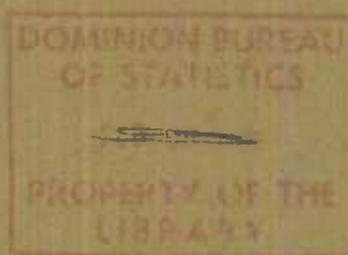


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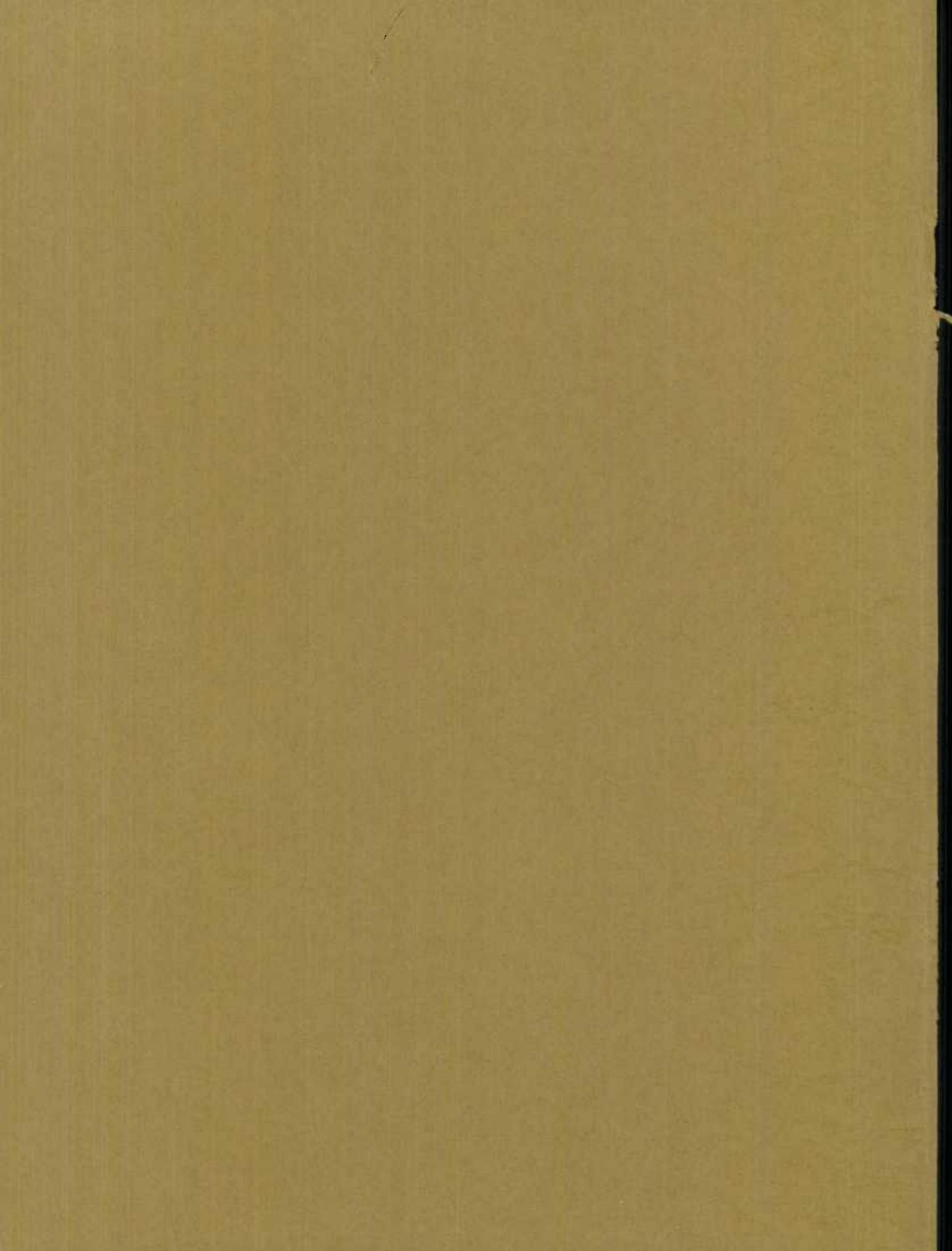
SURVEY OF
SCIENTIFIC AND INDUSTRIAL LABORATORIES
IN CANADA



OTTAWA
1941

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Survey of scientific and industrial laboratories in Canada

R. J. Jola
March 22/43

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DOMINION BUREAU OF STATISTICS

GENERAL STATISTICS BRANCH

OTTAWA - CANADA

SURVEY OF SCIENTIFIC AND INDUSTRIAL LABORATORIES IN CANADA.

Introduction.

Shortly after the outbreak of hostilities in September, 1939, an enquiry was undertaken to ascertain the extent of the laboratory facilities existing in Canada, in the effort completely to mobilize the resources of the Dominion for the prosecution of the war. In preparing the questionnaire for this survey, (the first of its kind in Canada), the National Research Council, the Department of National Defence, the Department of Mines and Resources and the Dominion Bureau of Statistics collaborated.

The need for immediate data regarding the more important laboratories, their personnel, equipment and functions, made it inadvisable to make the enquiry so exhaustive as might in other circumstances have been considered desirable. Accordingly, the survey was limited to the laboratories of the Dominion and Provincial Governments, to those of municipalities with a minimum population of 15,000, to the universities and larger colleges, to hospitals and tuberculosis sanatoria with a minimum of 200 beds, to industrial establishments ordinarily employing 15 persons and over in their businesses, and to the known, private consulting laboratories. Excluded were the smaller colleges and hospitals, the high schools, municipalities of less than 15,000 population, and other possible sources of information where the facilities were thought probably to be less extensive, or less readily available for use in the conduct of the war.

An excellent response was made by those to whom the questionnaires were sent, and the latter, on their return, were frequently accompanied by letters containing generous offers of assistance to the Government in any field by which the prosecution of the war might be furthered. As was expected, it was found that a large proportion of the industrial establishments circularized did not maintain laboratories. However, the inquiry was intended to build up, so far as possible, a complete list of the laboratories consulted by industrial establishments, as well as to obtain information regarding those operated by business concerns.^x

The many thousands of replies received were first used by the National Research Council for the primary purpose of the inquiry, namely, the securing of comprehensive information regarding all the more important scientific and industrial research laboratories in the country, including their names and addresses,

^x The questionnaire used is reproduced immediately following the text of this report.

TABLE 1. - SUMMARY - ALL REPORTING LABORATORIES.

	Dominion Government Laboratories	Provincial Laboratories	Municipal Laboratories	University Laboratories	Hospital Laboratories	Industrial Laboratories	All Reporting Laboratories
Number of Laboratories furnishing data	78	53	26	222	89	998	1,466
Usual Number employed in these Laboratories -							
Professional Personnel -							
Men	442	180	51	915	136	2,377	4,101
Women	131	33	4	78	90	33	369
Totals	573	213	55	993	226	2,410	4,470
Non-Professional Personnel -							
Men	387	155	42	411	87	2,308	3,390
Women	80	101	6	122	164	412	885
Totals	467	256	48	533	251	2,720	4,275
GRAND TOTALS	1,040	469	103	1,526	477	5,130	8,745
Total Current Expenditure on operation of Laboratories in 1938 -							
Salaries and Wages	\$ 1,659,981	\$ 548,260	\$ 152,864	\$ 1,704,527	\$ 453,482	\$ 7,257,792	\$ 11,776,907
Other Expenditures	\$ 446,067	\$ 118,399	\$ 24,399	\$ 336,111	\$ 188,212	\$ 1,645,347	\$ 2,758,536
Totals	\$ 2,106,048	\$ 666,659	\$ 177,263	\$ 2,040,638	\$ 641,694	\$ 8,903,140	\$ 14,535,443
Total Capital Expenditure on Buildings and Equipment in 1938	\$ 423,303	\$ 90,800	\$ 11,410	\$ 149,850	\$ 223,486	\$ 1,753,246	\$ 2,652,094
Approximate Total Investment in Laboratories	\$ 8,888,914	\$ 859,691	\$ 243,003	\$ 6,796,043	\$ 528,358	\$ 10,617,687	\$ 27,933,697
Total Income of Consulting Labora- tories (x) during 1938	\$ 8,917	\$ 24,009	\$ 4,513	\$ 24,991	\$ 208,564	\$ 800,331	\$ 1,071,325

(x) The questionnaire asked for a statement of the 1938 income from professional services only from consulting laboratories; these figures, therefore, represent only a small fraction of the value of the services rendered by laboratories in the Dominion.

their professional and non-professional personnel, and the types of work which they carry on or are prepared to carry on, together with their investment in buildings and equipment and their expenditures in 1938. Information on these subjects, obtained from the answers to the questionnaire, has been for some time on file at the offices of the National Research Council.

The statistical information furnished in the answers to the questionnaire has now been compiled in the Dominion Bureau of Statistics, and is issued in the present bulletin, which contains no reference to particular institutions. The considerable number of laboratories coming into the picture, their diversified professional staffs, the great variety of fields in which research is carried on, the millions invested in buildings and equipment and in salaries and maintenance, show that scientific and industrial research is being extensively carried on throughout the Dominion and are of good augury for the social and economic future of the country.

Directory.

In the Appendix to this bulletin are listed the names and addresses of the laboratories whose returns are included in the present survey; the directory, which is accompanied by a classification of industrial laboratories according to the types of work they are equipped to investigate, was prepared by officers of the National Research Council.

As already mentioned, the enquiry, for practical reasons, was limited to the laboratories of the Dominion and Provincial Governments, of the larger municipalities, the universities and the larger colleges, to hospitals and tuberculosis sanatoria having a minimum of 200 beds, and to the larger industrial establishments. It is probable that in certain cases, the data furnished by business concerns refer to services within their organizations that cannot be regarded as scientific laboratories in the strict sense of the word; other firms, apparently carrying on similar functions in their testing rooms, would not so define them. However, in this survey, the definition of the co-operating organizations was accepted.

The laboratories have been grouped according to their ownership; the names and addresses listed are those shown on the questionnaires completed in the autumn of 1939. The addresses of both business office and laboratory are given, if these differed, in the cases where the information is available.

A key to the classification of industrial laboratories by the types of work they are equipped to carry on follows the directory for such establishments, preceded by a brief explanation of the key.

Summary.

Table 1 summarizes the data reported by laboratories throughout the Dominion. Returns were received from 1,466 such institutions, 998 of these being maintained by industrial establishments and 222 by the universities. A great many of the laboratories were situated in Quebec and Ontario.

The number of professional workers usually employed was 4,470, of whom 4,101, or 91.7 p.c., were men, while the proportion of males among the 4,275 non-professional employees was 79.2 p.c. Of the total number of professional and non-professional workers of both sexes employed in all laboratories furnishing data, nearly 59 p.c. were reported by industrial establishments, 17 p.c. by the universities and just under 12 p.c. by the Dominion Government. In the professional group, the proportions differed to some extent, laboratories of industrial establishments reporting 53.9 p.c. of the total of 4,470 employees with scientific training, with universities employing 22.2 p.c. and the Dominion Government 12.8 p.c. of that number.

The amount paid out in salaries and wages during 1938 was \$11,776,907, giving an average of \$1,347 per employees. That this average was low, was probably due to several factors, one of these being the large proportion of non-professional assistants, which constituted 48.9 p.c. of the total; in the non-professional category undoubtedly were

included some persons engaged in routine clerical work, in cleaning, and in other relatively low-paid occupations. Again, in a number of cases, members of the staff were only part-time employees of the laboratories, so that the figures available do not represent their total earnings in 1938. A third factor tending to lower the average, was the inclusion of data from certain religious institutions, in which salaries, if paid at all, were in many cases nominal.

The highest average salary of \$1,596 was reported by Dominion Government laboratories, in which rather more than 55 p.c. of the total personnel was classed as professional. Municipal laboratories reported an average of \$1,484; in this case, professional workers constituted over 53 p.c. of the total, and the proportion of female workers was low. Next in descending order came the earnings in industrial laboratories, in which the staff of 5,130 employees was paid an average of \$1,415 in 1938. Scientific workers formed 47 p.c. of their total personnel, which was preponderantly male, there being only 33 professional women reported by this category of laboratory. The part-time factor was no doubt of considerable importance in its effect on the average earnings indicated in industrial laboratories.

In 1938, the provinces paid \$548,260 to their 215 professional and 256 non-professional laboratory assistants, an average of \$1,169. The former class constituted only 45 p.c. of the total; this was the lowest ratio of professional employees indicated, the proportion for all laboratories being 51 p.c. The universities reported laboratory staffs numbering 1,526, of whom 65 p.c. were professional; these persons were paid \$1,704,527, an average of \$1,117. In certain cases, data showing the earnings of the personnel were not given, their remuneration being charged to the general expenses of the teaching faculty, rather than to the laboratories in which they taught and carried on investigations. As in the case of part-time employees of the industrial laboratories, this practice was probably an important factor in lowering the averages, both for the universities, and for all classes of laboratories.

Hospital laboratories reported 477 employees, of whom only 47 p.c. were professional; the earnings were reported as \$453,482, or \$951, on the average. The proportion of women workers was unusually high in this class of laboratory, while, as already mentioned, the average earnings were also lowered by the inclusion of a number of institutions maintained by religious orders, whose members were not paid salaries, or else received only nominal remuneration.

The total current expenditure on the operation of laboratories in 1938 was \$14,535,443, of which salaries accounted for 81 p.c. and other expenses for 19 p.c. The largest current outlay was made by industrial laboratories, which expended 61 p.c. of the money spent on the operation of laboratories in Canada in that year. The Dominion Government spent \$2,106,048, or 14.5 p.c., and the universities, \$2,040,638, or 14 p.c. of the aggregate. Thus these three classes reported almost 90 p.c. of the total expended on the operation of the 1,466 laboratories co-operating in the survey.

The capital expenditure on buildings and equipment in 1938 was \$2,652,094, a sum which approximated 9.5 p.c. of the total estimated investment in the reporting laboratories. The largest capital outlay in 1938 was made by industrial establishments, whose expenditure of \$1,753,246 constituted 66 p.c. of the total; the laboratories of the Dominion Government reported 16 p.c.; those of hospitals and tuberculosis sanatoria, over eight p.c., and those of the universities, 5.7 p.c. of the aggregate. Of the figure of \$2,652,094, over 54 p.c. (\$1,443,873), was spent by laboratories whose main function was plant control; plant control allied with research accounted for nearly 22 p.c. of the total, while laboratories operating mainly in the research field reported for 1938 a capital expenditure of

\$604,081, or 22.8 p.c. of the aggregate.

The 1,466 co-operating laboratories represented an approximate total investment of \$27,933,697, of which nearly 55 p.c. was for housing, and some 39 p.c. was for equipment; the remaining sum of \$1,609,138, or 5.8 p.c., was not itemized. In connection with the investment in housing, it should be noted that in a number of cases the value of the space occupied by the laboratory was not estimated, particularly where this service shared a building with other branches of the establishment.

The approximate investment in laboratories operated by industrial establishments was \$10,617,687, or 38 p.c. of the total figure. The Dominion Government and the universities reported 31.8 and 24.3 p.c., respectively, of the aggregate. An analysis of the total investment according to the function of the laboratory, as indicated in Table 4, shows that the largest proportion (44.5 p.c.) was made in the field of research, where the investment amounted to \$12,438,998. Plant control allied with research accounted for \$7,560,527, or 27 p.c., and plant control laboratories, for 21 p.c. of the aggregate of \$27,933,697.

The final question of the schedule sent out, asked consulting laboratories, only, to state their total income in 1938 from professional services, consultations, royalties, etc. The income reported for 1938 by such laboratories was \$1,071,325, of which \$800,331, or 74.7 p.c. was reported by industrial establishments, and \$208,564, or 19.5 p.c., by hospitals and tuberculosis sanatoria.

The data summarized in Table 1 are shown in greater detail in the tables on pages 11 to 22, while brief analyses and explanations of the statistics are given in the following pages.

Classes of Work Which the Laboratories Undertake.

The various classes of work undertaken by Dominion, Provincial, Municipal, university, hospital and tuberculosis sanatoria and industrial laboratories are shown in Table 13. In regard to this table, it must be stressed that the numbers do not represent laboratories necessarily equipped for or engaged exclusively or even mainly in work in the class specified at the left, but indicate rather that the stated number of laboratories possess the facilities for physical or chemical testing or for research work in that particular commodity, or field of investigation. In most cases, laboratories will carry on work in many of the different classes enumerated, such work being conducted simultaneously or at different periods, in the same laboratories, or in different parts of the same laboratories. In other words, the figures show that work in the specified line is being, or can be carried on, in certain laboratories whose numbers range from the low to the high figures given under the three headings - physical testing; chemical testing or research, - in the laboratories arranged according to their ownership. The total number of laboratories about which information is available, as shown in Table 1, is 1,466, the distribution among the various classes of ownership being as follows:- Dominion Government, 78; Provincial Governments, 53; Municipalities, 26; Universities, 222; Hospitals, 89; Industrial Establishments, 998.

Personnel of Laboratories.

Among the more significant statistics furnished by laboratories are those respecting their personnel.

The numbers of persons employed in laboratories carrying on, or prepared to undertake work in certain classes of work enumerated at the left, are given in Table 14; the explanation regarding Table 13 applies also to the figures of this table. Question 6 of the questionnaire used in the survey asked for the usual number employed in the laboratory, while Question 5 required an enumeration of the classes of work which the laboratory considered itself equipped to investigate. The figures given quoted in Table 14 show the aggregate of employees in the laboratory as a whole, rather than the number necessarily engaged in, or indeed, qualified by profession to work in the particular item specified at the left, this total number of persons being given opposite each of the items which the establishment listed as a subject of its investigations. Thus the numbers in this table serve mainly to indicate, in terms of personnel, the relative size of the laboratories which conduct research or testing work in the various classes of work enumerated. In this regard, it may be recalled that the total number of employees reported by the 1,466 co-operating laboratories was 8,745, of whom 4,470 were professional and 4,275 were non-professional assistants.

Personnel by Ownership and Function of Laboratories.

Information respecting the number of persons usually employed in the various classes of laboratories operating in Canada is contained in Table 2, which shows the distribution of the staffs according to the function and ownership of the laboratory.

The function of plant control required a larger personnel than any of the others, with that of plant control and research taking second place; 6,345 persons out of a total of 8,745, or approximately 72.6 p.c. of the latter figure, were reported in these two classes, which employed 68 p.c. of the total professional, and 77 p.c. of all non-professional workers.

The persons employed in laboratories whose function was regarded primarily as research, numbered 1,942, or 22 p.c. of the total in all kinds of laboratories. The universities provided employment for 1,169 of the reported research workers, and the Dominion Government for 543, these two classes accounting for over 88 p.c. of the total number engaged in research. They also employed 89.7 p.c. of all the professional workers reported by research laboratories.

Of the total number of men and women constituting the normal staff of the 1,466 laboratories furnishing data in this enquiry, 4,470, or 51 p.c. were classed as professional and 4,275, or 49 p.c. as non-professional. Just over eight p.c. of the former category were women, whose proportion among the non-professional group rose to 20.7 p.c. The female workers, numbering 1,254, constituted 14.3 p.c. of the total staff, while the male employees numbered 7,491, or 85.7 p.c.

The largest group of women professional employees (131), was reported by the laboratories maintained by the Dominion Government, the hospitals and tuberculosis sanatoria with 90, and the universities, with 78, coming next in order. These three classes of laboratories employed 299, or 81 p.c. of the total of 369 professional women workers. On the other hand, the laboratories of industrial establishments reported 2,377 professional male helpers, constituting practically 58 p.c. of all the scientific men engaged in laboratories of all classes. The universities reported the next largest male professional personnel, with 915, or 22 p.c. of the total.

The greatest proportion of workers - professional and other - was reported by industrial establishments, 5,130 men and women being employed in their laboratories; this was 58.7 p.c. of the aggregate. Next in order came the universities, with 17.4 p.c., the Dominion Government laboratories with 11.9 p.c., and those of hospitals and tuberculosis sanatoria and the Provinces, each of which categories reported over five p.c. of the total employees.

Occupations of the Professional
Personnel of Laboratories.

Tables 7 to 12 inclusive enumerate the occupations of the professional personnel reported by the co-operating laboratories, grouped according to their ownership, and give the numbers shown in the various occupations. In each of the categories of laboratories, except those maintained by hospitals and tuberculosis sanatoria, chemists were decidedly more numerous than any other class of workers, with engineers and physicists generally coming in second and third places; in the hospitals, pathologists and doctors predominated, followed by chemists and technicians.

The greatest variety of professional workers was indicated by the universities, over 27 different professions being reported in their laboratories. In a number of instances there was insufficient information to permit enumeration of the callings, or these were too diversified to be shown in the table; this was also the case in many laboratories of other ownership.

Total Current Expenditure Reported by Laboratories.

