

After a period during which no milk samples were collected in Invercargill, sampling was commenced in August by the City Council. The results were rather striking. Of the first 22 samples examined, 3 contained added water, 1 was stale, 2 were seriously deficient in milk fat, and one contained visible dirt. Of the remaining 38 samples collected later in the year only two were deficient. The deterrent effect of regular sampling is obvious. From Oamaru, where sampling is regular, 96 samples were examined, none of which failed to comply with the standard.

Reductase Test.—As stated in the report for 1935, this test was reported on by the Ministry of Health, Great Britain, as the most satisfactory method of controlling the bacteriological quality of milk-supplies. This confirmed the results of experience in New Zealand extending over twenty years.

During 1936 reductase testing was extended to several of the larger towns outside the four main centres, and it is the intention to further extend it as circumstances permit.

The milk supplied to schools is being tested to ensure that it is of satisfactory quality from both the nutritive and bacteriological points of view.

The phosphatase test, which when newly introduced about two years ago was thoroughly investigated and adopted as a routine test in the Auckland branch laboratory, is now used also in the main Laboratory and the other two branches. It is proving of great value in ensuring that the pasteurization of milk has been properly carried out, and is being used particularly for testing milk supplied to schools.

Water.—As in previous years many samples of water from existing and projected town supplies were analysed in the main Laboratory and the three branches.

Sewage.—A large number of samples were examined in connection with the proposed scheme of sewage disposal for Auckland City.

Miscellaneous.—Samples of butter and other goods obtained throughout the Dominion were analysed and with few exceptions were found to comply with the regulations under the sale of Food and Drugs Act.

The investigation of iodized salt in regard to the proportions and distribution of iodide in the salt and the rate of loss of iodides under various conditions of storage was completed during the year. It will now be possible to suggest a form of a container which will prevent loss of iodide from the salt on keeping.

Drugs.—All the available brands of acetylsalicylic acid (Aspirin) sold in tablet form were examined, with most interesting results. It was found that without exception they complied with the standard of the British Pharmacopœia and for practical purposes were all equally pure and of high quality.

In some cases the statements in the accompanying literature would by inference be misleading, such as a warning against purchasing impure aspirin when all the brands sold are of equal purity.

One brand was described as more effective than aspirin, but aspirin is simply a synonym for acetylsalicylic acid and the tablets were sold as such.

Several makes were advertised as “Does not affect the heart.” The samples being all of the same degree of purity, this statement if correct would apply equally to the other brands.

The different brands varied widely in price although practically identical in quality, and provide an interesting example of the effect of advertising.

A specially prepared flannel said to possess radioactive properties and therefore to be of value in the treatment of various complaints was found to contain no appreciable amount of uranium or thorium and showed no detectable radioactivity.

“Vitality” pills were found to consist mainly of iron (ferrous) sulphate.

Four samples of medicinal preparations from a Chinese practitioner in Christchurch sold as remedies for epilepsy, blood pressure, &c., were found to contain ordinary B.P. drugs.

A number of samples of air taken in connection with the ventilation of the projection-boxes of theatres, tunnels, and living-rooms were examined for various Departments.

MINES DEPARTMENT.

The Dominion Laboratory has, as in past years, carried out the testing and analysis of mineral samples and mine gases. An investigation was also carried out on stone dusts suitable for use in mines.

Prospectors' samples from all parts of the Dominion have been examined for gold and silver and occasionally for other metals (in one notable case, platinum, in the North Island).

The physical and chemical survey of the coal resources of the Dominion which has been under discussion for some time has been commenced, and officers have been appointed to work under a committee comprising representatives of the Dominion Laboratory, Geological Survey, and Mines Department.

The purpose of the survey is to obtain complete information on the coal reserves of the Dominion; to correlate coal-seams of various localities; and to estimate the suitability of the coals for industrial use, oil production, gasmaking, &c. Preliminary geological work has already been carried out on the Blackburn area, and arrangements are in hand for the provision of laboratory accommodation for chemical analyses and investigations.

GOVERNMENT STORES.

Numerous samples were analysed in connection with the purchase and behaviour in use of various materials for the Stores Control Board, Post Office, Public Works, and other Government Departments. These included coal, oils, soap, rope, disinfectants, paints, stamps, transmitting-tape, carbon tetrachloride, fencing-wire, shellac, soldering-fluid, red lead paints, creosote, water for concrete making, turpentine, and insulating-tape.

An investigation was made as to the effectiveness of suggested methods for reconditioning motor oil.

Several cases of corrosion were investigated and remedial measures suggested.