

not as strong as previously. All the new members, however, have proved willing workers, and a good spirit has been constantly maintained.

THE WAR.

The continuance of the war increased the work of the Laboratory in various directions. Food-stuffs from the military camps were examined regularly, and the water-supplies occasionally, at the discretion of the Director of Medical Services. Eighty consignments of scheelite, representing 170 tons, were assayed for the Imperial Government Supplies Department, and some shipments of condensed milk analysed. All crude glycerine exported for the manufacture of explosives was analysed at the Laboratory. Several minor investigations were undertaken as required.

CUSTOMS.

Samples are submitted by this Department, chiefly to assist classification for tariff purposes, and the results call for no special comment.

JUSTICE.

An alleged fire-extinguisher, forwarded by the police, consisted of bicarbonate of soda 80 per cent. and clay 20 per cent. Canisters containing 4 lb. of this mixture were being retailed at £1 each. The vendors were prosecuted.

Several analyses of Anconia sheep-dip proved that three different preparations were sold under that name. The first contained ground limestone, sulphur, tobacco-dust, carbonate of soda, and salt. The second was composed of sulphur and sodium carbonate, while the addition of common salt to these two constituents produced the third variety. The retail price of a 3 lb. packet was 5s., and the directions were to mix it with 100 gallons of water. The fluid so prepared was worthless for dipping sheep. Prosecutions resulted in this case also.

Nothing deleterious was disclosed in the few liquors submitted during the year.

In one post-mortem examination radish-seeds were found in the intestines, and were indicated as the probable cause of death. Confirmatory evidence was obtained by feeding seeds both of the turnip-rooted and long scarlet varieties to three white mice, which ate ten, fifteen, and thirty-five seeds respectively. Two showed marked symptoms of distress in from four to five hours, and all died within twenty-four hours. It does not appear to be generally known that radish-seeds are so poisonous.

MINES.

The Geological Survey forwarded thirty-three coals, twelve ores for metallic contents, ten clays, nine rocks for complete analysis, and several other samples for various estimations.

Numerous parcels of stone were also tested for prospectors. The Maharahara copper lode was re-examined during the year, but outcrops near the old shaft yielded only from 0·3 to 0·5 per cent. of copper, and the dump from the oldest drive 1·5 per cent. More encouraging results were obtained from Maunganiemi, Kaeo, Whangaroa, where the ore averaged 3·9 and 4·0 per cent. of copper, and a better sample still from Takaka, contained 15 per cent. In no case, however, was either gold or silver associated in appreciable quantities with the copper.

An iron carbonate from Ohai Stream, one mile west of Linton Coal-mine, gave equivalent to 38·8 per cent. metallic iron in the natural state, and 56·3 when calcined. An ironstone from Birkdale appeared to be suitable for the manufacture of hæmatite paint.

Analyses were made of pig iron and slag from the smelting-works, New Plymouth. Some manganese-ore from Otau, Auckland, assayed up to 52·8 per cent. of metallic manganese. A diatomaceous earth of good quality was received from Otorohanga. Highly siliceous polishing-earth, composed of exceedingly fine rounded particles, was obtained from Wairakei and Puhipuhi.

Some distillation tests were made of Waikaia shale. Fuller descriptions of these samples will be found in the detailed report of the Laboratory work.

POST OFFICE.

Samples analysed for the Post Office comprised beeswax, copper sulphate, distilled water, lead sheathing, mercury, phosphor-bronze, salammoniac, sulphuric acid, zinc for batteries, and the filling of some dry cells.

A number of letters were successfully treated to restore addresses that had been rendered illegible through accidental saturation with heavy oil.

PUBLIC HEALTH.

The Public Health Department supplied approximately 70 per cent. of the samples examined in the laboratory. They comprised baking-powder, beer, bread, butter, cake, chocolates, cocoa, coffee, cordials, cream, custard-powder, disinfectants, egg-powder, flour, gas, gelatine, hair-dye, honey, ice-cream, jam, lard, "Lemeese" (lemon cheese), malt extract, margarine, medicine, milk, minced meat, oatmeal, oil, patent food, pepper, phospho-citric acid, "Sargol," sugar of milk, tallow, tincture of quinine, vinegar, wheat, tincture of iodine.

One butter contained as much as 20 per cent. of water, and five others exceeded the standard of 16 per cent.

Non-permitted dyes had been used to colour several of the cordials. One sample of olive-oil was heavily adulterated with cotton-seed oil.

Methylated spirit was found in some tincture of iodine, and also in ammoniated quinine retailed at Castlecliff during the influenza epidemic. Prosecution in the latter case resulted in a fine of £50 being imposed.