Table 3 shows the total current expenditure reported for 1938 by the 1,466 laboratories furnishing data.

Of the grand total of \$14,535,443 required to maintain and staff laboratories in 1938, \$11,776,907, or 81 p.c. was spent for salaries and wages, and \$2,758,536, or 19 p.c. for other purposes. Industrial laboratories reported a current expenditure of \$8,903,140, or 61.3-p.c. of the aggregate, while their salaries and wages accounted for a fractionally higher proportion of the 1938 outlay for those items, viz., 61.6 p.c. The Dominion Government laboratories spent 14.5 p.c. of the total expenditure and 14.1 p.c. of the total payroll, while for the universities, these proportions were 14.0 p.c. and 14.5 p.c., respectively.

Laboratories functioning mainly in the field of plant control reported for 1938 current expenditure of \$5,313,243, and those in the plant control and research category, of \$5,380,925, these two together accounting for 73.8 p.c. of the aggregate current outlay in that year for salaries and wages and other items. By laboratories engaged chiefly in research, \$3,272,788 was spent, a proportion of 22.5 p.c. of the total. On the latter figure, \$1,617,055 was spent by the universities and \$1,216,339 by the Dominion Government; these sums represented 49 p.c. and 37 p.c., respectively, of the aggregate outlay by research laboratories reported in Canada for 1938.

In connection with the laboratories maintained by hospitals and tuberculosis

institutions, and to a less extent in connection with those of the universities, it should again be noted that the aggregate and the average salaries and wages reported were reduced to some extent by the inclusion of certain such establishments operated by religious organizations, where the payment to the personnel was nominal. This factor also tends slightly to lower the statistics for all the co-operating laboratories.

Approximate Total Investment Reported by Laboratories.

Table 4 shows the approximate total investment reported by 1,466 laboratories furnishing statistics. In a number of cases, particularly among industrial establishments, the investment in the laboratories could not be segregated from that of a more general character in the business, so that the figures of this table tend to underestimate the capital outlay on such services.

On the whole, the housing of laboratories constituted nearly 55 p.c. of the total investment, with equipment representing over 39 p.c. of this figure of \$27,933,697; the remaining six p.c. of the investment was not itemized.

Industrial laboratories, with an outlay of \$10,617,687, or 38 p.c. of the total, reported a larger investment than any other class. Their activities were largely in the fields of plant control and plant control and research, functions which accounted for 93.5 p.c. of the aggregate capital investment in laboratory facilities reported by industrial establishments; these were mainly classed in manufacturing.

Next in magnitude of investment came the laboratories of the Dominion Government, and those of the co-operating universities, these classes accounting for 31.8 p.c. and 24.3 p.c., respectively, of the total. In the former category, almost 78 p.c. of the investment was in connection with research, and nearly 21 p.c. was for plant control and research. The investment in facilities for research constituted 72.7 p.c. of the total reported by the universities.

Under the heading "Not Specified", the only figures shown are those of the universities; while laboratories of other classes did not always specify their function, it was considered advisable in the light of other available information, to assign their statistics to one of the other categories - usually plant control, or plant control and research. In the case of the universities, however, it was felt that where the function was not specified, it was undoubtedly mainly that of instruction, also carried on in the research laboratories; accordingly, such figures for the universities were segregated, and together with those of the laboratories reporting their function as teaching, are shown in Table 4. The investment in this class of laboratory represented practically 27 p.c. of the total reported by the universities, and 6.5 p.c. of that reported by all laboratories.

An analysis of the investment figures according to the function of the laboratory, shows that \$12,438,998, or 44.5 p.c. of the total, was in facilities for research work. Of this outlay, more than half (\$6,899,123) had been made by the Dominion Government, while an investment of \$4,939,472 was reported by the universities in research laboratories. The latter figure constituted 39.7 p.c. of the aggregate of \$12,438,998. The category "Plant Control and Research" accounted for \$7,560,527, or 27 p.c. of the total, and "Plant Control" for an investment of \$5,885,008, or 21 p.c.; the investment in these two classes was largely reported by industrial establishments.

Total Capital Expenditure Reported by Laboratories.

The total capital expenditure on buildings and equipment reported for 1938 by the 1,466 co-operating laboratories is shown in Table 13.

This sum was \$2,652,094, which represented 9.5 p.c. of the approximate total investment in all the laboratories for which data are on record. The total amount reported as having been spent in 1938 on both capital and current account was \$17,187,537; of this sum, capital expenditure constituted 15.4 p.c., while 85.6 p.c. represented current expenditure on the operation of the laboratories.

Outlay on buildings and equipment for the laboratories of industrial establishments amounted to \$1,753,246, or 66 p.c. of the 1938 total; of this figure, 79.5 p.c. was spent on plant control laboratories, and 19.4 p.c. was shown as having been expended on plant control and research laboratories. The Dominion Government spent \$423,303 in capital expenditures in 1938, a proportion of 16 p.c. of the total, while hospitals and tuberculosis sanatoria reported 8.4 p.c. and the universities, 5.7 p.c. of that figure.

Laboratories engaged mainly in plant control accounted for \$1,443,873, or over 54 p.c. of the capital expenditure of \$2,652,094 made by all laboratories for 1938; of the former sum, industrial establishments reported 96.5 p.c.; their capital expenditure for plant control work was shown as \$1,394,045 for 1938. The function of research accounted for less than 23 p.c. of the total expended on capital account, while such outlay on plant control and research laboratories amounted to \$574,965, or 21.7 p.c. of the aggregate.

Income Reported by Consulting Laboratories.

Question 10 on the schedule / submitted to scientific institutions asked that consulting laboratories, only, should furnish information respecting the income they derived in 1938 from the services and operation of their laboratories. The replies to this question are summarized in Table 14, which shows a total of \$1,071,325 received by the relatively small number of laboratories operated for consultation purposes in the Dominion.

The function of these laboratories was in the main, plant control and research, 67.5 p.c. of the total income being ascribed to work in that field. Industrial establishments reported \$800,331, or 75 p.c. and hospitals and tuberculosis sanatoria \$208,564, or 19.5 p.c. of the aggregate.

/ The questionnaire used is reproduced immediately following the text of this report.

DOMINION BUREAU OF STATISTICS, OTTAWA

SURVEY OF SCIENTIFIC AND INDUSTRIAL LABORATORIES IN CANADA

1. Name and address: Date of completion
2. Do you engage laboratory consulting services? If so, give names and addresses of the firms you usually employ.
3. Do you maintain one or more laboratories? If so, give number and address of each. (Separate data are desired for each of your laboratories. Extra forms will be sent on request to head or local offices; please indicate number required and addresses to be used.)
4. What is the primary function of your laboratory or laboratories?
 (a) Consulting (b) Research (c) Plant control (d) Other (specify)
5. Is your laboratory specially equipped with a view to carrying on any specific class of work?
 If so, place check marks in the appropriate columns against the items in the following list to indicate whether your laboratory is prepared to do: (a) physical testing, (b) chemical testing, or (c) research, on the classes of work indicated:

<u>Check here</u>			<u>Check here</u>			<u>Check here</u>					
A	B	C	A	B	C	A	B	C			
..	acids	..	..	..	electrothermics	..	..	..	petroleum
..	adhesives	..	..	..	explosives	..	..	..	pharmaceuticals
..	analysis	..	..	..	fermentations	..	..	..	physical chemistry
..	animal oils and fats	..	..	..	fertilizers	..	..	..	plastics
..	assaying	..	..	..	flotation	..	..	..	rubber
..	bacteriology	..	..	..	foods	..	..	..	sanitation
..	biochemistry and nutrition	..	..	..	fuels	..	..	..	soap and glycerine
..	cellulose	..	..	..	heat	..	..	..	soils
..	cement	..	..	..	iron and steel	..	..	..	solvents
..	ceramics	..	..	..	leather	..	..	..	textiles
..	colloids	..	..	..	light	..	..	..	vegetable oils
..	dyes and intermediates	..	..	..	non-ferrous metals	..	..	..	water
..	electrical engineering	..	..	..	organic chemistry	..	..	..	wood
..	electrochemistry	..	..	..	paints	..	..	..	others (specify)

6. Usual number employed in laboratory:
- | | <u>Chemists</u> | <u>Physicists</u> | <u>Engineers</u> | <u>Others</u> |
|------------------------|-----------------|-------------------|------------------|---------------|
| (a) Professional - Men | ..... | ..... | ..... | ..... |
| Women | ..... | ..... | ..... | ..... |
| (b) Non-professional - | Men | Women | | |
7. Total current expenditure on operation of laboratory in 1938 - Salaries and wages \$
 Total \$
8. Total capital expenditure on building and equipment in 1938 - \$
9. Approximate total investment in laboratory:
 Housing of laboratory \$ or floor space rent (in 1938) \$ Laboratory equipment \$
10. Total income during 1938 from professional services, laboratory, consulting, royalties, etc.
 (for consulting laboratories only). \$

Address of laboratory covered by this report

Signature and Official Position

TABLE 2. - USUAL NUMBER OF PERSONS EMPLOYED IN THE LABORATORIES FURNISHING DATA.

Ownership of Laboratory.	Function of Laboratory.											
	Consulting		Research		Plant Control		Plant Control and Research		Not (x) Specified		Total	
	Professional	Non- Professional	Professional	Non- Professional	Professional	Non- Professional	Professional	Non- Professional	Professional	Non- Professional	Professional	Non- Professional
Usual Number of Persons Employed -												
Dominion Government												
Men	-	-	242	251	22	16	178	120	-	-	442	387
Women	-	-	7	43	-	1	124	36	-	-	131	80
Totals	-	-	249	294	22	17	302	156	-	-	573	467
Provincial Governments												
Men	8	4	27	15	54	51	91	85	-	-	180	155
Women	-	12	-	7	27	56	6	26	-	-	33	101
Totals	8	16	27	22	81	107	97	111	-	-	213	256
Municipalities												
Men	-	-	-	-	35	35	16	7	-	-	51	42
Women	-	-	-	-	4	5	-	1	-	-	4	6
Totals	-	-	-	-	39	40	16	8	-	-	55	48
Universities												
Men	-	-	708	319	-	-	9	3	198	89	915	411
Women	-	-	69	73	-	-	-	-	9	49	78	122
Totals	-	-	777	392	-	-	9	3	207	138	993	533
Hospitals and Tuberculosis Sanatoria												
Men	4	1	24	6	68	55	40	25	-	-	136	87
Women	-	8	16	23	54	82	20	51	-	-	90	164
Totals	4	9	40	29	122	137	60	76	-	-	226	251
Industrial Establishments												
Men	55	15	48	55	1,171	1,413	1,103	825	-	-	2,377	2,308
Women	1	5	3	6	18	295	11	106	-	-	33	412
Totals	56	20	51	61	1,189	1,708	1,114	931	-	-	2,410	2,720
All Reporting Laboratories												
Men	67	20	1,049	646	1,350	1,570	1,437	1,065	198	89	4,101	3,390
Women	1	25	95	152	103	439	161	220	9	49	369	885
Totals	68	45	1,144	798	1,453	2,009	1,598	1,285	207	138	4,470	4,275
Total Personnel												
Men	87		1,695		2,920		2,502		287		7,491	
Women	26		247		542		381		58		1,254	
GRAND TOTALS .	113		1,942		3,462		2,883		345		8,745	

(x) Where the functions of the laboratories were not specified, they were, on the basis of available information, assigned mainly to plant control, or plant control and research; in the case of the universities, however, the laboratories whose functions were not specified were regarded as teaching laboratories and the number of these unspecified laboratories is shown under "Not specified".

TABLE 3. - TOTAL CURRENT EXPENDITURE REPORTED BY LABORATORIES FURNISHING DATA.

Ownership of Laboratory.	Function of Laboratory					Total
	Consulting	Research	Plant Control	Plant Control and Research	Not (x) Specified	
	\$	\$	\$	\$	\$	\$
Current Expenditure -						
Dominion Government						
Salaries and Wages ..	-	910,448	48,210	701,323	-	1,659,981
Other	-	305,891	3,200	136,976	-	446,067
Total	-	1,216,339	51,410	838,299	-	2,106,048
Provincial Governments						
Salaries and Wages ..	36,491	75,002	207,337	229,431	-	548,260
Other	6,600	12,302	23,113	76,384	-	118,399
Total	43,090	87,304	230,451	305,815	-	666,659
Municipalities						
Salaries and Wages ..	-	-	106,420	46,444	-	152,864
Other	-	-	21,224	3,175	-	24,399
Total	-	-	127,645	49,619	-	177,263
Universities						
Salaries and Wages ..	-	1,338,447	-	21,287	344,793	1,704,527
Other	-	278,608	-	3,228	54,275	336,111
Total	-	1,617,055	-	24,515	399,068	2,040,638
Hospitals and Tuberculosis Sanatoria						
Salaries and Wages ..	15,732	90,827	242,782	104,141	-	453,482
Other	1,031	14,992	126,298	45,891	-	188,212
Total	16,762	105,819	369,081	150,032	-	641,694
Industrial Establishments						
Salaries and Wages ..	83,939	200,580	3,756,943	3,216,330	-	7,257,792
Other	25,628	45,690	777,713	796,316	-	1,645,347
Total	109,567	246,271	4,534,657	4,012,646	-	8,903,140
All Reporting Laboratories						
Salaries and Wages ..	136,161	2,615,304	4,361,693	4,318,956	344,793	11,776,907
Other	33,258	657,484	951,549	1,061,969	54,275	2,758,536
GRAND TOTAL .	169,419	3,272,788	5,313,243	5,380,925	399,068	14,535,443

(x) Where the functions of the laboratories were not specified, they were, on the basis of available information, assigned mainly to plant control, or plant control and research; in the case of the universities, however, the laboratories whose functions were not specified were regarded as teaching laboratories and the number of these unspecified laboratories is shown under "Not specified".

TABLE 4. - APPROXIMATE TOTAL INVESTMENT REPORTED BY THE LABORATORIES FURNISHING DATA.

Ownership of Laboratory.	Function of Laboratory					
	Consulting	Research	Plant Control	Plant Control and Research	Not (x) Specified	Total Investment
	\$	\$	\$	\$	\$	\$
Total investment by -						
Dominion Government						
Investment in:						
Housing	-	4,528,700	3,890	798,000	-	5,330,590
Rent in 1938 (Capitalized at 6 p.c.).	-	329,667	64,833	487,833	-	882,333
Equipment	-	2,040,756	65,559	569,676	-	2,675,991
Total Investment, Dominion Government Laboratories	-	6,899,123	134,282	1,855,509	-	8,888,914
Provincial Governments						
Investment in:						
Housing	-	1,000	16,200	254,800	-	272,000
Rent in 1938 (Capitalized at 6 p.c.).	-	20,000	85,700	-	-	105,700
Equipment	22,000	38,125	186,366	220,500	-	466,991
Not itemized	-	-	-	15,000	-	15,000
Total Investment, Provincial Governments Laboratories ..	22,000	59,125	288,266	490,300	-	859,691
Municipalities						
Investment in:						
Housing	-	-	63,100	35,000	-	98,100
Rent in 1938 (Capitalized at 6 p.c.).	-	-	840	-	-	840
Equipment	-	-	89,063	55,000	-	144,063
Total Investment, Municipal Laboratories	-	-	153,003	90,000	-	243,003
Universities						
Investment in:						
Housing	-	2,761,167	-	-	803,090	3,564,257
Equipment	-	1,375,305	-	31,155	667,388	2,073,847
Not itemized	-	803,000	-	-	354,939	1,157,939
Total Investment, University Laboratories	-	4,939,472	-	31,155	1,825,417	6,796,043
Hospitals and Tuberculosis Sanatoria						
Investment in:						
Housing	2,000	2,100	57,639	55,000	-	116,739
Rent in 1938 (Capitalized at 6 p.c.).	-	19,000	61,667	-	-	80,667
Equipment	12,000	19,900	247,118	51,935	-	330,952
Total Investment, Hospital Laboratories	14,000	41,000	366,423	106,935	-	528,358
Industrial Establishments						
Investment in:						
Housing	24,000	174,788	1,137,284	1,754,210	-	3,090,287
Rent in 1938 (Capitalized at 6 p.c.).	80,390	68,650	978,682	653,017	-	1,780,739
Equipment	83,357	256,840	2,808,568	2,161,701	-	5,310,467
Not itemized	-	-	18,500	417,699	-	436,199
Total Investment, Industrial Laboratories	187,747	500,278	4,943,033	4,986,628	-	10,617,687
All Reporting Laboratories						
Investment in:						
Housing	26,000	7,467,755	1,278,112	2,897,010	803,090	12,471,968
Rent in 1938 (Capitalized at 6 p.c.).	80,390	437,317	1,191,722	1,140,850	-	2,850,279
Equipment	117,357	3,730,926	3,396,674	3,089,967	667,388	11,002,312
Not itemized	-	803,000	18,500	432,699	354,939	1,609,138
GRAND TOTAL INVESTMENT	223,747	12,438,998	5,885,008	7,560,527	1,825,417	27,933,697

(x) Where the functions of the laboratories were not specified, they were, on the basis of available information, assigned mainly to plant control, or plant control and research; in the case of the universities, however, the laboratories whose functions were not specified were regarded as teaching laboratories and the number of these unspecified laboratories is shown under "Not specified".

TABLE 5. - TOTAL CAPITAL EXPENDITURE IN 1938, ON BUILDINGS AND EQUIPMENT REPORTED
BY LABORATORIES FURNISHING DATA.

Ownership of Laboratory	Function of Laboratory					Total
	Consulting	Research	Plant Control	Plant Control and Research	Not (1) Specified	
	\$	\$	\$	\$	\$	\$
Dominion Government	-	263,968	14,751	144,584	-	423,303
Provincial Governments ...	2,500	7,714	3,014	77,572	-	90,800
Municipalities	-	-	9,110	2,300	-	11,410
Universities	-	133,834	-	500	15,516	149,850
Hospitals and Tuberculosis Sanatoria	5,060	185,160	22,954	10,312	-	223,486
Industrial Establishments .	6,100	13,405	1,394,045	339,697	-	1,753,246
TOTALS	13,659	604,081	1,443,873	574,965	15,516	2,652,094

TABLE 6. - TOTAL INCOME DURING 1938 FROM PROFESSIONAL SERVICES, LABORATORY, CONSULTING,
ROYALTIES, ETC., RECEIVED BY CONSULTING LABORATORIES.^{/2}

Ownership of Laboratory	Function of Laboratory					Total
	Consulting	Research	Plant Control	Plant Control and Research	Not (1) Specified	
	\$	\$	\$	\$	\$	\$
Dominion Government	-	-	-	8,917	-	8,917
Provincial Governments ...	9,211	-	14,799	-	-	24,009
Municipalities	-	-	4,513	-	-	4,513
Universities	-	23,191	-	-	1,800	24,991
Hospitals and Tuberculosis Sanatoria	11,141	33,479	92,321	71,622	-	208,564
Industrial Establishments .	101,871	-	56,373	642,087	-	800,331
TOTALS	122,222	56,670	168,006	722,626	1,800	1,071,325

(1) Where the functions of the laboratories were not specified, they were, on the basis of available information, assigned mainly to plant control, or plant control and research; in the case of the universities, however, the laboratories whose functions were not specified were regarded as teaching laboratories and the number of these unspecified laboratories is shown under "Not specified".

/2 The questionnaire asked for a statement of the 1938 income from professional services only from consulting laboratories; these figures, therefore, represent only a small fraction of the value of the services rendered by laboratories in the Dominion.

TABLE 7. - PROFESSIONAL EMPLOYEES REPORTED BY DOMINION GOVERNMENT LABORATORIES.

Profession Reported	Function of Laboratory							
	Research		Plant Control		Research and Plant Control		Total	
	M.	F.	M.	F.	M.	F.	M.	F.
Chemists	70	2	15	-	86	4	171	6
Physicists	29	-	-	-	2	-	31	-
Engineers	51	-	4	-	30	-	85	-
Bacteriologists	14	-	-	-	1	-	15	-
Biologists	10	-	-	-	-	-	10	-
Agriculturists	-	-	-	-	6	-	6	-
Plant Breeders	2	-	-	-	-	-	2	-
Statistician	-	-	-	-	1	-	1	-
Assayers	-	-	-	-	3	-	3	-
Entomologists	-	-	-	-	1	-	1	-
Plant Pathologists	-	-	-	-	3	-	3	-
Minerographers	2	-	-	-	-	-	2	-
Inspectors (Explosive Laboratories)	-	-	3	-	-	-	3	-
Mineralogists	-	-	-	-	2	-	2	-
Others, or not specified ..	64	5	-	-	43	120	107	125
All Professions	242	7	22	-	178	124	442	131
TOTALS	249		22		302		573	

M. - Male. F. - Female.

TABLE 8. - PROFESSIONAL EMPLOYEES REPORTED BY PROVINCIAL LABORATORIES.

