

Other investigations included studies of brickmaking clays and manufacture of bricks, bentonite, diatomite as a filtering agent, boron compounds used in salt glazing, cement used for hydro-electric dams, Fuller's earth, glass-sand, and whiting from Oxford chalk.

FOOD AND DRUGS

Milk.—The numbers of samples examined were : Wellington, 3,731 ; Auckland, 4,922 ; Christchurch, 5,104 ; Dunedin, 1,946.

In the Wellington District the milk is of good quality, especially in the city. More reductase tests should be taken in the outlying districts.

In Auckland the supply is not so satisfactory. A large number of improperly pasteurized milks came from a particular plant during a relatively short period. Due to lack of proper chilling facilities, raw milk sold in Hamilton during warm weather was of poor quality. Watered milks amounted to 58.

As mentioned in the report for last year, some of the milk supplied to Christchurch is low in solids other than fat. There is urgent need for further investigations of this and for improvement at some farms.

Of 1,350 milk samples received from the Dunedin area, 7 per cent. were deficient in fat, 10 per cent. were deficient in solids other than fat, and 6 per cent. were stale. Deficiencies in fat and other solids were more frequent than last year. Stale milks were less in evidence, but the number of watered milks increased eightfold. Samples examined for efficiency of pasteurization showed an improvement, but the position is not yet satisfactory.

In the combined Otago-Southland area added water was detected in no fewer than 59 samples. This is 3 per cent. of the samples received. From Invercargill 7 per cent. of the milk samples were watered, and of the few samples tested for efficiency of pasteurization, nearly half were improperly pasteurized.

Attention was drawn in last year's report to the unsatisfactory condition of the milk supplied in the Otago and Southland Provinces (including the Dunedin City area), and it must be repeated that the position is still far from satisfactory and calls for early attention by the authorities concerned.

Waters.—Regular examinations were made of water-supplies throughout the Dominion, mainly from the health aspect, but an increasing number of analyses of water for use in steam boilers is being made. This work was in the past done mainly for Government Departments such as the Railways Department, but is now being extended to waters used in industrial boilers. A few swimming-bath waters were examined. Industrial effluents were tested for their effect on stream pollution.

Analyses of food and drug samples other than milk revealed the following : " Almond-meal " made from poisonous ground apricot kernels ; " almond-paste " with no almond ; bacon containing boric acid and excessive nitrite ; ice-cream not meeting the regulations in milk-fat ; sausages with insufficient meat ; minced meat and sausage-meat with excessive amounts of sulphur dioxide ; milk-shakes not conforming to regulations for milk-fat, and many other similar analyses.

ORGANIC

Research was carried out on New Zealand woods and an investigation was made of the extractives and of acid hydrolysis of one species.

In an effort to overcome the tainting of butter by boxes made of *Pinus radiata* timber, special coatings were applied to experimental boxes for packing butter.

A considerable number of questions on problems related to adhesives and plastics was handled.

Samples which were received for analysis and investigation included chlorinated oil, wetting and detergent agents, rubber hose for use in aircraft oil-lines, pressed-fibre wallboard, strawboard, lanolin, sun-flower seeds for oil-production, and plastic materials.