboratories. A number of food products analysed did not conform to standards laid down in the regulations, indicating the need for constant checking.

Many products were found to be labelled in a misleading or unsatisfactory manner, and appropriate action was taken by the Department of Health.

Insect infestation of foods was detected in a considerable number of instances, indicating that the standard of care in handling goods has deteriorated.

During the year a comprehensive survey of drugs, galenicals, pharmaceutical preparations, and proprietary medicines for determination of quality was commenced. In general the drugs on the market were of reasonably good quality, but in some instances there was considerable room for improvement.

ORGANIC

Samples for analyses included insignis-pine wood for determination of resin content, kauri gum, oil from phormium-flax seeds, and rubberware for aircraft and milking-machines.

Numerous inquiries were received from Government Departments and from industry for information concerning plastics, rubber, adhesives, textiles, and paper.

The investigation of the acid hydrolysis of waste wood was continued.

TOXICOLOGY

Poisons detected in police specimens included aspirin, barbiturates (4), carbon monoxide (5), chloroform, cresol, cyanide, Jeyes' fluid, methyl bromide, nembutal, nicotine (2), petroleum distillate, and strychnine (5).