Profession Reported	Function of Laboratory									
	Consulting		Research		Plant Control		Research and Plant Control		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chemists	-	-	2	-	12	-	47	1	61	1
Physicists	-	-	-	-	-	-	8	-	8	-
Engineers	-	-	3	-	3	-	6	-	12	-
Chemical engineers ..	2	-	-	-	3	-	6	-	11	-
Doctors	-	-	1	-	13	-	2	-	16	-
Technicians	-	-	11	-	4	6	-	-	15	6
Pathologists	6	-	2	-	5	2	1	-	14	2
Agronomists	-	-	1	-	-	-	-	-	1	-
Physiologists	-	-	-	-	3	-	-	-	3	-
Nurses	-	-	-	-	-	3	-	-	-	3
Botanists	-	-	-	-	2	-	3	-	5	-
Entomologists	-	-	-	-	-	-	4	-	4	-
Geologists	-	-	-	-	-	-	1	-	1	-
Draftsmen	-	-	-	-	-	-	2	-	2	-
Engineers (Forestry).	-	-	6	-	-	-	-	-	6	-
Metallurgists	-	-	-	-	-	-	2	-	2	-
Household Scientists.	-	-	-	-	-	4	-	-	-	4
Bacteriologists	-	-	-	-	3	1	-	-	3	1
Veterinarians	-	-	-	-	2	-	-	-	2	-
Biologists	-	-	1	-	1	-	-	-	2	-
Others, or not specified	-	-	-	-	3	11	9	5	12	16
All Professions	8	-	27	-	54	27	91	6	180	33
TOTALS	8		27		81		97		213	
M. - Male.	F. - Female.									

TABLE 9. - PROFESSIONAL EMPLOYEES REPORTED BY MUNICIPAL LABORATORIES.

Profession Reported	Function of Laboratory					
	Plant Control		Research and Plant Control		Total	
	M.	F.	M.	F.	M.	F.
Chemists	17	1	7	-	24	1
Physicists	1	-	3	-	4	-
Engineers	8	-	-	-	8	-
Chemical Engineers	-	-	4	-	4	-
Bacteriologists	1	-	-	-	1	-
Physicians	7	1	-	-	7	1
Pharmacists	1	-	2	-	3	-
Nurses	-	2	-	-	-	2
All Professions	35	4	16	-	51	5
TOTALS	39		16		55	

M. - Male. F. - Female.

TABLE 10. - PROFESSIONAL EMPLOYEES REPORTED BY UNIVERSITY LABORATORIES.

Profession Reported	Function of Laboratory							
	Research		Research and Plant Control		Not (x) Specified		Total	
	M.	F.	M.	F.	M.	F.	M.	F.
Chemists	278	20	5	-	46	1	329	21
Physicists	75	5	-	-	19	-	94	5
Engineers	59	-	-	-	56	-	115	-
Biologists	12	-	-	-	15	2	27	2
Embryologists	-	-	-	-	1	1	1	1
Pathologists	15	-	-	-	1	1	16	1
Geologists	8	-	-	-	5	-	13	-
Physiologists	26	2	-	-	1	-	27	2
Entomologists	11	-	-	-	-	-	11	-
Plant Pathologists	9	-	3	-	-	-	12	-
Bacteriologists	28	5	-	-	1	-	29	5
Engineers (Geological) ...	3	-	-	-	-	-	3	-
Veterinarians	7	-	-	-	1	-	8	-
Doctors	3	-	-	-	16	3	19	3
Technicians	8	18	1	-	-	-	9	18
Agronomists	6	-	-	-	2	-	8	-
Anatomists	1	-	-	-	-	-	1	-
Anatomo-pathologists	1	-	-	-	-	-	1	-
Biochemists	11	8	-	-	-	-	11	8
Pharmacists	-	-	-	-	3	-	3	-
Biophysicists	1	-	-	-	-	-	1	-
Neurophysiologists	1	-	-	-	-	-	1	-
Botanists	2	1	-	-	-	-	2	1
Pharmacologists	1	-	-	-	-	-	1	-
Mineralogists	3	-	-	-	-	-	3	-
Horticulturists	1	-	-	-	-	-	1	-
Animal Pathologists	2	-	-	-	-	-	2	-
Others, or not specified..	136	10	-	-	31	1	167	11
All Professions	708	69	9	-	198	9	915	78
TOTALS	777		9		207		993	

M. - Male. F. - Female.

(x) The functions of the university laboratories, where they were not specified, were regarded as being mainly that of instruction.

TABLE 11. - PROFESSIONAL EMPLOYEES REPORTED BY HOSPITAL AND TUBERCULOSIS SANATORIA.

Profession Reported	Function of Laboratory									
	Consulting		Research		Plant Control		Research and Plant Control		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chemists	2	-	3	-	4	5	7	3	16	8
Physicists	-	-	-	-	-	-	1	-	1	-
Engineers	-	-	-	-	-	-	-	-	-	-
Pathologists	-	-	4	-	21	-	13	-	38	-
Technicians	-	-	1	14	14	44	-	7	15	65
Bacteriologists	-	-	3	-	3	-	4	-	10	-
Doctors	2	-	4	-	17	1	11	2	34	3
Nurses	-	-	-	-	-	1	-	6	-	7
Biologists	-	-	9	2	-	-	1	-	10	2
Biochemists	-	-	-	-	-	1	-	-	-	1
Others, not specified	-	-	-	-	9	2	3	2	12	4
All Professions	4	-	24	16	68	54	40	20	136	90
TOTALS	4		40		122		60		226	

M. - Male.

F. - Female.

TABLE 12. - PROFESSIONAL EMPLOYEES REPORTED BY INDUSTRIAL LABORATORIES.

Profession Reported	Function of Laboratory									
	Consulting		Research		Plant Control		Research and Plant Control		Total	
	M.	F.	M.	F.	M.	F.	M.	F.	M.	F.
Chemists	19	--	23	1	778	4	650	4	1,470	9
Physicists	--	--	5	--	6	--	27	--	38	--
Engineers	4	--	14	--	246	1	282	--	546	1
Biologists	--	--	--	--	--	--	2	--	2	--
Bacteriologists	4	--	--	--	3	--	--	--	7	--
Doctors	1	--	--	--	--	--	1	--	2	--
Nurses	--	1	--	--	--	--	--	--	--	1
Brewmasters	--	--	--	--	4	--	--	--	4	--
Metallurgists	--	--	--	--	3	--	2	--	5	--
Pharmacists	--	--	--	--	3	--	--	--	3	--
Others, or not specified	27	--	6	2	228	13	139	7	300	22
All Professions	55	1	48	3	1,171	18	1,103	11	2,377	33
TOTALS	56		51		1,189		1,114		2,410	

M. - Male. F. - Female.

TABLE 13. - LABORATORIES CARRYING ON OR PREPARED TO UNDERTAKE WORK IN SPECIFIED CLASSES.

Class of Work Indicated.	Laboratories Maintained by:																	
	Dominion Government			Provincial Governments			Municipalities			Universities			Hospitals and Tuberculosis Sanatoria			Industrial Establishments		
	Number of Laboratories prepared to do:																	
	Physical Testing	Chemical Testing	Research	Physical Testing	Chemical Testing	Research												
Acids	2	5	1	2	4	2	3	5	2	4	13	7	-	-	-	53	128	24
Adhesives	2	3	3	2	2	2	2	2	2	2	4	4	-	-	-	50	53	24
Aerodynamics	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Analysis	8	21	14	8	13	8	4	6	3	11	30	22	1	2	1	77	230	52
Animal fats and oils	5	10	7	2	4	2	2	4	2	7	16	16	-	-	-	64	97	30
Animal Research	-	-	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Apiculture	-	-	-	-	-	1	-	-	-	-	-	1	-	-	-	-	-	-
Assaying	1	2	1	1	6	3	2	3	2	2	7	4	-	-	-	33	110	29
Bacteriology	3	5	10	10	7	7	5	5	7	14	15	34	5	5	7	27	45	23
Biochemistry and nutrition ...	6	10	12	2	4	2	-	1	-	5	16	25	4	4	3	4	13	7
Biology	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-
Blood	-	-	-	1	-	-	-	-	-	1	1	-	-	-	1	-	-	-
Botany	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Cellulose	1	1	1	2	3	4	-	-	-	4	6	8	-	-	-	58	64	36
Cement	3	2	2	2	6	-	6	5	2	9	6	6	-	-	-	35	46	20
Ceramics	3	2	2	1	2	-	2	3	2	2	4	1	-	-	-	18	26	12
Colloids	1	1	1	-	1	2	-	-	-	4	7	12	-	-	-	6	12	9
Dairy Products	-	1	1	1	-	-	-	1	-	2	2	3	-	-	-	5	5	4
Dyes and intermediates	1	2	2	-	2	1	2	-	-	2	6	6	-	-	-	38	44	16
Electrical engineering	5	-	2	-	-	-	1	-	-	11	-	8	-	-	-	37	11	23
Electrochemistry	2	3	2	-	2	2	-	-	-	5	9	10	-	-	-	9	30	23
Electrothermics	1	1	1	-	1	-	1	1	-	2	2	2	-	-	-	6	7	11
Explosives	3	3	2	-	2	-	-	1	-	1	2	2	-	-	-	10	19	8
Entomology	-	-	-	-	-	1	-	-	-	-	-	4	-	-	-	-	-	-
Fermentations	2	7	6	-	2	1	-	-	-	3	5	12	-	-	-	25	46	24
Fertilizers	6	10	3	-	4	2	-	4	-	8	15	13	-	-	-	17	67	16
Flotation	2	1	2	-	-	-	-	-	-	2	1	5	-	-	-	15	20	26
Foods	9	16	22	7	6	3	-	6	-	11	27	30	4	3	2	43	105	43
Fuels	3	3	3	3	10	1	4	5	2	10	11	13	-	-	-	61	124	23
Feeding stuffs, insecticides, fungicides	2	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fisheries biology	1	1	1	1	1	1	-	-	-	-	-	1	-	-	-	-	-	-
Forestry	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-
Genetics	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Geriatrics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Heat	2	1	2	1	1	1	2	2	2	10	1	10	-	-	-	10	6	8
Highway materials	-	-	-	-	-	-	1	1	-	-	-	-	-	-	-	-	-	-
Histology	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Hydraulics	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hydrodynamics	1	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iron and steel	3	3	2	2	4	1	2	4	-	10	11	7	-	-	-	66	99	31
Leather	2	2	1	1	3	1	-	-	-	4	-	-	-	-	-	15	26	13
Light	1	-	1	1	-	-	-	-	-	11	1	34	-	-	-	5	1	4
Medicine	-	-	-	-	-	-	-	-	-	-	-	2	-	-	21	-	-	-
Metallography	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Microscopy	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-	-	-	-
Minerals	3	3	3	1	2	1	-	-	-	4	5	5	-	-	-	-	-	-
Mycology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-
Non-ferrous metals	4	4	2	1	6	2	2	3	-	7	12	12	-	-	-	61	107	39
Organic chemistry	4	6	5	3	5	2	-	2	-	7	17	19	2	2	-	22	57	27
Paints	6	6	4	2	5	3	3	5	3	1	7	3	-	-	-	60	67	41
Paper	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	19	17	10
Parasitology	-	-	-	-	-	-	-	-	-	-	1	1	-	-	-	-	-	-
Pathology	-	-	-	-	-	-	-	-	-	-	-	2	-	-	3	-	-	-
Petroleum	4	4	2	4	6	5	6	7	2	10	10	10	-	-	-	68	71	24
Pharmaceuticals	5	7	5	-	2	1	-	1	-	6	14	19	3	1	2	31	47	23
Physical chemistry	3	4	4	3	2	2	1	-	-	7	12	13	-	-	-	11	15	16
Pharmacology	-	-	-	-	-	-	-	-	-	-	1	3	-	-	-	-	-	-
Plants	-	1	5	-	-	-	-	-	-	2	2	7	-	-	-	-	-	-
Plastics	2	3	3	-	1	1	2	2	-	2	3	4	-	-	-	16	20	12
Physiology	-	-	-	-	-	-	-	-	-	-	1	5	-	-	-	-	-	-
Radiology	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2	-	-	-
Refrigeration	1	-	2	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Rubber	2	2	1	1	2	-	-	-	-	2	2	5	-	-	-	35	34	19
Sanitation	2	3	5	6	6	3	2	5	1	4	9	6	3	2	-	16	32	15
Seed	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Serology	-	-	-	-	-	-	-	-	-	-	-	1	-	-	2	-	-	-
Soap and glycerine	5	7	3	-	5	-	3	5	2	1	7	5	-	-	-	30	70	22
Soils	6	11	8	4	7	5	3	5	2	12	16	17	-	-	-	21	35	12
Solvents	3	3	3	1	3	1	2	3	2	3	6	5	-	-	-	57	71	20
Textiles	4	4	3	1	2	1	1	1	-	3	2	4	-	-	-	58	54	25
Tuberculosis	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-
Vegetable oils	4	7	6	1	4	2	2	4	2	4	11	9	-	-	-	61	99	27
Water	3	7	7	8	12	6	10	13	5	7	19	11	2	2	-	54	130	25
Wood	4	3	4	-	-	-	2	3	2	9	7	13	-	-	-	44	37	22
Zoology	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-
Other classes	-	-	-	1	1	-	-	-	-	2	1	1	-	-	-	54	65	42

TABLE 14. - TABLE SHOWING THE NUMBER OF PERSONS EMPLOYED IN LABORATORIES CARRYING ON, OR PREPARED TO UNDERTAKE WORK IN THE SPECIFIED CLASSES.

Class of Work Indicated.	Laboratories Maintained by:											
	Dominion Government		Provincial Governments		Municipalities		Universities		Hospitals and Tuberculosis Sanatoria		Industrial Establishments	
	Professional	Non-Professional	Professional	Non-Professional	Professional	Non-Professional	Professional	Non-Professional	Professional	Non-Professional	Professional	Non-Professional
Acids	138	233	37	38	21	11	207	69	-	-	632	692
Adhesives	151	230	30	27	12	10	51	46	-	-	323	248
Aerodynamics	117	215	6	4	-	-	-	-	-	-	-	-
Analysis	291	233	112	109	24	12	259	147	37	57	1,020	745
Animal fats and oils	207	276	36	37	18	10	254	83	-	-	368	366
Animal Research	17	14	-	-	-	-	3	8	-	-	-	-
Apiculture	-	-	2	-	-	-	1	-	-	-	-	-
Assaying	33	38	14	14	16	10	61	21	-	-	470	552
Bacteriology	185	289	119	176	13	16	223	150	62	75	181	118
Biochemistry and nutrition ..	244	286	44	65	3	4	232	100	49	42	52	32
Biology	-	-	-	-	-	-	16	7	-	-	-	-
Blood	-	-	2	14	-	-	10	1	36	31	-	-
Botany	-	-	-	-	-	-	12	-	-	-	-	-
Cellulose	117	215	36	32	-	-	164	72	-	-	326	463
Cement	134	234	26	18	21	10	153	51	-	-	310	208
Ceramics	134	234	32	27	14	10	35	14	-	-	175	107
Colloids	117	215	31	39	-	-	206	69	-	-	64	73
Dairy products	14	3	1	1	3	-	7	1	1	-	13	15
Dyes and intermediates	120	218	22	25	12	10	107	33	-	-	162	204
Electrical engineering	122	117	-	-	1	4	116	37	-	-	282	212
Electrochemistry	146	243	28	30	-	-	175	45	-	-	237	242
Electrothermics	117	215	26	30	2	-	27	15	-	-	123	152
Explosives	133	221	10	2	2	-	97	11	-	-	112	101
Entomology	-	-	6	12	-	-	22	3	-	-	-	-
Fermentations	188	247	54	75	-	-	142	62	-	-	128	74
Fertilizers	88	42	42	41	16	10	161	53	-	-	277	136
Flotation	38	36	-	-	-	-	103	21	-	-	217	158
Foods	281	349	91	121	22	25	240	101	26	18	300	190
Fuels	176	255	82	97	23	11	187	84	-	-	770	781
Feeding stuffs, insecticides, fungicides	10	6	-	-	-	-	-	-	-	-	-	-
Fisheries biology	11	3	1	3	-	-	5	2	-	-	-	-
Forestry	-	-	3	12	-	-	-	-	-	-	-	-
Genetics	-	-	-	-	-	-	5	2	-	-	-	-
Germs	-	-	-	-	-	-	-	-	2	4	-	-
Heat	131	228	26	30	12	10	213	52	-	-	96	55
Highway materials	-	-	4	5	5	-	-	-	-	-	-	-
Histology	-	-	-	-	-	-	12	14	2	5	-	-
Hydraulics	-	-	-	-	-	-	6	2	-	-	-	-
Hydrodynamics	117	215	-	-	-	-	-	-	-	-	-	-
Iron and steel	177	253	39	38	22	25	242	67	-	-	516	462
Leather	126	218	36	32	-	-	30	13	-	-	123	72
Light	117	215	2	-	-	-	166	48	-	-	29	32
Medicine	-	-	-	-	-	-	53	33	220	239	-	-
Metallography	-	-	-	-	-	-	7	4	-	-	-	-
Microscopy	-	-	-	-	-	-	36	12	-	-	-	-
Minerals	41	37	9	12	-	-	27	10	-	-	-	-
Mycology	-	-	-	-	-	-	-	-	2	4	-	-
Non-ferrous metals	157	151	49	47	18	10	242	82	-	-	623	480
Organic chemistry	201	241	45	43	6	-	315	108	6	7	312	344
Paints	180	258	66	81	22	10	200	43	-	-	491	317
Paper	-	-	-	-	-	-	-	-	-	-	87	154
Parasitology	-	-	-	-	-	-	8	8	2	5	-	-
Pathology	-	-	-	-	-	-	52	51	68	71	-	-
Petroleum	151	245	47	48	25	10	252	80	-	-	372	413
Pharmaceuticals	141	247	28	30	4	-	191	83	20	19	192	484
Physical chemistry	136	230	33	39	2	-	279	102	-	-	227	222
Pharmacology	-	-	-	-	-	-	4	5	-	-	-	-
Plants	21	13	-	-	-	-	36	28	-	-	-	-
Plastics	151	230	22	25	12	10	102	12	-	-	154	220
Physiology	-	-	-	-	-	-	12	9	-	-	-	-
Radiology	-	-	-	-	-	-	-	-	11	24	-	-
Refrigeration	124	218	-	-	-	-	6	-	-	-	-	-
Rubber	126	218	33	39	3	7	149	46	-	-	173	133
Sanitation	176	223	28	58	22	10	112	66	8	13	139	103
Seed	125	4	-	-	-	-	-	-	-	-	-	-
Serology	-	-	-	-	-	-	14	20	28	11	-	-
Soap and glycerine	147	249	63	81	22	10	157	33	-	-	258	202
Soils	205	243	62	46	21	11	161	57	-	-	267	242
Solvents	134	231	46	36	14	10	160	33	-	-	279	291
Textiles	128	220	34	32	2	-	103	39	-	-	276	228
Tuberculosis	-	-	-	-	-	-	-	-	16	18	-	-
Vegetable oils	183	243	37	38	18	10	224	56	-	-	401	296
Water	248	301	135	163	33	25	244	96	7	7	546	539
Wood	151	234	25	24	14	10	198	72	-	-	261	407
Zoology	-	-	-	-	-	-	14	12	-	-	-	-
Others	-	-	43	35	12	12	55	17	-	-	485	419

A p p e n d i x.

DIRECTORY OF LABORATORIES.

All laboratories which completed questionnaires and whose statistical data are given in the foregoing tables, are listed in this Directory, which was prepared by officers of the National Research Council. The arrangement of names conforms to the plan followed in the tables, in which the statistics are mainly grouped according to the ownership of the laboratories. In the Directory, however, the laboratories are listed on a provincial basis, and organizations having laboratories in more than one province are shown under each province where they reported a laboratory.

The organizations co-operating in the enquiry into laboratory facilities have been numbered by classes, Dominion Government laboratories being numbered from one to 57, Provincial Government laboratories from 100, Municipal laboratories from 200, University and school laboratories from 300, Hospital laboratories from 400 and industrial laboratories from 500. The numbers assigned to the various laboratories are shown to the right of the name.

To facilitate the use of the Directory, the industrial laboratories have also been classified according to the types of work which they reported themselves as equipped to investigate; a key to this classification appears immediately following the Directory, the numbers given in the key corresponding to those shown at the left of the names of the establishments furnishing data for their laboratories.

DOMINION GOVERNMENT LABORATORIES

Prince Edward Island

- 1 Atlantic Biological Station, Fisheries Research Board of Canada, Ellerslie.
- 2 Experimental Fox Ranch (Dominion Department of Agriculture), Summerside.

Nova Scotia

- 3 Atlantic Fisheries Experimental Station, Fisheries Research Board of Canada, Halifax.
- 4 Experimental Station, Dominion Department of Agriculture, Kentville.
- 5 Food & Drugs Laboratory, Dominion Department of Pensions and National Health, Dominion Public Building, Halifax.
- 6 Fruit Products Laboratory, Dominion Department of Agriculture, Kentville.

