

VACCINE LABORATORY.

It is satisfactory to be able to report that our difficulties with regard to the weakness of the vaccine lymph mentioned in last year's report have been to a great extent overcome, and, as the accompanying table shows, the percentage of case-success has risen to 91 per cent. This figure we may hope to see improved in future, as the influence of the alteration in methods which brought about the improvement did not extend to the whole of the past year. The principal cause of failure we found to be a very simple matter—namely, the sudden changes in the temperature to which the lymph was exposed. Lymph taken straight from our ice-chest and submitted to a temperature of 90° Fahr. or so in the postal bags during summer produced very unsatisfactory results. If the change is made gradually, less deterioration takes place.

For comparative purposes, some imported lymph of a well-known maker was obtained and distributed throughout the Dominion. The returns from this lymph showed only 58 per cent. of successful cases, thus affording proof that it was more satisfactory to prepare our own lymph for local use.

RETURN SHOWING RESULTS OF VACCINE LYMPH FOR YEAR 1908-9.

Series.	Number of Tubes issued.	Number of Scarifications to which Lymph was applied.	Number of Vesicles obtained.	Remarks.			
				Per-centage.	Cases done.	Cases successful.	Per-centage.
43 Chloroformed	483	160	76	47.5	58	37	63.8
Glycerinized	264	221	177	80.09	71	68	95.7
44 Chloroformed	221	172	156	90.7	58	57	98.2
Glycerinized	381	315	295	93.6	106	104	98.1
45 Chloroformed	468	299	268	89.6	111	106	95.4
Glycerinized	315	309	296	95.8	112	111	99.1
46 Chloroformed	150	167	133	79.6	48	41	85.4
Glycerinized	610	193	176	91.1	69	65	94.2
47 Chloroformed	332	232	221	95.2	76	76	100.0
Glycerinized	30	18	18	100.0	6	6	100.0
48 Chloroformed	321	144	135	93.7	51	50	98.0
Glycerinized	204	65	50	76.9	23	20	87.0
49 Chloroformed	30	18	18	100.0	6	6	100.0
Glycerinized	442	139	92	66.1	42	36	85.7
50 Glycerinized	183	286	183	63.9	92	77	83.6
51 "	786	502	398	79.2	163	143	87.7
52 "	355	64	32	50.0	21	13	61.9
53 "	430	115	115	100.0	46	46	100.0
54 "	210	84	83	98.8	31	31	100.0
55 "	834	577	476	82.4	177	163	92.09
56 "	516	21	16	76.2	7	6	85.7
Total	7,565	4,101	3,414	83.2	1,374	1,262	91.8

The following matters, apart from laboratory work, occupied my attention during the year :—

A report on the question of the suitability of tree-planting camps for consumptives was prepared after visiting the work being done by the Forestry Department in the Rotorua district.

Further investigations were made into the question of regulations for the control of carbon-monoxide-producing plants. It was finally decided that, in view of the varying conditions met with, it was advisable that the control should be in the hands of the Inspectors of Machinery, and a series of model regulations was drawn up for their guidance.

A special investigation was made into the growth and prevention of moulds in freezing-chambers.

Air analysis : The ventilation of the Otira Tunnel works was the subject of a series of observations. An examination was made of the air in the hold of a vessel on which a fire had taken place.

During the absence of Dr. Mason, in October, the Head Office was in my charge.

During the latter end of February some time was devoted in assisting the police in the recovering of corpses subsequent to the wreck of the "Penguin" at Terawhiti.

I have, &c.,

R. H. MARGILL.

Bacteriologist.

Dr. J. M. Mason, Chief Health Officer, Wellington.