New Brunswick

- 7 Atlantic Biological Station, Fisheries Research Board of Canada, St. Andrews.
- 8 Plant Products Division, Dominion Department of Agriculture, Sackville.

Quebec

- 9 Animal Diseases Research Institute, Dominion Department of Agriculture, Hull.
- 10 Dominion Arsenal, Department of National Defence, Carleton St., Quebec.
- 11 Food & Drugs Laboratory, Dominion Department of Pensions & National Health, Room 204, 379 Common St., Montreal.
- 12 Forest Products Laboratories, Dominion Department of Mines & Resources, 3420 University St., Montreal.
- 13 Fumigation Station, Dominion Department of Agriculture, 785 Mill St., Montreal.
- 14 Gaspé Fisheries Experimental Station, Fisheries Research Board of Canada, Grand River.
- 15 Plant Products Division, Dominion Department of Agriculture, Customs Building, Montreal.

Ontario

- 16 Bureau of Mines, Division of Fuels, Dominion Department of Mines & Resources, 562 Booth St., Ottawa.
- 17 Bureau of Mines, Division of Industrial Minerals, Dominion Department of Mines & Resources, Lydia & Rochester Sts., Ottawa.
- 18 Bureau of Mines, Division of Metallic Minerals, Dominion Department of Mines & Resources, 552 Booth St., Ottawa.
- 19 Bureau of Mines, Explosives Division, Dominion Department of Mines & Resources, Sussex & George Sts., Ottawa.
- 20 Central Experimental Farm, Dominion Department of Agriculture, Ottawa. Divisions: Animal Husbandry, Animal Pathology, Bacteriology and Dairy Research, Bee, Cereal, Chemistry, Economic Fibre, Field Husbandry, Forage Plants, Horticulture, Poultry, Tobacco.
- 21 Customs & Excise Laboratory, Dominion Department of National Revenue, Bryson Bldg., Ottawa.
- 22 Experimental Station, Dominion Department of Agriculture, Harrow.
- 23 Electricity & Gas Inspection Service, Dominion Department of Trade & Commerce, National Research Council, Sussex St., Ottawa.
- 24 Food & Drugs Laboratory, Dominion Department of Pensions & National Health, Sussex and John Sts., Ottawa.
- 25 Food & Drugs Laboratory, Dominion Department of Pensions & National Health, 59 Victoria St., Toronto.
- 26 Forest Products Laboratories, Dominion Department of Mines & Resources, Isabella and Metcalfe Sts., Ottawa.
- 27 Geological Survey, Dominion Department of Mines & Resources, Sussex and George Sts., Ottawa.
- 28 Laboratory of Hygiene, Dominion Department of Pensions & National Health, Sussex and John Sts., Ottawa.
- 29 Marine Radio Division, Air Services, Dominion Department of Transport, 683 Wellington St., Ottawa.
- 30 National Research Council of Canada, Ottawa. Divisions: Biology & Agriculture, Chemistry, Physics & Electrical Engineering, Sussex St.; Mechanical Engineering, John St.
- 31 Plant Products Division, Dominion Department of Agriculture, 251 Besserer St., Ottawa.
- 32 Plant Products Division, Dominion Department of Agriculture, 79 Sussex St., Ottawa.

Ontario (cont'd)

- 33 Plant Products Division, Dominion Department of Agriculture, 86 Collier St.,
Toronto.
- 34 Royal Canadian Mint, Dominion Department of Finance, Sussex St., Ottawa.
- 35 Testing Laboratories, Dominion Department of Public Works, West Block, Ottawa.

Manitoba

- 36 Board of Grain Commissioners of Canada, 876 Grain Exchange Bldg., Winnipeg.
- 37 Dominion Rust Research Laboratory, Winnipeg.
- 38 Electricity & Gas Inspection Service, Dominion Department of Trade & Commerce,
Room 509, Dominion Public Bldg., Winnipeg.
- 39 Food & Drugs Laboratory, Dominion Department of Pensions & National Health,
Main and Magnus Sts., Winnipeg.
- 40 Plant Products Division, Dominion Department of Agriculture, 730 Dominion
Public Building, Winnipeg.

Saskatchewan

- 41 Dairy Branch, Dominion Department of Agriculture, 11th Avenue and Albert St.,
Regina.
- 42 Forage Crops Laboratory, Dominion Department of Agriculture, University of
Saskatchewan, Saskatoon.
- 43 Plant Products Division, Dominion Department of Agriculture, Federal Bldg.,
Saskatoon.

Alberta

- 44 Plant Products Division, Dominion Department of Agriculture, Immigration
Bldg., Calgary.
- 45 Veterinary Research Station, Dominion Department of Agriculture, Lethbridge.

British Columbia

- 46 Division of Animal Pathology, Dominion Department of Agriculture, Saanichton.
- 47 Dominion Laboratory of Plant Pathology, Dominion Department of Agriculture,
Saanichton.
- 48 Dominion of Canada Assay Office, Dominion Department of Finance, 326 Howe St.,
Vancouver.

British Columbia (Cont'd)

- 49 Electricity & Gas Inspection Service, Dominion Department of Trade & Commerce,
326 Howe St., Vancouver.
- 50 Experimental Station, Dominion Department of Agriculture, Summerland.
- 51 Food & Drugs Laboratory, Dominion Department of Pensions & National Health,
325 Granville St., Vancouver.
- 52 Forest Products Laboratory, Dominion Department of Mines & Resources,
Vancouver.
- 53 Pacific Biological Station, Fisheries Research Board of Canada, Nanaimo.
- 54 Pacific Fisheries Experimental Station, Fisheries Research Board of Canada,
Prince Rupert.
- 55 Plants Products Division, Dominion Department of Agriculture, Mt. Pleasant,
Vancouver.
- 56 Red Water Investigational Farm, Dominion Department of Agriculture, Milner.
- 57 Royal Canadian Mint, Dominion Department of Finance, Vancouver.

PROVINCIAL GOVERNMENT LABORATORIES

Nova Scotia

- 100 Nova Scotia Department of Highways, Halifax.
- 101 Pathological Institute, Nova Scotia Department of Public Health, Morris St.,
Halifax.

New Brunswick

- 102 New Brunswick Department of Health, o/o General Hospital, Saint John.
- 103 New Brunswick Department of Lands & Mines, Geology and Forestry Bldg.,
Fredericton.

Quebec

- 104 Botanical Laboratory, Protection of Plants Service, Quebec Department of
Agriculture, Quebec.
- 105 Entomological Laboratory, Quebec Department of Agriculture, Montreal.

Quebec (Cont'd)

- 106 Entomological Service, Quebec Department of Lands & Forests, 53 Grand Allee, Quebec.
- 107 Industrial Hygiene Laboratory, Quebec Department of Public Health, Parliament Buildings, Quebec.
- 108 Laboratory of Pathological Forestry, Quebec Department of Lands & Forests, Quebec.
- 109 Mines Service, Quebec Department of Mines & Fisheries, Annex "E", Parliament Bldgs., Quebec.
- 110 Mines Service, Quebec Department of Mines & Fisheries, Ecole Polytechnique, Montréal.
- 111 Mines Service, Quebec Department of Mines & Fisheries, Thetford Mines.
- 112 Pépinière Provinciale, Quebec Department of Lands and Forests, Berthierville.
- 113 Quebec Department of Health, 89 Notre Dame St. E., Montreal.
- 114 Quebec Roads Department, Parliament Buildings, Quebec.
- 115 Service de Classification des Terres, Quebec Department of Colonization, 219 St. Paul St., Québec.
- 116 Soils Laboratory, Quebec Department of Agriculture, Sainte Anne de la Pocatière.

Ontario

- 117 Chemical & Assay Laboratories, Ontario Department of Mines, Parliament Bldgs., Toronto.
- 118 Industrial Hygiene Laboratory, Ontario Department of Health, East Block, Parliament Bldgs., Toronto.
- 119 Ontario Department of Health, Branch Laboratory, Fort William.
- 120 Ontario Department of Health, Branch Laboratory, 132 Main St. E., North Bay.
- 121 Ontario Department of Health, Branch Laboratory, 428 Slater Street, Ottawa.
- 122 Ontario Department of Health, Branch Laboratory, Peterborough.
- 123 Ontario Department of Health, Branch Laboratory, 53 Gore St., Sault Ste. Marie.
- 124 Ontario Department of Health, Central Laboratory, East Block Parliament Bldgs., Toronto.

Ontario (Cont'd)

- 125 Ontario Department of Public Highways, Electrical Bldg., University of Toronto, Toronto.
- 126 Ontario Research Foundation, 43 Queen's Park, Toronto.
- 127 Temiskaming Testing Laboratory, Ontario Department of Lands & Forests, Cobalt.
- 128 Wire Rope Testing Laboratory, Ontario Department of Mines, Toronto.

Manitoba

- 129 Bacteriological Laboratory, Manitoba Department of Health & Public Welfare, Winnipeg.
- 130 Manitoba Department of Agriculture, Legislative Bldg., Winnipeg.
- 131 Manitoba Game & Fisheries Laboratory, Experimental Fur Farm, University of Manitoba, Winnipeg.
- 132 Mines Branch, Manitoba Department of Mines & Natural Resources, Memorial Blvd., Winnipeg.

Saskatchewan

- 133 Saskatchewan Department of Highways, 7th Ave. and Smith St., Regina.
- 134 Saskatchewan Department of Public Health, Regina.
- 135 Soils Research Laboratory, Saskatchewan Department of Agriculture, Swift Current.

Alberta

- 136 Alberta Department of Public Health, University of Alberta, Edmonton.
- ~~137~~ Alberta Department of Public Works, Edmonton.
- 138 Apiculture Branch, Alberta Department of Agriculture, Edmonton.
- 139 Dairy Department, Alberta Department of Agriculture, University of Alberta, Edmonton.
- 140 Foothills Health District Laboratory, Alberta Department of Public Health, High River.
- 141 Lamont Health District Laboratory, Alberta Department of Public Health, Lamont.

Alberta (Cont'd)

- 142 Petroleum & Natural Gas Division, Alberta Department of Lands & Mines, Telephone Bldg., Calgary.
- 143 Red Deer Full Time Health Unit, Alberta Department of Public Health, Box 180, Red Deer.
- 144 British Columbia Board of Health Laboratories, Kelowna.
- 145 British Columbia Board of Health Laboratory, Division of Tuberculosis Control, 10th and Willow St., Vancouver.
- 146 British Columbia Department of Mines, Victoria.

MUNICIPAL LABORATORIES

Quebec

- 200 Filtration Plant, St. Maurice St., Trois Rivières.
- 201 Municipal Laboratory, City Hall, Quebec.
- 202 Municipal Laboratory, Public Works Department, 3161 Joseph St., Verdun.
- 203 Public Health Laboratory, City Hall, Montreal.
- 204 Public Works Laboratory, City Hall, 600 De Fleurimont St., Montreal.

Ontario

- 205 Board of Works, City Hall, Kitchener.
- 206 City of Ottawa Water Purification Plant, Ottawa.
- 207 Filtration Plant Laboratories, Centre Island, Toronto.
- 208 Hamilton Filtration Plant, Hamilton.
- 209 Health Laboratory, City Hall, Toronto.
- 210 Public Utilities Commission, London.
- 211 Sewerage Disposal Plant, c/o City Engineer, Stratford.
- 212 Water Works Plant, Chatham.

Ontario (Cont'd)

- 213 Welland County Road System, Seeley St., Welland.
- 214 Works Department, Foot Sherbourne St., Toronto.

Manitoba

- 215 City Health Department, City Hall, Winnipeg.

Saskatchewan

- 216 Water Filtration Plant, Swift Current.

Alberta

- 217 Calgary Municipal Testing Laboratory, Calgary.
- 218 City Health Department, Edmonton.
- 219 City Power Plant, Edmonton.
- 220 Glenmore Water Supply Laboratory, Calgary.

British Columbia

- 221 Board of Works Laboratory, 120 Union St., Vancouver.
- 222 City of Vancouver Health Department, 236 Cordova St. E., Vancouver.

UNIVERSITY AND SCHOOL LABORATORIES.

Prince Edward Island

- 300 Prince of Wales College, Charlottetown.

Nova Scotia

- 301 Acadia University, Wolfville.
- 302 Dalhousie University, Halifax.
- 303 St. Francis Xavier University, Antigonish.

New Brunswick

- 304 Mount Allison University, Sackville.
- 305 University of New Brunswick, Fredericton.

Quebec

- 306 Agricultural Institute of Qka, LaTrappe.
- 307 Agricultural School, Ste. Anne de la Pocatière.
- 308 Dairy School, Ste. Hyacinthe.
- 309 Macdonald College, Macdonald College, Que.
- 310 McGill University, Montreal.
- 311 Sainte-Marie College, 1180 Bleury St., Montreal.
- 312 Sir George Williams College, 1441 Drummond St., Montreal.
- 313 Université Laval, Quebec.
- 314 University of Bishop's College, Lennoxville.
- 315 University of Montreal, 1265 St. Denis St., Montreal.

Ontario

- 316 Kemptville Agricultural School, Kemptville.
- 317 Ontario Agricultural College, Guelph.
- 318 Ontario College of Pharmacy, 44 Gerrard St., Toronto.
- 319 Ontario Veterinary College, Guelph.
- 320 Queen's University, Kingston.
- 321 Royal Military College, Kingston.
- 322 St. Patrick's College, Echo Drive, Ottawa.
- 323 Trent Institute, Guelph.
- 324 University of Ottawa, Ottawa.
- 325 University of Toronto, Toronto.
- 326 University of Western Ontario, London.

Manitoba

- 327 Brandon College, Brandon.
- 328 Manitoba School, Portage la Prairie.
- 329 University of Manitoba, Winnipeg.

Saskatchewan

- 330 University of Saskatchewan, Saskatoon.

Alberta

- 331 School of Agriculture, Olds.
- 332 School of Agriculture, Vermilion.
- 333 University of Alberta, Edmonton.

British Columbia

- 334 University of British Columbia, Vancouver.

HOSPITAL LABORATORIES.

(Copies of the questionnaire were sent to all hospitals having 200 beds or more. The following list includes the names of those from which returns were received.)

Nova Scotia

- 400 Camp Hill Hospital, Halifax.
- 401 Halifax Infirmary, Halifax.
- 402 Nova Scotia Sanatorium, Kentville.

New Brunswick

- 403 Jordan Memorial Sanatorium, The Glades, N.B.
- 404 Moncton Hospital Pathological Laboratory, Moncton.
- 405 St. John Tuberculosis Hospital, East Saint John.

(Copies of the questionnaire were sent to all hospitals having 200 beds or more. The following list includes the names of those from which returns were received.)

Quebec

- 406 Children's Memorial Hospital, Montreal.
- 407 Hôpital de l'Enfant Jésus, 395 de la Canardière, Québec.
- 408 Hôpital du Sacré-Coeur, 3300 Blvd. Gouin ouest, Cartierville.
- 409 Hôpital du St. Sacrement, Québec.
- 410 Hôpital Laval, Ste. Foy, Québec.
- 411 Hôpital Pasteur, rue Sherbrooke est, Montréal.
- 412 Hôpital Ste. Jeanne d'Arc, 110 Prince Arthur e., Montréal.
- 413 Hôpital Ste. Justine, rue 6055 St. Denis, Montréal.
- 414 Hôtel-Dieu de Québec, Cote du Palais, Québec.
- 415 Hôtel-Dieu de St. Joseph, Avenue des Pins ouest, Montréal.
- 416 Hôtel-Dieu du Coeur Agonisant de Jésus, Lévis.
- 417 Hôtel-Dieu St. Vallier, Chicoutimi.
- 418 Montreal General Hospital, Montreal.
- 419 St. Luke's Hospital, St. Denis St., Montreal.
- 420 St. Mary's Hospital, 3830 Lacombe Ave., Montreal.
- 421 St. Vincent de Paul General Hospital, Sherbrooke.
- 422 Sanatorium Cooke, Trois Rivières.
- 423 Woman's General Hospital, 4039 Tupper St., Westmount.

Ontario

- 424 Banting Institute, College St., Toronto.
- 425 Brantford General Hospital, Brantford.
- 426 Christie Street Hospital, Christie St., Toronto.
- 427 General Hospital, Hamilton.
- 428 Hospital for Sick Children, College St., Toronto.

(Copies of the questionnaire were sent to all hospitals having 200 beds or more. The following list includes the names of those from which returns were received.)

Ontario (Cont'd)

- 429 McKellar General Hospital, Fort William.
- 430 Mountain Sanatorium, Hamilton.
- 431 Muskoka Hospital, Gravenhurst.
- 432 Niagara Falls General Hospital, Niagara Falls.
- 433 Nicholls Hospital, Peterborough.
- 434 Ottawa Civic Hospital, Ottawa.
- 435 Ottawa General Hospital, Ottawa.
- 436 Preston Springs Sanatorium Ltd., Preston.
- 437 Queen Alexandra Sanatorium, London.
- 438 Royal Ottawa Sanatorium, Ottawa.
- 439 St. Michael's Hospital, Bond Street, Toronto.
- 440 St. Joseph's Hospital, London.
- 441 St. Joseph's Hospital, Peterborough.
- 442 St. Joseph's Hospital, Sunnyside, Toronto.
- 443 Sarnia General Hospital, Sarnia.
- 444 Toronto General Hospital, Toronto.
- 445 Toronto Hospital for Consumptives, Weston.
- 446 Toronto Western Hospital, Bathurst St., Toronto.
- 447 Westminster Hospital, London.

Manitoba

- 448 Brandon Hospital for Mental Diseases, Brandon.
- 449 Central Tuberculosis Clinic, 668 Bannatyne Ave., Winnipeg.
- 450 Deer Lodge Hospital, Deer Lodge, St. James.
- 451 Hospital for Mental Diseases, Selkirk.

(Copies of the questionnaire were sent to all hospitals having 200 beds or more. The following list includes the names of those from which returns were received.)

Manitoba (Cont'd)

- 452 Manitoba Sanatorium, Ninette.
- 453 Manitoba School for Mental Defectives, Portage la Prairie.
- 454 Misericordia Hospital, 20 Sherbrooke St., Winnipeg.
- 455 Municipal Hospital, Morley Ave., Winnipeg.
- 456 St. Boniface Hospital, St. Boniface.
- 457 St. Boniface Sanatorium, St. Vital.

Saskatchewan

- 458 Fort Qu'Appelle Sanatorium, Fort San.
- 459 Prince Albert Sanatorium, Prince Albert.
- 460 Regina General Hospital, Regina.
- 461 Regina Grey Nuns' Hospital, Regina.
- 462 Saskatoon Sanatorium, Saskatoon.

Alberta

- 463 Calgary General Hospital, Calgary.
- 464 Central Alberta Sanatorium, Calgary.
- 465 Edmonton General Hospital, Edmonton.
- 466 Holy Cross Hospital, Calgary.
- 467 Provincial Mental Hospital, Ponoka.
- 468 University of Alberta Hospital, Edmonton.

British Columbia

- 469 Kootenay Lake General Hospital, Nelson.
- 470 Nanaimo Clinical Laboratory, Nanaimo Hospital, Nanaimo.
- 471 Prince Rupert Hospital, Prince Rupert.

(Copies of the questionnaire were sent to all hospitals having 200 beds or more. The following list includes the names of those from which returns were received.)

British Columbia (Cont'd)

- 472 Provincial Mental Hospital, Essondale.
- 473 Quarantine Station, William Head, Vancouver Island.
- 474 Royal Inland Hospital, Kamloops.
- 475 Royal Jubilee Hospital, Victoria.
- 476 St. Paul's Hospital, Vancouver.
- 477 Shaughnessy Hospital, Vancouver.
- 478 Vancouver General Hospital, Vancouver.
- 479 C. S. Williams Clinic, Trail.

INDUSTRIAL LABORATORIES.

Nova Scotia

- 500 Acadia Coal Co., Ltd., Stellarton.
- 501 Acadia Sugar Refining Co., Ltd., 237 Hollis St., Halifax.
Laboratory at: Dartmouth.
- 502 Avon Gold Mines Ltd., 407 Insurance Exchange Bldg., Montreal, Que.
Laboratory at: Oldham.
- 503 Borden Co., Ltd., Yardley House, Toronto, Ont.
Laboratory at: Water Street, Truro.
- 504 Coca Cola Co. of Canada, Ltd., 90 Broadview, Toronto, Ont.
Laboratory at: 72 Grafton St., Halifax.
- 505 Dominion Coal Co. Ltd., Sydney.
Laboratory at: Glace Bay.
- 506 Dominion Steel and Coal Corp. Ltd., Sydney.
- 507 Dominion Tar & Chemical Co. Ltd., 423 Canada Cement Bldg., Montreal, Que.
Laboratory at: Sydney.

Nova Scotia (Cont'd)

- 508 Festerfat Ltd., 91 Lower Water St., Halifax.
- 509 General Sea Foods Ltd., Ocean Terminals, Halifax.
- 510 Guysborough Mines Ltd., Goldenville.
- 511 Halifax Power & Pulp Co. Ltd., Sheet Harbour.
- 512 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at: Dartmouth.
- 513 Lockeport Co. Ltd., Lockeport.
- 514 Maritime Telegraph & Telephone Co., Hollis St., Halifax.
- 515 Mersey Paper Co. Ltd., P.O. Box 485, Liverpool.
- 516 Moirs Ltd., 128 Argyle St., Halifax.
- 517 Nova Scotia Light & Power Co., Ltd., 357 Barrington St., Halifax.
Laboratory at: Lower Water St., Halifax.
- 518 Oland & Sons, 297 Agricola St., Halifax.
- 519 Trenton Steel Works, Ltd., New Glasgow.
Laboratory at: Trenton.

New Brunswick

- 520 Atlantic Sugar Refineries, Ltd., 805 McGill Bldg., Montreal, Que.
Laboratory at: Saint John.
- 521 Bathurst Power & Paper Co. Ltd., Bathurst.
- 522 Canadian Gypsum Co. Ltd., 1221 Bay St., Toronto, Ont.
Laboratory at: Hillsborough.
- 523 Connors Brothers Ltd., Black's Harbour.
- 524 Fraser Companies Ltd., Edmundston.
- 525 International Fertilizers Ltd., 71 Peter St., Quebec, Que.
Laboratory at: Saint John.
- 526 Irving Oil Co. Ltd., East Saint John.
- 527 New Brunswick International Paper Co., Dalhousie.
- 528 Port Royal Pulp & Paper Co. Ltd., Fairville.
- 529 Restigouche Co. Ltd., Campbellton.

New Brunswick (Cont'd)

- 530 St. Croix Soap Mfg. Co., Water St., St. Stephen.
- 531 St. George Pulp and Paper Co., St. George.
- 532 St. John Milling Co. Ltd., 181 City Road, Saint John.
- 533 T. S. Simms & Co. Ltd., Box 130, Fairville.
- 534 W. R. Turnbull, Rothesay.

Quebec

- 535 Abbot Laboratories Ltd., 388 St. Paul St. W., Montreal.
- 536 Abrasive Co. of Canada, Ltd., 858 Burlington St. East, Hamilton, Ont.
Laboratory at: P.O. Box 401, Arvida.
- 537 Acton Shoe Co. Ltd., Acton Vale.
- 538 Aldermac Copper Corp. Ltd., Arntfield.
- 539 Aluminum Co. of Canada Ltd., 158 Sterling Road, Toronto, Ont.
Laboratories at: Arvida and Shawinigan Falls.
- 540 Amalgamated Beauty Products Ltd., 2340 Delorimier Ave., Montreal.
- 541 Amn Gold Mines (Quebec) Ltd., Kewagama.
- 542 Anglo-Canadian Pulp & Paper Mills, 71 Peter St., Quebec.
- 543 Anglo Italian and Hubbard Ltd., 425 Marien Ave., Montreal East.
- 544 Arntfield Gold Mines Ltd., Arntfield.
- 545 Asbestonos Corp. Ltd., 48 Fort St., St. Lambert.
- 546 Associated Textiles of Canada Ltd., 800 University Tower, Montreal.
Laboratory at: Louiseville.
- 547 Ayerst, McKenna and Harrison Ltd., 485 McGill St., Montreal.
- 548 Baribeau & Fils, 92 Commerciale St., Levis.
- 548a Barrett Co. Ltd., 5551 St. Hubert St., Montreal.
- 549 Barry & Staines Linoleum Ltd., Farnham.
- 550 Beattie Gold Mines (Quebec) Ltd., Duparquet.
- 551 Belding Corticelli Ltd., 1455 Shearer St., Montreal.
Laboratories at: Montreal and St. Jean.

Quebec (Cont'd)

- 552 Bepco Canada, Ltd., 1050 Mountain St., Montreal.
- 553 Brandram-Henderson Ltd., 6684 St. Urbain St., Montreal.
- 554 Bremner, Norris & Co. Ltd., 2049 McGill College Ave., Montreal.
- 555 T. G. Bright (Quebec) Ltd., Niagara Falls, Ont.
Laboratory at: Lachine.
- 556 British American Oil Co. Ltd., 1303 Royal Bank Bldg., Toronto, Ont.
Laboratory at: Montreal.
- 557 British Rubber Co. of Canada Ltd., 55 Ouimet Ave., St. Laurent.
- 558 Brompton Pulp & Paper Co. Ltd., 1030 Canada Cement Bldg., Montreal.
Laboratory at: East Angus.
- 559 Brown Corporation, 714 University Tower Bldg., Montreal.
Laboratory at: La Tuque.
- 560 Bruck Silk Mills Ltd., Cowansville.
- 561 R. H. Bryson, Inc., 1101 St. Catherine St. W., Montreal.
- 562 Building Products, Ltd., P.O. Box 2529, Montreal.
Laboratory at: 240 St. Patrick St., Ville LaSalle.
- 563 Bull Dog Grip Cement Co. Inc., 2101 Bennett Ave., Montreal.
- 564 Cambridge Rubber Ltd., St. Remi.
- 565 Canada Cement Co. Ltd., Canada Cement Bldg., Montreal.
Laboratories at: Hull and Montreal.
- 566 Canada and Dominion Sugar Co. Ltd., Box 490, Montreal.
- 567 Canada Dry Ginger Ale Ltd., 153 Sherbourne St., Toronto, Ont.
Laboratory at: 6380 St. Urbain St., Montreal.
- 568 Canada Malting Co. Ltd., 1702 Royal Bank Bldg., Toronto 2, Ont.
Laboratory at: 5022 St. Ambrose St., Montreal.
- 569 Canada Metal Co. Ltd., 721 Eastern Ave., Toronto 8, Ont.
Laboratory at: 6265 Notre Dame St. E., Montreal.
- 570 Canada Packers Ltd., St. Clair Ave. W., Toronto, Ont.
Laboratories at Hull and Montreal.
- 571 Canada Paper Company, 749 Guy St., Montreal.
Laboratory at: Windsor Mills.

Quebec (Cont'd)

- 572 Canadian Brakeshoe Co. Ltd., 724-736 St. James St., W., Montreal.
Laboratory at: 101 Belvidere St., Sherbrooke.
- 573 Canadian Bronze Powder Works Ltd., 1102 University Ave., Montreal.
Laboratory at: Valleyfield.
- 574 Canadian Car & Foundry Co. Ltd., 621 West Craig St., Montreal.
Laboratory at: Ft. St. Charles St., Montreal.
- 575 Canadian Celanese Ltd., 1401 McGill College Ave., Montreal.
Laboratory at: Drummondville.
- 576 Canadian Copper Refiners Ltd., 804 Royal Bank Bldg., Toronto 2, Ont.
Laboratory at: P. O. Box 489, Montreal.
- 577 Canadian Foundry Supplies and Equipment Ltd., 4295 Richelieu St., Montreal.
- 578 Canadian Industries Ltd., 1135 Beaver Hall Hill, Montreal.
Laboratories at: Brownsburg, McMasterville, Montreal and
Shawinigan Falls.
- 579 Canadian International Paper Co., 1155 Beaver Hall Square, Montreal.
Laboratories at: Gatineau, Temiskaming and Trois Rivières.
- 580 Canadian Johns-Manville Co. Ltd., Laird Drive, Leaside, Ont.
Laboratory at: Asbestos.
- 581 Canadian Kaolin Silica Products Ltd., 1007 Canada Cement Bldg., Montreal.
Laboratory at: St. Remi d'Amherst.
- 582 Canadian Laco Lamps, Ltd., 1511 St. James St., Montreal.
- 583 Canadian Lastex, Ltd., 1665 Notre Dame St. E., Montreal.
- 584 Canadian Malartic Gold Mines Ltd., Amos.
- 585 Canadian Marconi Co., P.O. Box 1690, Montreal.
Laboratory at: 2440 Trenton Ave., Montreal.
- 586 Canadian Pacific Railway Co., Montreal.
Laboratory at: Angus Shops, Montreal.
- 587 Canadian Potteries Ltd., St. Jean.
- 588 Canadian Pulp and Paper Assoc., 3420 University St., Montreal.
- 589 Canadian Refractories, Ltd., 1050 Canada Cement Bldg., Montreal.
Laboratory at: Kilmar.
- 590 Canadian Steel Foundries Ltd., 621 Craig St. W., Montreal.
Laboratory at: Longue Point, Maisonneuve.

Quebec (Cont'd)

- 591 Canadian Tube & Steel Products Ltd., P.O. Box 67, Montreal.
Laboratory at: 5765 Hamilton St., Montreal.
- 592 Carter White Lead Co. Ltd., 1295 Delorimier Ave., Montreal.
Laboratory at: 1071 Delorimier Ave., Montreal.
- 593 Chemicals Ltd., 384 St. Paul St. W., Montreal.
- 594 Ciba Company Ltd., 759 Victoria Square, Montreal.
- 595 Clough Chemical Co., Montreal.
Laboratory at: 33 St. Mathieu Street, St. Laurent.
- 596 Coca-Cola Co. of Canada Ltd., 90 Broadview Ave., Toronto.
Laboratory at: 200 Bellechasse St., Montreal.
- 597 B. J. Coghlin Co. Ltd., 3320 Ontario St. E., Montreal.
- 598 Commercial Alcohols Ltd., 3176 Notre Dame St. E., Montreal.
- 599 Congoleum Canada Ltd., 3700 St. Patrick St., Montreal.
- 600 Consolidated Dyestuff Corp. Ltd., Box 440, Place d'Armes, Montreal.
Laboratory at: 420 Lagauchetiere St. W., Montreal.
- 601 Consolidated Optical Co. Ltd., 6 Adelaide St. E., Toronto.
Laboratory at: Nicolet.
- 602 Consolidated Paper Corp. Ltd., 1515 Sun Life Bldg., Montreal.
Laboratories at: Grand'Mere, Port Alfred, Shawinigan Falls and
Trois Rivières.
- 603 Construction Equipment Co. Ltd., 180 Vallée Street, Montreal.
- 604 Consumer Glass Co. Ltd., 2nd Ave., Ville St. Pierre.
- 605 Continental Can Co. of Canada Ltd., 2600 Mullins St., Montreal.
- 606 Control Technique, Ltee., 437 St. Vincent St., Montreal.
- 607 Coopérative Fédérée de Québec, 130 St. Paul St. E., Montreal.
Laboratory at: Henryville.
- 608 Corporation Pharmaceutique Francaise, 533 Bonsecours St., Montréal.
- 609 Courmor Mining Co., Perron.
- 610 Crane, Ltd., 1170 Beaver Hall Square, Montreal.
Laboratory at: 3800 St. Patrick St., Montreal.
- 611 Crown Diamond Paint Co. Ltd., 41 Bates Road, Outremont.

Quebec (Cont'd)

- 612 Daoust, Lalonde & Cie, Ltée., 935-939 Victoria Square, Montreal.
Laboratory at: 5080 Iberville St., Montreal.
- 613 Davis & Lawrence Co., 356 St. Antoine St., Montreal.
- 614 Desautels Laboratories Ltd., 1180 Benoit St., Montreal.
- 615 Dewey & Almy Chemical Co. of Canada, 20 Grey Nun St., Montreal.
Laboratory at: 255 La Fleur Ave., La Salle.
- 616 Dominion Bridge Co. Ltd., P.O. Box 280, Montreal.
Laboratory at: Lachine.
- 617 Dominion Engineering Co. Ltd., P.O. Box 220, Montreal.
Laboratories at: Longueuil and Lachine.
- 618 Dominion Oilcloth & Lino Co. Ltd., 220 St. Catherine St. E., Montreal.
- 619 Dominion Rubber Co. Ltd., 420 Lagachetiere St. W., Montreal.
Laboratory at: 1665 Notre Dame St. East, Montreal.
- 620 Dominion Silk Dyeing and Finishing Co., Ltd., Drummondville.
- 620a Dominion Silk Printing Ltd., Drummondville.
- 621 Dominion Tar & Chemical Co. Ltd., 423 Canada Cement Bldg., Montreal.
Laboratory at: 3547 Allard St., Ville Emard.
- 622 Dominion Textile Co. Ltd., 710 Victoria Square, Montreal.
Laboratories at: Montreal and Magog.
- 623 Donald Inspection Ltd., 1181 Guy Street, Montreal.
- 624 J. T. Donald & Co. Ltd., 1181 Guy St., Montreal.
- 625 Donnacoma Paper Co. Ltd., 44 St. Louis St., Quebec.
Laboratory at: Donnacona.
- 657 La Cie F. X. Drolet, 206 Du Pont St., Quebec.
- 626 Drummondville Cotton Co. Ltd., 710 Victoria Square, Montreal.
Laboratory at: Drummondville.
- 627 East Malartic Mines Ltd., Norrie.
- 628 E. B. Eddy Co. Ltd., Hull.
- 629 Electric Reduction Company of Canada, Buckingham.
- 630 Elmhurst Dairy, 7460 Western Ave., Montreal.
- 631 Familex Products Co., 570 St. Clement St., Montreal.

Quebec (Cont'd)

- 632 Franco-Canadian Dyers Ltd., Cousins and St. Georges Sts., St. Johns.
- 633 Francoeur Gold Co., Arntfield.
- 634 Charles E. Frosst & Co., 3571 St. Antoine St., Montreal.
- 635 Fry-Cadbury Ltd., 2025 Masson St., Montreal.
- 636 Gaspesia Sulphite Co. Ltd., Chandler.
- 637 General Foods Ltd., Sterling Tower, Toronto, Ont.
Laboratory at: 3510 Albert St., Montreal.
- 638 Goodyear Cotton Co. of Canada Ltd., St. Hyacinthe.
- 639 Guaranteed Pure Milk Co. Ltd., 1025 Aqueduct St., Montreal.
- 640 Francis Hankin & Co. Ltd., P. O. Box 127, Station "B", Montreal.
Laboratory at: 2028 Union Ave., Montreal.
- 641 Hart Battery Co. Ltd., St. Jean.
- 642 Milton Hersey Co. Ltd., 980 St. Antoine St., Montreal.
- 643 Hires Co. (Quebec) Ltd., 9162 St. Lawrence Blvd., Montreal.
- 644 Frank W. Horner Ltd., 950 St. Urbain St., Montreal.
- 645 F. W. Huggins Ltd., P. O. Box 339, Rouyn.
- 646 Hull Iron & Steel Foundries, 207 Montcalm St., Hull.
- 646a Hyde & Co., 5350 Connaught Ave., Montreal.
- 647 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at: Montreal East.
- 648 Imperial Tobacco Co. of Canada Ltd., 3810 St. Antoine St., Montreal.
- 649 Industrial & Commercial Lab. Ltd., 637 Craig St. W., Montreal.
- 650 Institute Agricole Belge, Oka.
- 651 International Fibre Board, P.O. Box 687, Ottawa, Ont.
Laboratory at: Gatineau.
- 652 International Foils Ltd., Cap de la Madeleine.
- 653 Jenkins Bros. Ltd., 617 St. Remi, Montreal.
- 654 Johnson & Johnson Ltd., 2155 Pius IX Blvd., Montreal.

Quebec (Cont'd)

- 655 Johnson Wire Works Ltd., 4760 Dagenais St., Montreal.
- 656 Joliette Steel Ltd., 9 Laval St., Joliette.
- 657 La Cie F. X. Drolet, 206 Du Pont St., Quebec.
- 658 La Cie Liqueurs Corona Ltd., 3159 Verdun Ave., Verdun.
- 659 L'Air Liquide Society, 1111 Beaver Hall Hill, Montreal.
Laboratory at 4800 7th Ave., Rosemount.
- 660 Laiterie St. Alexandre, Ltée., 263 3rd Ave., Longueuil.
- 661 Fred A. Lallemand Refining Co., 1150 Prefontaine St., Montreal.
Laboratory at 1620 Prefontaine St., Montreal.
- 662 Lapa Cadillac Gold Mines, Heva River, via Amos.
- 663 Laurentian Dairy Products Ltd., Ste. Anne de la Perade.
- 664 Les Producteurs de Sucre d'Erable, Plessisville.
- ~~664~~ La Cie Liqueurs Corona Ltd., 3159 Verdun Ave., Verdun.
- 665 Walter M. Lowmey Co. of Canada, Ltd., 350 Inspector St., Montreal.
- 666 Lymans Ltd., 286 St. Paul St. W., Montreal.
- 667 Lynn MacLeod Engineering Supplies, Notre Dame St., Montreal.
Laboratory at Thetford Mines.
- 668 McArthur Chemical Co. Ltd., 20 St. Paul St. W., Montreal.
- 669 McArthur Irwin Ltd., 11 Bates Road, Outremont.
- 670 McColl-Frontenac Oil Co. Ltd., Royal Bank Bldg., Montreal.
- 671 McWatters Gold Mines, McWatters, via Rouyn.
- 672 Mallinckrodt Chemical Works Ltd., 378 St. Paul St. W., Montreal.
Laboratory at 425 St. Patrick St., Ville LaSalle.
- 673 Manganese Steel Castings, Sherbrooke.
- 674 Manitou Mines (Quebec) Ltd., Val d'Or.
- 675 Martin-Senour Co. Ltd., 6833 de l'Epée Ave., Montréal.
- 676 Melchers Distilleries Ltd., 437 St. James St. W., Montreal.
Laboratory at Berthierville.
- 677 Merck & Co. Ltd., 412 St. Sulpice St., Montreal.
Laboratory at 560 Decourcelles St., Montreal.

Quebec (Cont'd)

- 678 **Meredith Simmons & Co. Ltd.**, 371-79 Wallace Ave., Toronto 4, Ont.
Laboratory at 5565 Côte St. Paul, Montreal.
- 679 Miner Rubber Co. Ltd., Granby.
- 680 Robert Mitchell Co. Ltd., St. Henry Postal Station, Montreal.
Laboratory at 102 Monkland Blvd., St. Laurent.
- 681 Molson's Brewery, Ltd., 1670 Notre Dame St. E., Montreal.
- 682 Montreal Bronze Ltd., 999 Delorimier Ave., Montreal.
- 683 Montreal Coke and Manufacturing Co., P.O. Box 397, Montreal.
Laboratory at 435 St. Patrick St., Ville LaSalle.
- 684 Montreal Cottons Ltd., Valleyfield.
- 685 Montreal Light Heat & Power, 176 Dalhousie St., Montreal.
- 686 Mount Royal Colour & Varnish Co., 285 Dorchester St. E., Montreal.
Laboratory at 5669 Casgrain St., Montreal.
- 687 Mount Royal Dairies Ltd., 1200 Papineau Ave., Montreal.
- 688 Nadeau Laboratory Ltd., 100 St. Paul Street W., Montreal.
- 689 National Breweries Ltd., 990 Notre Dame St. W., Montreal.
Laboratory at 740 St. Maurice St., Montreal.
- 690 Noranda Mines Ltd., Noranda.
- 691 Northern Electric Company Ltd., Beaver Hall Hill, Montreal.
- 692 Normetal Mining Corp'n. Ltd., Normetal.
- 693 Parks Ltd., 163 St. Paul St. W., Montreal.
- 694 Pepsi-Cola Co. of Canada Ltd., 825 Querbes St., Montreal.
- 695 Perron Gold Mines Ltd., Perron.
- 696 N. C. Polson & Co. Ltd., 651 Notre Dame St. W., Montreal.
- 697 Powell Rouyn Gold Mines Ltd., Noranda.
- 698 Price Brothers & Co., 65 St. Anne St., Quebec.
Laboratories at Kenogami and Riverbend.
- 699 Producers Dairy Ltd., 275 Kent St., Ottawa, Ont.
Laboratory at Shawville.
- 664 Les Producteurs de Sucre d'Erable, Plessisville.

Quebec (Cont'd)

- 700 Pulp & Paper Laboratories, 3420 University St., Montreal.
- 701 Purity Ice Cream Co. Ltd., 1076 Mountain St., Montreal.
- 702 Quebec North Shore Paper Co., Baie Comeau.
- 703 R C A Victor Co. Ltd., 976 Lacasse St., Montreal.
- 704 Roast Laboratories, 999 Delorimier Ave., Montreal.
- 705 Rock City Tobacco Co. Ltd., 224 Dorchester St., Quebec.
- 706 Rockland Chemical Co. Ltd., St. Jean.
- 707 Rolland Paper Co. Ltd., 116 St. Paul St. W., Montreal.
Laboratories at Mont Rolland and St. Jerome.
- 708 Saguenay Power Ltd., 1000 Dominion Square Bldg., Montreal.
Laboratories at Arvida and Isle Maligne.
- 709 Ste. Anne Paper Co. Ltd., Beaulieu.
- 710 St. Lawrence Alloys & Metals Ltd., Beauharnois.
- 711 St. Lawrence Flour Mills Co., 2110 Notre Dame St. West, Montreal.
- 712 St. Lawrence Paper Mills Co. Ltd., Trois Rivières.
- 713 St. Raymond Paper Ltd., 660 St. Catharine St. W., Montreal.
Laboratory at Desbiens.
- 714 Shawinigan Chemicals Ltd., 819 Power Bldg., Montreal.
Laboratory at Shawinigan Falls.
- 715 Shawinigan Water & Power Co., Power Bldg., Montreal.
Laboratory at Shawinigan Falls.
- 716 Shell Oil Co. of Canada, Ltd., 25 Adelaide St. East, Toronto.
Laboratory at Montreal East.
- 717 Sherwin-Williams Co. Ltd., 2875 Centre St., Montreal.
- 718 Howard Smith Paper Mills Ltd., 749 Guy St., Montreal.
Laboratories at Beauharnois and Montreal.
- 719 Solex Co. Ltd., 4060 St. Lawrence Blvd., Montreal.
- 720 Sorel Steel Foundries, 1435 Peel St., Montreal.
Laboratory at Sorel.
- 721 Stadacona Rouyn Mines Ltd., Rouyn.

Quebec (Cont'd)

- 722 Stedfast Rubber Co. Ltd., Granby.
- 723 Steel Co. of Canada Ltd., 525 Dominion St., Montreal.
- 724 Sultana Ltd., 1000 Amherst St., Montreal.
- 725 Sun Oil Co. Ltd., 3550 St. Patrick St., Montreal.
- 726 Thorp-Hambrock Co. Ltd., 2720 St. Patrick St., Montreal.
- 727 United Chemical Co. Ltd., 3830 St. Ambroise St., Montreal.
- 728 Union Screen Plate Co. of Canada, Main St., Lennoxville.
- 729 Union Twist Drill Co., ~~Rock~~ Island.
- 730 Usines Chimiques du Canada, Inc., 87 Station "C", Montreal.
Laboratory at 1338 Lagachetiere St. E., Montreal.
- 731 Wabasso Cotton Co. Ltd., St. Maurice St., Trois Rivières.
- 732 J. T. Wait Co. Ltd., 760 St. Antoine St., Montreal.
- 733 Waite-Amulet Mines Ltd., Noranda.
- 734 Warden King Ltd., Bennet Ave., Montreal.
- 735 Charles Warnock & Co. Ltd., 485 McGill St., Montreal.
- 736 J. R. Watkins Co., 2177 Masson St., Montreal.
- 737 Webster & Sons Ltd., Canada Cement Bldg., Montreal.
- 738 Wingate Chemical Co. Ltd., 378 St. Paul St. W., Montreal.
- 739 Zonite Products Corp. Ltd., Ste. Therese.

Ontario

- 740 Abitibi Power & Paper Co. Ltd., 408 University Ave., Toronto.
Laboratories at Fort William, Iroquois Falls, Sault Ste. Marie
and Smooth Rock Falls.
- 741 Acme Carbon & Ribbon Co. Ltd., 260 Richmond St. W., Toronto.
- 742 Acme Farmers Dairy Ltd., Walmer Rd., Toronto.
Laboratories at Napanee, Sydenham and Toronto.
- 743 Acme Farmers Dairy Ltd., 797 Barton St. E., Hamilton.

Ontario (Cont'd)

- 744 Aerovox Canada Ltd., Hamilton.
- 745 C. E. Alder, Ingersoll.
- 746 Algoma Central & Hudson Bay Rly., Sault Ste. Marie.
- 747 Algoma Ore Properties Ltd., Sault Ste. Marie.
Laboratory at Helen Mines
- 748 Algoma Steel Corp., Sault Ste. Marie.
- 749 Alliance Paper Mills Ltd., Merritton.
- 750 Aluminum Co. of Canada Ltd., 158 Sterling Rd., Toronto.
- 751 Amherst Distillers Ltd., Amherstburg.
- 752 Anaconda American Brass Ltd., New Toronto.
- 753 Anglo-Canadian Drug Ltd., Oshawa.
- 754 Anglo-Canadian Leather Co. Ltd., Huntsville.
- 755 Arner Co. Ltd., Lewis & Bridge Sts., Fort Erie.
- 756 Atlas Steels Ltd., Welland.
- 757 Ault & Wiborg Co. of Canada Ltd., 82 Peter St., Toronto 2.
- 758 Aunor Gold Mines Ltd., P.O. Box 420, Timmins.
- 759 Auto Specialties Mfg. Co. Ltd., 614 Tecumseh Rd. E., Windsor.
- 760 Bakelite Corp. of Canada Ltd., 163 Dufferin St., Toronto.
- 761 Bankfield Consolidated Mines Ltd., Bankfield.
- 762 Bates Valve Bag Co. Ltd., Dryden.
- 763 Beamish Sugar Refineries Ltd., 587 Fleet St., Toronto.
- 764 Beardmore Leathers Ltd., 37 Front St., Toronto.
Laboratory at Acton.
- 765 Beaver Wood Fibre Co. Ltd., Thorold.
- 766 J. W. N. Bell, Browning St., Haileybury.
- 767 Bellak Brothers & Simmons Ltd., 1199 Bathurst St., Toronto.
- 768 Bepco Canada Ltd., 1050 Mountain St., Montreal, Que.
Laboratory at 45 Niagara St., Toronto.

Ontario (Cont'd)

- 769 John Bertram & Sons Co. Ltd., Hatt St., Dundas.
- 770 Bidgood Kirkland Gold Mines Ltd., Kirkland Lake.
- 771 Bilmac Gold Mines Ltd., 357 Bay St., Toronto.
Laboratory at Shining Tree.
- 772 Bird-Archer Co. Ltd., McGill Bldg., Montreal, Que.
Laboratory at Cobourg.
- 773 Black Donald Graphite Co. Ltd., Calabogie.
- 774 Blatchford Feeds Ltd., 61 Pelham Ave., Toronto.
Laboratory at 75 Pelham Ave., Toronto.
- 775 J. R. Booth Ltd., 6 Booth St., Ottawa.
- 776 Borden Co. Ltd., Yardley House, Toronto.
Laboratory at Tillsonburg.
- 777 Reg. N. Boxer Co. Ltd., New Toronto.
- 778 Brantford Roofing Co. Ltd., Sydenham St., Brantford.
- 779 Breithaupt Leather, Kitchener.
- 780 T. G. Bright & Co. Ltd., Niagara Falls.
- 781 British American Bank Note Co., 262 Wellington St., Ottawa.
- 782 British American Oil Co. Ltd., Toronto 2.
- 783 Bromo Seltzer Ltd., 1266 Queen St. West, Toronto.
- 784 Brunner, Mond Canada, Ltd., Amherstburg.
- 785 W. K. Buckley, Ltd., 559 College St., Toronto.
- 786 Buffalo Ankerite Gold Mines Ltd., South Porcupine.
- 787 Burlington Steel Co. Ltd., Sherman Ave., North, Hamilton.
- 788 Charles Bush, Ltd., 105 Davenport Rd., Toronto.
- 789 Campbell Soup Co. Ltd., 4th & Birmingham Sts., New Toronto.
- 790 Canada Bread Co. Ltd., 160 Avenue Rd., Toronto.
Laboratory at 224 Davenport Rd., Toronto.
- 791 Canada Cement Co., Canada Cement Bldg., Montreal, Que.
Laboratories at Belleville and Port Colborne.
- 792 Canada Cycle & Motor Co. Ltd., Weston.

Ontario (Cont'd)

- 793 Canada & Dominion Sugar Co. Ltd., Chatham.
Laboratories at Chatham and Wallaceburg.
- 794 Canada Dry Ginger Ale, Ltd., 153 Sherbourne St., Toronto 2.
- 795 Canada Electric Castings Co. Ltd., Orillia.
- 796 Canada Foils Ltd., 7 Fraser Ave., Toronto 2.
- 797 Canada Foundries & Forgings Ltd., Empire St., Welland.
- 823 Canada Metal Co. Ltd., 721 Eastern Ave., Toronto.
- 798 Canada Packers Ltd., St. Clair Ave. W., Toronto.
Laboratories at Peterborough and Toronto.
- 799 Canada Printing Ink Co., 15 Duncan St., Toronto.
- 800 Canada Sand Papers Ltd., Preston.
Laboratory at Plattsville.
- 801 Canada Starch Co. Ltd., 637 Craig St. West, Montreal.
Laboratory at Cardinal.
- 802 Canada Wire & Cable Co. Ltd., Leaside.
- 803 Canada Wood Products Co., 223 Talbot St., St. Thomas.
Laboratory at Rodney.
- 804 Canadian Acme Screw & Gear Ltd., 1209 King St. West, Toronto.
- 805 Canadian Aniline & Extract Co., Cannon & Hughson Sts., Hamilton.
- 806 Canadian Bank Note Co. Ltd., 224 Wellington St., Ottawa.
- 807 Canadian Bitumuls Co. Ltd., Leaside, Ont.
- 807a Canadian Blower & Forge Co. Ltd., Kitchener.
- 808 Canadian Breweries Ltd., 496 Queen St. East, Toronto.
- 809 Canadian Car & Foundry Co. Ltd., Wilkins St., Brantford.
- 810 Canadian Carborundum Co. Ltd., Niagara Falls.
- 811 Canadian Cottons Ltd., 760 Victoria Square, Montreal.
Laboratories at Cornwall and 429 James St. Hamilton.
- 812 Canadian Doughnut Co. Ltd., Terminal Warehouse Bldg., Toronto.
Laboratory at P.O. Box 610, Trenton.
- 813 Canadian Durex Abrasives Ltd., 154 Pearl St., Toronto.
Laboratory at Brantford.

Ontario (Cont'd)

- 814 Canadian General Electric Co., 212 King St. W., Toronto 2.
Laboratories at Toronto and Peterborough.
- 815 Canadian General Rubber Co. Ltd., Galt.
- 816 Canadian Germicide Co. Ltd., 1 Howard Park Ave., Toronto.
- 817 Canadian Gypsum Co. Ltd., Hagersville.
- 818 Canadian Hanson & Van Winkle Co. Ltd., 15 Morrow Ave., Toronto.
Laboratory at 2 Silver Ave., Toronto.
- 819 Canadian Industries Ltd., 1135 Beaver Hall Hill, Montreal, Que.
Laboratories at Chatham, Copper Cliff, Cornwall, Hamilton,
Nobel and Toronto.
- 820 Canadian Inspection & Testing Co. Ltd., 52 York St., Toronto.
- 821 Canadian International Paper Co., 1155 Beaver Hall Square, Montreal.
Laboratory at Hawkesbury.
- 822 Canadian Kodak Co. Ltd., Eglinton Ave., Toronto.
- 823 Canada Metal Co. Ltd., 721 Eastern Ave., Toronto.
- 824 Canadian National Carbon Co. Ltd., 340 University Ave., Toronto 2.
Laboratory at 805 Davenport Rd., Toronto.
- 825 Canadian National Telegraphs, Ottawa.
Laboratory at 347 Bay St., Toronto.
- 826 Canadian Nepheline Ltd., Lakefield.
- 827 Canadian Ohio Brass Ltd., Niagara Falls.
- 828 Canadian Oil Cos. Ltd., 12 Strachan Ave., Toronto.
Laboratory at Petrolia.
- 829 Canadian Westinghouse Co. Ltd., Hamilton.
- 830 Canadian Wineries Ltd., 330 Bay St., Toronto.
Laboratories at Niagara Falls, Toronto and Hamilton.
- 831 Cansfield Electrical Works Ltd., 260 Geary Ave., Toronto 4.
- 832 Capital Brewing Co. Ltd., 840 Wellington St., Ottawa.
- 833 Cardinal Chemical Co. Ltd., 128 Simcoe St., Toronto.
- 834 Carnation Co. Ltd., 80 King St. W., Toronto.
Laboratory at Aylmer.
- 835 Caulfield's Dairy Ltd., 45 Howard Park Ave., Toronto.

Ontario (Cont'd)

- 836 Chateau Cheese Co. Ltd., 12-14 York St., Ottawa.
- 837 Chesterville Larder Lake Gold Mining, Cheminis.
- 838 City Dairy Co. Ltd., 487 Spadina Ave., Toronto 4.
- 839 Clark Dairy Ltd., 634 Bronson Ave., Ottawa.
- 840 Cline Lake Gold Mines Ltd., Lochalsh.
- 841 Cobourg Dyeing Co. Ltd., William St., Cobourg.
- 842 Coca-Cola Co. of Canada Ltd., 90 Broadview Ave., Toronto 8.
- 843 Colgate-Palmolive-Peet Co. Ltd., 64 Natalie St., Toronto.
- 844 Collis Leather Co. Ltd., Tyler St., Aurora.
- 845 Commonwealth Electric Corp., 130 Dennistoun St., S., Welland.
- 846 Coniaurum Mines Ltd., Schumacher.
- 847 Consumers Gas Co. of Toronto, 19 Toronto St., Toronto.
- 848 Cooksville Co., 46 Bloor St. W., Toronto.
Laboratory at Cooksville.
- 849 Copeland Flour Mills Ltd., Midland.
- 850 Rolph R. Corson, Ltd., 146-148 Brock Ave., Toronto.
- 851 Cosmos Imperial Mills Ltd., Sherman St. W., Hamilton.
- 852 Coulter Copper & Brass Co. Ltd., 115 Sumach St., Toronto.
- 853 Courtaulds (Canada) Ltd., Cornwall.
- 854 Cow & Gate (Canada) Ltd., Gananoque.
- 855 Currie Products Ltd., 87 Sheaffe St., Hamilton.
- 856 Danforth Wines, Ltd., 1076 Lakeshore Rd., New Toronto.
- 857 A. Davis & Son Ltd., 407 Rideau St., Kingston.
- 858 Dearborn Chemical Co. of Canada Ltd., 2454-64 Dundas St. W., Toronto.
- 859 E. L. Deitch, Welland.
- 860 Delaney & Pettit, Ltd., 133 Jefferson Ave., Toronto.
- 861 Delnite Mines Ltd., Timmins.

Ontario (Cont'd)

- 862 Deloro Smelting & Refining Co. Ltd., Deloro.
- 863 De Santis Porcupine Mines Ltd., Timmins.
- 864 Dome Mines Ltd., South Porcupine.
- 865 Dominion Cutout Company Ltd., 250 Richmond St. W., Toronto.
- 866 Dominion Fabrics Co. Ltd., Dunnville.
- 867 Dominion Foundries & Steel Ltd., Depew St., Hamilton.
- 868 Dominion Linseed Oil Co. Ltd., 587 Fleet St., Toronto.
- 869 Dominion Rubber Co. Ltd., 420 Lagauchetiere St., Montreal, Que.
Laboratory at Strange St., Kitchener.
- 870 Dominion Salt Co. Ltd., Sarnia.
- 871 Dominion Tar & Chemical Co. Ltd., 423 Canada Cement Bldg., Montreal, Que.
Laboratories at Ft. of Morse St., Toronto, and Sault Ste. Marie.
- 872 Dominion Woollens & Worsteds Ltd., 80 King St. W., Toronto.
Laboratory at Hespeler.
- 873 Donald Inspection Ltd., 208 King St. W., Toronto.
- 874 Douglas-Pectin Ltd., 577 Ontario St., Cobourg.
- 875 Druggists Corp. Ltd., 6 Ontario St., Toronto.
- 876 Dryden Paper Co. Ltd., Dryden.
- 877 John Duff & Son Ltd., Brant St., Hamilton.
- 878 Dunlop Tire & Rubber Goods Co. Ltd., 244 Booth Ave., Toronto.
- 879 Duplate Safety Glass Co. of Canada Ltd., 1st Ave. and Prospect St., Oshawa.
- 880 Eastern Power Devices Ltd., 1244 Dufferin St., Toronto.
- 881 T. Eaton Co. Ltd., Toronto.
- 882 Eldorado Gold Mines Ltd., 80 King St. W., Toronto.
Laboratory at Port Hope.
- 882a Electro Metallurgical Co. of Canada, Welland.
- 883 Empire Cotton Mills Ltd., P.O. Box 758, Queen St., Welland.
- 884 English Electric Co. of Canada Ltd., St. Catharines.
- 885 J. C. Eno (Canada) Ltd., 296 Richmond Street W., Toronto.

Ontario (Cont'd)

- 886 Fähralloy Canada Ltd., 95 Barrie Rd., Orillia.
- 887 Falconbridge Nickel Mines, Ltd., Falconbridge.
- 888 F. W. Fearman Co. Ltd., Hamilton.
- 889 Federal Inks Ltd., 40 Patrick St., Toronto.
- 890 Ferranti Electric Ltd., Mount Denis, Toronto 9.
- 891 Ferro-Enameling Co. of Canada Ltd., 629 Wellington St., Ottawa.
- 892 Firestone Cotton Mills of Canada Ltd., Woodstock.
- 893 Firestone Tire & Rubber Co. Ltd., Beach Rd., Hamilton.
- 894 First Co-operative Packers Ltd., Barrie.
- 895 Fittings Ltd., Bruce St., Oshawa.
- 896 Ford Motor Co. of Canada Ltd., East Windsor.
- 897 Fowlers Canadian Co. Ltd., Wentworth St. N., Hamilton.
- 898 Frost Steel & Wire Co. Ltd., 250 Lottridge St. N., Hamilton.
- 899 Gair Co., Canada, Ltd., 372 Bay St., Toronto.
- 900 Galt Testing Laboratory, 149 Main St., Galt.
- 901 Geigy Co. Inc., 9 Front St. E., Toronto.
- 902 General Milk Products of Canada Ltd., Brockville.
- 903 General Motors of Canada Ltd., Oshawa.
- 904 General Steel Wares Ltd., Adelaide St., London.
- 905 W. & A. Gilby's Gin Distillery, 18th St., New Toronto.
- 906 Glidden Co. Ltd., 382 Wallace Ave., Toronto.
- 907 Gold Medal Products Ltd., 21-22 Front St. E., Toronto.
- 908 Golden Gate Mining Co. Ltd., Swastika.
- 909 Good Rich Refining Co. Ltd., Port Credit.
- 910 B. F. Goodrich Rubber Co., King St., Kitchener.
- 911 Goodyear Tire & Rubber Co., New Toronto.
Laboratories at Bowmanville and New Toronto.

Ontario (Cont'd)

- 912 Granatstein & Sons, Toronto, Ltd., 482 Wellington St., W., Toronto 2.
- 913 Great Lakes Paper Co. Ltd., Fort William.
- 914 B. Greening Wire Co. Ltd., Queen & Napier Sts., Hamilton.
- 915 Greenmelk Co. Ltd., Wallaceburg.
- 916 Wm. & J. G. Greey Ltd., 56 Esplanade St., Toronto.
- 917 G. L. Griffith & Sons, Ltd., Stratford.
- 918 Griffith Laboratories Ltd., 218 Front St., Toronto.
- 919 Guaranty Silk Dyeing & Finishing Co., St. Catharines.
- 920 Guelph Carpet & Worsted Spinning Mills, 83 Neeve St., Guelph.
- 921 Gutta Percha & Rubber Ltd., 160 West Lodge Ave., Toronto 3.
- 922 Gypsum, Lime & Alabastine, Ltd., Paris.
Laboratories at Paris and Caledonia.
- 923 Hallnor Mines Ltd., Pamour.
- 924 Hamilton By-product Coke Ovens Ltd., Hamilton.
- 925 Hamilton Gear & Machine Co., 76 Van Horne St., Toronto.
- 926 Hamilton Pure Milk Dairies, 181 John St., Hamilton.
- 927 Hammond Manufacturing Co., 40 Wellington St. W., Guelph.
- 928 Chr. Hansen's Laboratory, 833 King St. W., Toronto.
- 929 Hard Rock Gold Mines Ltd., Geraldton.
- 930 Harding Carpets Ltd., Morrell St., Brantford.
- 931 W. Harris & Co. Ltd., 200 Heating St., Toronto 2.
- 932 J. F. Hartz Co. Ltd., 32-34 Grenville St., Toronto.
- 933 H. J. Heinz Co., 115 George St., Toronto.
Laboratory at Leamington.
- 934 Helfrich Laboratories of Canada Ltd., Bathurst & King Sts., Toronto.
- 935 Thos. Heys & Sons, 77 Yonge St. Arcade, Toronto.
- 936 Hiawatha Gold Mines Ltd., Lake Kabinakagami via Oba.
- 937 Hield Bros. Ltd., Kingston.

Ontario (Cont'd)

- 938 Hinde & Dauch Paper Co. Ltd., 47 Hanna Ave., Toronto.
- 939 Hollinger Consolidated Gold Mines, Ltd., Timmins.
Laboratories at Timmins and Matachewan.
- 940 Holmes Foundry Co. Ltd., Sarnia.
- 941 Hoover Suction Sweeper Co., Hamilton.
- 942 E. F. Houghton & Co. of Canada Ltd., 163 Dufferin St., Toronto 3.
- 943 Howard Furnace Co., 881 Yonge St., Toronto.
- 944 Howell Warehouses, Ltd., 218 Front St. E., Toronto.
- 945 Hydro-Electric Power Commission of Ontario, 620 University Ave., Toronto.
Laboratory at 8 Strachan Ave., Toronto.
- 946 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at Sarnia.
- 947 Imperial Varnish & Colour Co. Ltd., 2-20 **Morse St., Toronto 8.**
Laboratory at Toronto.
- 948 Ingram & Bell Ltd., 256 McCaul St., Toronto.
- 949 Interlake Tissue Mills Co. Ltd., Merritton.
- 950 International Nickel Co., Copper Cliff.
Laboratories at Copper Cliff and Port Colborne.
- 951 Irvington Varnish & Insulator Co. of Canada, Ltd., Kenilworth Ave., Hamilton.
- 952 Jason Gold Mines, 612-67 Yonge St., Toronto.
Laboratory at Sioux Lookout.
- 953 Andrew Jergens Co. Ltd., Perth.
- 954 J - M Consolidated Gold Mines Ltd., Jackson Manion P.O.
- 955 S. C. **Johnson** & Son Ltd., Frank St., Brantford.
- 956 Johnson Matthey & Co. Ltd., 198 Clinton St., Toronto.
- 957 Jordan Wine Co. Ltd., Box 399, St. Catharines, Ont.
Laboratory at Jordan.
- 958 Kaministiquia Power Co. Ltd., Fort William.
- 959 Kaufman Rubber Co. Ltd., 410 King St., Kitchener.
- 960 Kellogg Co. of Canada, Ltd., London.

Ontario (Cont'd)

- 961 Kellough Brothers, Fort William.
- 962 Kennedy Laboratories, Otterville.
- 963 Wm. Kennedy & Sons Ltd., 1114 First Ave. W., Owen Sound.
- 964 Kenora Paper Mills, Ltd., Kenora.
- 965 Kenricia Gold Mines, P.O. Box 593, Kenora.
- 966 Kenwood Mills Ltd., Arnprior.
- 967 Kerr-Addison Gold Mines Ltd., Larder Lake.
- 968 Kirkland Lake Gold Mining Co. Ltd., P.O. Box 850, Chaput-Hughes.
- 969 La France Textiles, Ltd., Beale & Dundas Sts., Woodstock.
- 970 Lake Shore Mines Ltd., Kirkland Lake.
- 971 Lake Sulphite Pulp Co. Ltd., Nipigon.
- 972 Lake of the Woods Milling Co. Ltd., 460 St. John St., Montreal, Que.
Laboratory at Keewatin.
- 973 Lang Brothers Specialty Co. Ltd., 69 Sherbourne St., Toronto.
- 974 Lang Tanning Co. Ltd., 30 Francis St. S., Kitchener.
- 975 S. F. Lawrason & Co. Ltd., Adelaide & Nelson Sts., London.
- 976 Lebel Oro Mines Ltd., P.O. Box 156, Sudbury.
- 977 Leitch Gold Mines Ltd., Beardmore.
- 978 Lever Bros. Ltd., Eastern Division, Eastern Ave., Toronto.
- 979 Libby, McNeill & Libby Ltd., 330 Richmond St., Chatham.
Laboratory at Brockville.
- 980 Lightning Fastener Co. Ltd., 52 Niagara St., St. Catharines.
- 981 London Winery Ltd., 409 Ridout St. N, London.
- 982 E. Long Ltd., Orillia.
- 983 Joe Lowe Corp., 100 Sterling Rd., Toronto.
- 984 Lundy Steel Products, Dunnville.
- 985 Lysaught Dominion Sheet Metal Co., Burlington & Wallace Sts., Hamilton.

Ontario (Cont'd)

- 986 Mace Gold Mines Ltd., Schumacher.
- 986a McColl Frontenac Oil Co. Ltd., Royal Bank Bldg., Montreal, Que.
Laboratory at 114 Don Esplanade, Toronto.
- 987 McIntyre Porcupine Mines Ltd., Schumacher.
- 988 McKinnon Industries Ltd., Ontario St., St. Catharines.
- 989 McLarens Ltd., Park & Merrick St., Hamilton.
- 990 MacLeod-Cockshutt Gold Mines Ltd., Little Long Lac.
- 991 MacMillan Co. of Canada Ltd., Toronto.
- 992 Manton Bros. Ltd., 105 Elizabeth St., Toronto.
- 993 Fred Marsh Winery Ltd., 749 Park St., Niagara Falls.
- 994 Massey-Harris Co. Ltd., 915 King St. W., Toronto.
- 995 Matachewan Consolidated Mines Ltd., Matachewan.
- 996 Matthew-Wells Co. Ltd., Victoria Rd., Guelph.
- 997 R. W. Matthewman & Son Ltd., 225 Sterling Rd., Toronto.
- 998 Meredith, Simmons & Co. Ltd., 371 Wallace Ave., Toronto 4.
- 999 Metals & Alloys Ltd., 11 Wiltshire Ave., Toronto.
- 1000 Miles Laboratories Ltd., Bloor & Dufferin Sts., Toronto.
- 1001 Milquo Ltd., P. O. Box 356, Hamilton.
Laboratory at 200 Gage Ave., S., Hamilton.
- 1002 Minneapolis Honeywell Regulator Co., Peter St., Toronto.
- 1003 Moffats Ltd., Dennison Rd., Weston.
- 1004 Monarch Battery Mfg. Co. Ltd., Kingston.
- 1005 Moneta Porcupine Mines Ltd., Timmins.
- 1006 Benjamin Moore & Co. Ltd., 2 Lloyd St. W., West Toronto.
- 1007 J. Morrow Screw & Nut Co. Ltd., Ingersoll.
- 1008 National Aniline & Chemical Co. Ltd., 137 Wellington St. W., Toronto.
- 1009 National Dry Ltd., 303 Richmond St., London.
- 1010 National Fireproofing Co., 96 Bloor St. W., Toronto.
Laboratory at Aldershot.

Ontario (Cont'd)

- 1011 Wm. Neilson, Ltd., 277 Gladstone Ave., Toronto.
- 1012 Neptune Meters, Ltd., 345 Sorauren Ave., Toronto.
- 1013 Nestle's Milk Products (Canada) Ltd., Metropolitan Bldg., Toronto 2.
Laboratory at Chesterville.
- 1014 Newlands & Co. Ltd., Galt.
- 1015 Niagara Brand Spray Co. Ltd., Burlington.
- 1016 Nichols Chemical Co. Ltd., Sulphide.
- 1017 Northern Empire Mines Co. Ltd., Empire.
- 1018 Northern Rubber Co. Ltd., Guelph.
- 1019 Norton Company, Chippawa.
- 1020 O'Cedar of Canada, Ltd., 365 Sorauren Ave., Toronto.
- 1021 O'Keefe's Beverages Ltd., 181 Carlaw Ave., Toronto.
- 1022 Omega Gold Mines Ltd., Larder Lake.
- 1023 Ontario Paper Co. Ltd., Thorold.
- 1024 Ontario Refining Co. Ltd., Copper Cliff.
- 1025 Ontario Steel Products Co. Ltd., Chatham.
- 1026 O-Pee-Chee Co. Ltd., 430 Adelaide St., London.
- 1027 Ottawa Dairy Ltd., Ottawa.
- 1028 Pamour Porcupine Mines Ltd., Pamour.
- 1029 Parke, Davis & Co., Walkerville.
- 1030 Parkhill Gold Mines Ltd., Wa Wa, via Sault Ste Marie.
Laboratory at Gold Park.
- 1031 Paymaster Consolidated Mines Ltd., South Porcupine.
- 1032 Peerless Countryside Dairies Ltd., Windsor.
- 1033 Phillips Electrical Works Ltd., Brockville.
- 1034 Port Hope Sanitary Mfg. Co. Ltd., Port Hope.
- 1035 Prest-O-Lite Storage Battery Co., 1360 Dufferin St., Toronto 4.

Ontario (Cont'd)

- 1036 Preston East Dome Mines Ltd., P.O. Box 545, South Porcupine.
- 1037 Proctor & Gamble Mfg. Co., 170 Bay St., Toronto 2.
Laboratory at Burlington St. E., Hamilton.
- 1038 Producers Dairy Ltd., 275 Kent St., Ottawa.
Laboratories at Almonte and Ottawa.
- 1039 Provincial Paper Mills Ltd., 56 University Ave., Toronto 2.
Laboratories at Georgetown, Mille Roches, Port Arthur and
Thorold.
- 1040 Purity Dairies, Ltd., 1501 Howard Ave., Windsor.
- 1041 Pyrene Mfg. Co. of Canada, Ltd., 91 Don Roadway, Toronto.
- 1042 Quaker Oats Co., Peterborough.
- 1043 Radio Valve Co. of Canada, Ltd., 189 Dufferin St., Toronto.
- 1044 Reanite Corp. Ltd., Eastview.
- 1045 Renfrew Textile Ltd., Renfrew.
- 1046 Renfrew Woollen Mills, Renfrew.
Laboratories at Renfrew and Carleton Place.
- 1047 Richardson & Co. Ltd., St. Mary's.
- 1048 Robbins & Myers Co. of Canada, Brantford.
- 1049 W. Robinson & Son Converters, 55-57 Wellington St. W., Toronto.
- 1050 Robson Leather Co. Ltd., Oshawa.
- 1051 **Rogers Majestic Corporation Ltd., Fleet St., Toronto 2.**
- 1052 Rogers Radio Tubes Ltd., 100 Sterling Rd., Toronto 2.
- 1053 Royal Oak Dairy Ltd., 225 East Ave., N., Hamilton.
- 1054 Helena Rubinstein, Ltd., 126 Bloor St. W., Toronto.
- 1055 Rumpel Felt Co. Ltd., 60 Victoria St., Kitchener.
- 1056 St. Anthony Gold Mines Ltd., Savant Lake.
Laboratory at Sturgeon Lake.
- 1057 St. Lawrence Starch Co. Ltd., Port Credit.
- 1058 St. Mary's Cement Co. Ltd., St. Mary's.

Ontario (Cont'd)

- 1059 St. Williams Fruit Preservers, Ltd., Simcoe.
- 1060 Sandos Chemical Works, Ltd., 181 King St. W., Toronto.
Laboratory at 179 King St. W., Toronto.
- 1061 Sand River Gold Mining Co. Ltd., Beardmore.
- 1062 Sangamo Co. Ltd., 183-185 George St., Toronto 2.
- 1063 W. E. Saunders Ltd., 186 King St., London.
- 1064 A. F. Schnauffer Co. Ltd., 37-39 McMurrich St., Toronto 2.
- 1065 J. M. Schneider, Ltd., Kitchener.
- 1066 Scottish Fertilizers, Ltd., Welland.
- 1067 J. E. Seagram & Sons, Ltd., Waterloo.
- 1068 Seiberling Rubber Co. of Canada, Ltd., 99 Paton Rd., Toronto 9.
- 1069 Service Laboratories Ltd., 1244 Dufferin St., Toronto.
- 1070 Service Lamp Co. Ltd., 197 King St., London.
- 1071 Service Station Equipment Co. Ltd., 101 Hanson St., Toronto.
- 1072 Shirriff's Ltd., 2 Matilda St., Toronto.
- 1073 John S. J. Shotwell, 92 Slater St., Ottawa.
- 1074 Shuttleworth Chemical Co., 525 Logan Ave., Toronto.
- 1075 Silverwood Dairies Ltd., Mulberry & Railway, Hamilton.
- 1076 Silverwood Windsor Dairy Ltd., 409 Chatham St. E., Windsor.
- 1077 Malcolm Sinclair Co. Ltd., Oakville.
- 1078 Sinclair & Valentine Co., 233 Richmond St. W., Toronto.
- 1079 Skinner Co. Ltd., Oshawa.
- 1080 H. G. Skinner, 122 Richmond St. W., Toronto.
- 1081 Sladen-Malartic Mines Ltd., 85 Sparks St., Ottawa.
- 1082 N. Slater Co. Ltd., Sydney St., Hamilton.
- 1083 Slingsby Mfg. Co. Ltd., 266 West Mill St., Brantford.
Laboratory at Grand River Ave., Brantford.

Ontario (Cont'd)

- 1084 E. D. Smith & Son Ltd., Winona.
- 1085 Howard Smith Paper Mills Ltd., 749 Guy St., Montreal, Que.
Laboratory at Cornwall.
- 1086 Smith Mfg. Co. Ltd., 201 Front St., E., Toronto.
- 1087 Robert Smith, Finch.
- 1088 Smith & Stone, Georgetown.
- 1089 Sovereign Potters Ltd., 282 Sherman Ave., Hamilton.
- 1090 Sparton Co. of Canada, London.
- 1091 Spruce Falls Power & Paper Co. Ltd., Kapuskasing.
- 1092 J. H. Stafford Industries, Ltd., 24-25 Hayter St., Toronto.
- 1093 Standard Brands Limited, Dominion Square Bldg., Montreal, Que.
Laboratories at Waterloo Ave., Guelph & Fraser Ave., Toronto.
- 1094 Standard Paint & Varnish Co., Ltd., Wyandotte St., Windsor.
- 1095 Stanley Laboratories, 2277 Yonge St., Toronto.
- 1096 Fred Stearns & Co. of Canada, Ltd., 345 Sandwich St. W., Windsor.
- 1097 Steel Co. of Canada, Ltd., Hamilton.
- 1098 Sterling Rubber Co. Ltd., Waterloc Ave., Guelph.
- 1099 G. F. Sterne & Sons, Ltd., Bruce St., Brantford.
- 1100 Stewart-Warner-Alemite Corp., Macdonald Ave., Belleville.
- 1101 Jos. Stokes Rubber Co. Ltd., Welland.
- 1102 William Stone Sons Ltd., Ingersoll.
- 1103 Straw Lake Beach Gold Mines, Ltd., 710 Excelsior Life Bldg., Toronto.
Laboratory at Emo.
- 1104 Stromberg-Carlson Telephone Mfg. Co., 211 Geary Ave., Toronto 4.
- 1105 Stuart & Foster, Ltd., 361 King St., E., Toronto.
- 1106 Sturgeon River Gold Mines, Ltd., 320 Bay St., Toronto.
Laboratory at Nezah.
- 1107 Sturgeons Limited, 330 Carlaw Ave., Toronto.

Ontario (Cont'd)

- 1108 Summit Dyeing Co. Ltd., 590 King St. W., Toronto.
Laboratory at 471 Adelaide St. W., Toronto.
- 1109 Sun Oil Co., Ltd., Ft. of Bouchette St., Toronto 8.
Laboratory at 29 Basin St., Toronto.
- 1110 Swift Canadian Co. Ltd., Union Stock Yards, Toronto 9.
- 1111 Sydenham Trading Co. Ltd., Wallaceburg.
- 1112 Sylvanite Gold Mines Ltd., Box 670, Kirkland Lake.
- 1113 Synthetic Drug Co. Ltd., 243 College St., Toronto.
- 1114 G. Tamblyn, Ltd., 227 Jarvis St., Toronto.
- 1115 T. H. Taylor Co. Ltd., 14 William St., Chatham.
- 1116 Teck Hughes Gold Mines, Ltd., Kirkland Lake.
- 1117 Temiskaming Testing Laboratories, Cobalt.
- 1118 Thunder Bay Co-operative Dairy Co., 284 Henry St., Port Arthur.
- 1119 Thunder Bay Pulp & Paper Co., Bare Point, Port Arthur.
- 1120 Tide Water Oil Co. of Canada, Ltd., 201 Weston Rd., South Toronto.
- 1121 Tilleys Ltd., 90 Richmond St. W., Toronto.
- 1122 Toburn Gold Mines Ltd., Kirkland Lake.
- 1123 Tombill Gold Mines, Ltd., Geraldton.
- 1124 Toronto Dyeing & Finishing Works, 356 Dufferin St., Toronto.
- 1125 Toronto Elevators, Ltd., Fleet St., Toronto.
Laboratory at Queen's Quay, Toronto.
- 1126 Toronto Pharmacal Co. Ltd., 20 Brockton Ave., Toronto.
- 1127 Toronto Star Ltd., 80 King St. W., Toronto.
Laboratory at 275 Albany Ave., Toronto.
- 1128 Toronto Testing Laboratories, Ltd., 70 Adelaide St. W., Toronto.
- 1129 Trelco Ltd., 6 Alcuia Ave., Toronto.
- 1130 Tremco Manufacturing Co. Ltd., P.O. Box 249, Toronto.
Laboratory at Clark & Wickstead Sts., Leaside.
- 1131 Tyranite Mines, Ltd., Gowganda.

Ontario (Cont'd)

- 1132 United Drug Co. Ltd., 88 Broadview Ave., Toronto.
- 1133 Universal Button Fastening & Button Co., 1076 Walker Rd., **Walkerville.**
- 1134 Viceroy Manufacturing Co., Ltd., 32 Alpine Ave., Toronto 9.
Laboratory at 345 Royce Ave., Toronto.
- 1135 Walker Metal Products, Ltd., Kildare Rd., Walkerville.
- 1136 Hiram Walker & Sons, Ltd., Walkerville.
- 1137 Hiram Walker-Gooderham & Worts Ltd., 2 Trinity St., Toronto.
Laboratories at Walkerville and Toronto.
- 1138 Walkerville Brewery **Ltd., Walker Rd., Walkerville.**
- 1139 Wallaceburg Brass & Iron Co. Ltd., Wallaceburg.
- 1140 Henry K. Wampole & Co. Ltd., Perth.
- 1141 A. Wander, Ltd., Peterborough.
- 1142 W. R. Warner & Co., Ltd., 727 King St. W., Toronto 2.
- 1143 Charles Warnock & Co., Ltd., 485 McGill St., Montreal, Que.
Laboratories at Fergus, Hamilton and Toronto.
- 1144 James Weir Co., Ltd., New Toronto.
- 1145 Wendigo Gold Mines Ltd., Kenora.
- 1146 E. P. West, Duchess St., Toronto.
- 1147 W. J. Westaway Co. Ltd., 38 - 42 McNabb St., South Hamilton.
- 1148 Western Canada Flour Mills, St. Boniface, Man.
Laboratory at Goderich.
- 1149 Goerge Weston Ltd., 134 Peter St., Toronto.
- 1150 Wickett & Craig Ltd., 1 - 37 Cypress St., Toronto.
- 1151 Charles R. Will & Co. Ltd., 571 Richmond St., London.
- 1152 Willard Storage Battery Co. of Canada, 269 Campbell St., Toronto.
- 1153 Windsor Utilities Commission, 607 Canada Bldg., Windsor.
- 1154 Witts Fertilizer Works, **Norwich.**
- 1155 G. H. Wood & Co. Ltd., 323 Keele St., Toronto.
- 1156 W. C. Wood Co., Ltd., 2480 Dundas St. W., Toronto.

Ontario (Cont'd)

- 1157 W. Lloyd Wood, Ltd., 64 Gerrard St. E., Toronto.
- 1158 Woodstock Rubber Co. Ltd., Huron & Dundas Sts., Woodstock.
- 1159 Wright-Hargreaves Mines Ltd., Kirkland Lake.
- 1160 John Wyeth & Brother, Inc., 2109 Ottawa St., Windsor.
- 1161 Charles Yeates Co. Ltd., 8 Paisley St., Guelph.
- 1162 Yocum Faust Co. Ltd., 123 St. George St., London.
- 1163 York Knitting Mills Ltd., 993 Queen St. West, Toronto.
- 1164 F. Zeidler, 143 College St., Toronto.

Manitoba

- 1165 Anglo-Canadian Oils, Ltd., Brandon.
- 1166 Canada Cement Co. Ltd., Canada Cement Bldg., Montreal, Que.
Laboratory at Fort White.
- 1167 Canada Metal Co. Ltd., 721 Eastern Ave., Toronto, Ont.
Laboratory at Winnipeg.
- 1168 Canada Packers Ltd., St. Clair Ave., Toronto 9, Ont.
Laboratory at Marion St., St. Boniface.
- 1169 Canadian Industries, Ltd., 1135 Beaver Hall Hill, Montreal, Que.
Laboratory at R.R. No. 1, Winnipeg.
- 1170 City Dairy Co., Winnipeg.
- 1171 Coca-Cola Co. of Canada Ltd., 90 Broadview Ave., Toronto, Ont.
Laboratory at 100 Dagmar St., Winnipeg.
- 1172 Crescent Creamery Co., 542 Sherburn St., Winnipeg.
- 1173 Dominion Malting Co. Ltd., 404 Grain Exchange, Winnipeg.
Laboratory at Transcona.
- 1174 Drewrys, Ltd., Boyd Ave., E., Winnipeg.
Laboratory at Redwood Ave., Winnipeg.
- 1175 Dyson's Ltd., 1139 McDermot Ave., Winnipeg.
- 1176 T. Eaton Co. Ltd., Toronto, Ont.
Laboratory at Winnipeg.

Manitoba (Cont'd)

- 1177 Gunnar Gold Mines, Ltd., 80 King St. W., Toronto, Ont.
Laboratory at Beresford Lake.
- 1178 Gurney Gold Mines, Ltd., Gurney Gold P.O.
- 1179 Milton Hersey Co. Ltd., 233 Fort St., Winnipeg.
- 1180 Hudson Bay Mining & Smelting Co. Ltd., 500 Royal Bank Bldg., Winnipeg.
Laboratory at Flin Flon.
- 1181 B. Guy Hunt, 153 Grain Exchange, Winnipeg.
- 1182 International Laboratories Ltd., 450 Rue des Meurons, St. Boniface.
- 1183 Manitoba Pulp & Paper Co. Ltd., Pine Falls.
- 1184 Manitoba Rolling Mills Co., Selkirk.
- 1185 Manitoba Steel Foundries Ltd., Selkirk.
- 1186 National Drugs Ltd., McDermot & Lydia Sts., Winnipeg.
- 1186a National Testing Laboratories Ltd., 223 James St., Winnipeg.
- 1187 North Star Oil Ltd., Winnipeg.
Laboratory at 525 Archibald St., St. Boniface.
- 1188 Radio Oil Refiners Ltd., Winnipeg.
Laboratory at Munroe & Watt St., E., Kildonan.
- 1189 Riedle Brewery, Ltd., 47 Stadacona St., Winnipeg.
- 1190 Royal Crown Soaps Ltd., 298 King St., Winnipeg.
- 1191 Shea's Winnipeg Brewery Ltd., Winnipeg.
- 1192 Sherritt-Gordon Mines, Ltd., Sherridon.
- 1193 G. F. Stephens Co. Ltd., 172 Market St., Winnipeg.
- 1194 Vulcan Iron Works Co. Ltd., Winnipeg.
- 1195 Western Canada Flour Mills Ltd., Lombard & Main Sts., Winnipeg.
Laboratory at St. Boniface.

Saskatchewan

- 1196 Andrews & Cruickshanks, Regina.
- 1197 British American Oil Co. Ltd., Toronto 2, Ont.
Laboratory at Moose Jaw.

Saskatchewan (Cont'd)

- 1198 Canadian Industries Ltd., 1135 Beaver Hall Hill, Montreal, Que.
Laboratory at Regina.
- 1199 Consumers Co-operative Refineries, Ltd., P.O. Box 399, Regina.
- 1200 Dominion Briquettes & Chemicals Ltd., Box 17, Bienfait.
- 1201 Dominion Fire Brick & Clay Products, Moose Jaw.
Laboratory at Claybank.
- 1202 G. C. Gower, Westman Chambers, Regina.
- 1203 Horseshoe Lake Mining Co., Ormiston.
- 1204 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at Regina.
- 1205 Midwest Chemicals, Ltd., Palo.
- 1206 Natural Sodium Products, Ltd., Bishopric.
- 1207 Saskatoon Brewing Co. Ltd., Saskatoon.
- 1208 Sterling Refiners, Ltd., Yorkton.

Alberta

- 1208a Abasand Oils Ltd., Abasand.
- 1209 Alberta Clay Products, P.O. Box 672, Medicine Hat.
- 1210 Anglo-Canadian Oil Co. Ltd., P.O. Box 31, Longview.
- 1211 Becker Refineries, Ltd., Royalties.
- 1212 British American Oil Co. Ltd., Toronto 2, Ont.
Laboratories at Calgary and Longview.
- 1213 Burns Co. Ltd., Calgary.
Laboratories at Calgary and Edmonton.
- 1214 Cadomin Coal Co., Cadomin, via Edson.
- 1215 Calgary & District Milk Producers Assoc., 704 11th Ave. W., Calgary.
- 1216 Canada Cement Co. Ltd., Canada Cement Bldg., Montreal, Que.
Laboratory at Exshaw.
- 1217 Canada Extract & Mfg. Co., P.O. Box 458, Medicine Hat.
Laboratory at 6 Capitol Bldg., Medicine Hat.

Alberta (Cont'd)

- 1218 Canada Malting Co. Ltd., 5022 St. Ambroise St., Montreal, Que.
Laboratory at Calgary.
- 1219 Canada Packers Ltd., St. Clair Ave. W., Toronto, Ont.
Laboratories at Calgary and Edmonton.
- 1220 Canadian Engineering & Sales Co., 22 Travellers' Bldg., Calgary.
- 1221 Canadian Sugar Factories, Ltd., Raymond.
Laboratories at Raymond and Picture Butte.
- 1222 Coal Valley Mining Co., Coal Valley.
- 1223 J. C. Colpitts, 308 - 17th Ave., W., Calgary.
- 1224 Consolidated Mining & Smelting Co., 215 St. James St., Montreal, Que.
Laboratory at 1230 - 10th Ave., W., Calgary.
- 1225 Edmonton City Dairy Co. Ltd., **Edmonton.**
- 1226 Edmonton Paint & Glass Co. Ltd., Edmonton.
- 1227 Ellison Milling Elevator Co. Ltd., Lethbridge.
- 1228 Gas & Oil Products Ltd., **300** Lancaster Bldg., Calgary.
Laboratory at Hartell.
- 1229 Gold Standard Oils, Ltd., Wainwright.
- 1230 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at East Calgary.
- 1231 Lion Refining Co., Calgary.
- 1232 Maple Leaf Milling Co., 309 Dominion Bank Bldg., Toronto, Ont.
Laboratory at Medicine Hat.
- 1233 Medalta Stoneware Co., Medicine Hat.
- 1234 Northern Alberta Dairy Pool Ltd., 10531 - 102nd St., Edmonton.
- 1235 Riverside Iron Works, 803 - 24th Ave., S.E., Calgary.
- 1236 Royal Crown Soaps, 289 King St., Winnipeg, Man.
Laboratory at Calgary.
- 1237 Royalite Oil Co. Ltd., 606 - 2nd St. W., Calgary.
Laboratory at Turner Valley.
- 1238 Swift Canadian Co. Ltd., Union Stock Yards, Toronto, Ont.
Laboratory at Edmonton.

Alberta (Cont'd)

- 1259 Union Milk Co. Ltd., Calgary.
- 1240 Western Canada Flour Mills Co. Ltd., 287 MacPherson Ave., Toronto, Ont.
Laboratory at Calgary.

British Columbia

- 1241 A. C. Rubber Co. Ltd., 2311 Cambie St., Vancouver.
- 1242 Associated Dairies, Ltd., 405 West 8th Ave., Vancouver.
- 1243 Borden Co. Ltd., Yardley House, Toronto, Ont.
Laboratory at P.O., R.R. No. 1, Sardis.
- 1244 Bralorne Mines Ltd., Bralorne.
- 1245 Britannia Mining & Smelting Co. Ltd., Britannia Beach.
- 1245a British America Paint Co. Ltd., 200 Belleville St., Victoria.
- 1246 British Columbia Cement Co. Ltd., 305 Belmont House, Victoria.
Laboratory at Bamberton.
- 1247 B. C. Drugs Ltd., 796 Beatty St., Vancouver.
- 1248 B. C. Electric Power & Gas Co. Ltd., Carrall St., Vancouver.
- 1249 British Columbia Pulp & Paper Co. Ltd., 708 Bank of Nova Scotia Bldg.,
Vancouver.
Laboratories at Woodfibre and Port Alice.
- 1250 B. C. Sugar Refining Co. Ltd., 1118 Powell St., Vancouver.
- 1251 British Columbia Telephone Co., 768 Seymour St., Vancouver.
- 1252 Buckerfields Ltd., 250 Terminal Ave., Vancouver.
- 1253 Burns & Co. Ltd., Woodland Drive, Vancouver.
- 1254 Canada Packers Ltd., St. Clair Ave. W., Toronto, Ont.
Laboratory at Vancouver.
- 1255 Canada Roof Products Ltd., Canada Cement Bldg., Montreal, Que.
Laboratory at 2624 Arbutus St., Vancouver.
- 1256 Canada Western Cordage Co. Ltd., 911-12, 850 W. Hastings St., Vancouver.
- 1257 Canadian Collieries, Ltd., Nanaimo.
- 1258 Canadian Fishing Co., Ft. of Gore Ave., Vancouver.

British Columbia (Cont'd)

- 1259 Canadian Industries Ltd., 1135 Beaver Hall Hill, Montreal, Que.
Laboratory at James Island.
- 1260 Cariboo Gold Quartz Mining Co. Ltd., Wells.
- 1261 Consolidated Mining & Smelting Co., 215 St. James St., W., Montreal, Que.
Laboratories at Chapman Camp, Stewart and Trail.
- 1262 Consolidated Nicola Goldfields Ltd., 506 Dunsmuir St., Vancouver.
Laboratory at P.O. Box 759, Kamloops.
- 1263 Coyle Batteries, Ltd., 1481 Venables St., Vancouver.
- 1264 Crows Nest Pass Coal Co., Fernie.
Laboratory at Michel.
- 1265 G. S. Eldridge & Co., 576 Hornby St., Vancouver.
- 1266 Harold S. Elmes, Rossland.
- 1267 Empress Mfg. Co. Ltd., 1106 Homer St., Vancouver.
- 1268 Fraser Valley Milk Producers Assoc., 425 West 8th Ave., Vancouver.
- 1269 General Paint Corp. of Canada, Ltd., 950 Raymur St., Vancouver.
- 1270 Goddard & Co., Sidney.
- 1271 Gordon Campbell Ltd., 78 - 2nd Avenue, E., Vancouver.
- 1272 Granby Consolidated Mining & Smelting, Allenby.
- 1273 Growers' Wine Co., P.O. Box 219, Victoria.
- 1274 Gypsum, Lime & Alabastine Ltd., Paris, Ont.
Laboratory at 509 Richards St., Vancouver.
- 1275 Hedley Mascot Gold Mines Ltd., Hedley.
- 1276 Home Oil Distributors, 555 Burrard St., Vancouver.
Laboratory at Ft. of Berwick Ave., N. Vancouver.
- 1277 Imperial Oil Ltd., 56 Church St., Toronto, Ont.
Laboratory at Ioco.
- 1278 Industrial Testing Laboratories, 850 W. Hastings, Vancouver.
- 1279 Island Mountain Mines Co., Wells.
- 1280 Jersey Farms, Ltd., 2256 W. 9th Ave., Vancouver.
- 1281 Kelowna Exploration Co. Ltd., Hedley.

British Columbia (Cont'd)

- 1282 Kelowna Growers' Exchange, Kelowna.
- 1283 Kootenay Belle Gold Mines Ltd., Sheep Creek.
- 1284 Laucks Laboratories, 326 Howe St., Vancouver.
- 1285 Macdonald & Macdonald, Vancouver.
- 1286 Mount Zeballos Gold Mines Ltd., 514 Royal Bank Bldg., Vancouver.
Laboratory at Zeballos.
- 1287 Osoyoos Mines of Canada Ltd., Osoyoos.
- 1288 Pacific Lime Co. Ltd., Blubber Bay.
- 1289 Pacific Mills Ltd., Ocean Falls.
- 1290 Pioneer Gold Mines of B.C., Ltd., Pioneer Mines P.O.
- 1291 Polaris Taku Mining Co., Tulsequah.
- 1292 Powell River Co. Ltd., Powell River.
- 1293 Pumps & Power Ltd., 40 E. Cordova St., Vancouver.
- 1294 Reliance Foundry Co. Ltd., 149 - 4th Ave. W., Vancouver.
- 1295 Relief Arlington Mines Ltd., Erie.
- 1296 Reno Gold Mines, Ltd., Sheep Creek.
- 1297 Royal Crown Soaps Ltd., 298 King St., Winnipeg, Man.
Laboratory at 308 Georgia St., E. Vancouver.
- 1298 Sheep Creek Gold Mines Ltd., 616 Stock Exchange Bldg., Vancouver.
Laboratory at Sheep Creek.
- 1299 Shell Oil Co. of B.C., Ltd., P.O. Box 69, Vancouver.
Laboratory at Burnaby.
- 1300 Sidney Roofing & Paper Co. Ltd., Victoria.
- 1301 Silbak Premier Mines Ltd., Premier.
- 1302 Sitka Spruce Lumber Co. Ltd., 1 First Ave. W., Vancouver.
- 1303 Standard Oil Co. of B.C. Ltd., 906 Marine Bldg., Vancouver.
- 1304 Surf Inlet Consolidated Gold Mines, Butedale.
- 1305 Timber Preservers Ltd., Elsona.
- 1306 Union Oil Co. of Canada, Ltd., Port Moody.

British Columbia (Cont'd)

- 1307 Vancouver Breweries Co. Ltd., 2700 Yew St., Vancouver.
- 1308 Vancouver Engineering Works, Ltd., 619 Sixth Ave., W., Vancouver.
- 1309 Vidette Gold Mines, Ltd., Savona.
- 1310 E. W. Widdowson, 301 - 305 Josephine St., Nelson.
- 1311 J. R. Williams & Son, 576 Seymour St., Vancouver.
- 1312 Ymir Yankee Girl Gold Mines, Ltd., Ymir.

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Classification of Laboratories

For the purposes of this directory, the laboratories throughout the Dominion from which completed questionnaires were received, have been classified as follows:

- Nos. 1 - 57 - Dominion Government laboratories
- Nos. 100-146 - Provincial Government laboratories
- Nos. 200-222 - Municipal laboratories
- Nos. 300-334 - University and school laboratories
- Nos. 400-479 - Hospital laboratories
- Nos. 500-1312 - Industrial laboratories

As an additional aid in mobilizing the laboratory resources of the Dominion, the industrial concerns have been further classified according to different types of work, indicated in the questionnaire, which they reported their laboratories were specially equipped to do. This information is given in the following tabulation. The numbers under the several headings refer to the firms as numbered on pages 24 to 73.

Classification of Industrial Laboratories

(For explanation see Page 74)

ACIDS:

512, 524, 529, 537, 539, 542, 546, 551, 566, 575, 576, 578,
579, 593, 619, 622, 624, 629, 635, 642, 643, 647, 648, 649,
654, 677, 684, 691, 702, 706, 713, 714, 716, 724, 727, 728,
740, 744, 754, 760, 763, 775, 779, 783, 811, 818, 819, 820,
824, 828, 833, 851, 852, 853, 857, 858, 869, 873, 875, 881,
897, 903, 910, 920, 922, 930, 935, 946, 947, 950, 969, 971,
993, 1004, 1007, 1015, 1016, 1019, 1025, 1033, 1035, 1037, 1039, 1045,
1047, 1049, 1057, 1069, 1073, 1079, 1099, 1108, 1110, 1113, 1115, 1128,
1142, 1144, 1152, 1159, 1160, 1164, 1175, 1179, 1180, 1181, 1204, 1226,
1230, 1256, 1259, 1261, 1265, 1277, 1278, 1284, 1285, 1307.

ADHESIVES:

546, 549, 563, 578, 593, 615, 618, 619, 623, 624, 635, 642,
665, 678, 691, 694, 707, 714, 718, 724, 727, 740, 760, 775,
778, 781, 796, 801, 806, 813, 819, 820, 824, 851, 853, 860,
873, 878, 879, 881, 896, 899, 903, 910, 935, 998, 1007, 1041,
1044, 1057, 1069, 1073, 1099, 1105, 1128, 1130, 1142, 1144, 1179, 1255,
1256, 1261, 1265, 1278, 1284, 1285.

ANALYSIS:

504, 510, 520, 523, 527, 537, 539, 541, 542, 546, 547, 550,
558, 560, 565, 570, 571, 574, 575, 576, 578, 579, 581, 585,
589, 591, 595, 596, 599, 606, 609, 612, 618, 619, 622, 624,
625, 629, 632, 635, 642, 645, 648, 649, 653, 659, 664, 667,

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For **explanation** see Page 74)

ANALYSIS (Cont'd)

672, 676, 677, 682, 684, 690, 691, 692, 698, 704, 706, 707,
710, 712, 714, 716, 718, 724, 727, 735, 740, 746, 747, 760,
763, 766, 769, 772, 773, 774, 775, 779, 781, 783, 786, 793,
798, 801, 805, 808, 809, 811, 813, 814, 819, 820, 822, 823,
826, 828, 829, 833, 842, 851, 853, 856, 858, 862, 864, 869,
873, 875, 879, 881, 891, 896, 897, 900, 910, 913, 915, 922,
933, 935, 938, 939, 950, 956, 969, 973, 976, 982, 993, 994,
999, 1001, 1004, 1007, 1014, 1018, 1019, 1022, 1026, 1033, 1034, 1041,
1042, 1047, 1049, 1058, 1066, 1069, 1073, 1074, 1079, 1085, 1091, 1093,
1094, 1095, 1097, 1099, 1107, 1110, 1115, 1122, 1125, 1128, 1139, 1142,
1144, 1150, 1152, 1155, 1160, 1164, 1165, 1166, 1171, 1175, 1176, 1179,
1180, 1181, 1185, 1186a, 1193, 1196, 1206, 1210, 1213, 1216, 1220, 1224,
1226, 1238, 1245, 1245a, 1253, 1254, 1255, 1256, 1259, 1261, 1265, 1272,
1273, 1278, 1284, 1285, 1307, 1310.

ANIMAL OILS AND FATS:

508, 516, 523, 530, 537, 540, 546, 551, 556, 560, 570, 575,
578, 593, 595, 606, 612, 619, 622, 624, 642, 649, 654, 691,
716, 724, 727, 736, 740, 754, 774, 778, 779, 782, 798, 805,
811, 820, 828, 833, 843, 850, 851, 853, 854, 869, 873, 877,
881, 888, 894, 897, 903, 910, 920, 930, 931, 935, 946, 953,
969, 975, 978, 979, 1007, 1014, 1026, 1037, 1047, 1065, 1069, 1073,
1093, 1094, 1099, 1102, 1108, 1110, 1128, 1142, 1144, 1150, 1155, 1160,
1162, 1164, 1168, 1176, 1179, 1181, 1193, 1196, 1212, 1213, 1219, 1238,

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation see Page 74)

ANIMAL OILS AND FATS (Cont'd)

1253, 1255, 1256, 1258, 1265, 1278, 1284, 1285, 1297.

ASSAYING:

502, 510, 527, 538, 541, 544, 546, 550, 576, 581, 584, 606,
609, 624, 627, 633, 642, 645, 649, 662, 671, 674, 690, 692,
695, 697, 704, 706, 721, 727, 733, 746, 748, 758, 761, 766,
770, 771, 786, 795, 819, 823, 833, 837, 840, 846, 862, 864,
873, 875, 908, 923, 929, 935, 936, 939, 950, 952, 954, 956,
965, 967, 968, 970, 976, 977, 982, 986, 987, 990, 995, 1005,
1017, 1019, 1022, 1024, 1028, 1029, 1030, 1031, 1036, 1056, 1061, 1069,
1073, 1081, 1103, 1106, 1116, 1117, 1122, 1123, 1128, 1145, 1159, 1160,
1177, 1178, 1179, 1180, 1186a, 1192, 1196, 1214, 1245, 1256, 1260, 1261,
1262, 1265, 1266, 1272, 1275, 1278, 1281, 1285, 1284, 1286, 1290, 1291,
1295, 1296, 1298, 1301, 1304, 1310, 1311, 1312.

BACTERIOLOGY:

509, 523, 527, 547, 567, 624, 642, 650, 661, 676, 689, 706,
730, 740, 763, 776, 793, 794, 798, 801, 808, 830, 854, 873,
897, 905, 962, 1013, 1057, 1069, 1091, 1092, 1093, 1095, 1110, 1142,
1179, 1213, 1219, 1239, 1253, 1254, 1265, 1280.

BIOCHEMISTRY AND NUTRITION:

532, 547, 634, 635, 740, 808, 1042, 1047, 1059, 1093, 1095, 1115,
1164.

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation see Page 74)

BREWING:

681, 832, 1138, 1174, 1189, 1207.

CELLULOSE:

511, 521, 524, 527, 528, 529, 531, 542, 558, 559, 562, 571,
575, 578, 579, 602, 612, 618, 619, 622, 625, 651, 654, 684,
698, 702, 707, 709, 713, 718, 740, 765, 775, 781, 811, 821,
824, 851, 853, 879, 899, 913, 935, 938, 971, 1023, 1026, 1039,
1044, 1073, 1085, 1091, 1094, 1099, 1107, 1123, 1179, 1183, 1249, 1265,
1289.

CEMENT:

539, 565, 576, 577, 578, 580, 589, 606, 615, 623, 624, 642,
646a, 649, 735, 754, 775, 791, 810, 819, 820, 845, 873, 881,
896, 910, 922, 955, 1019, 1044, 1058, 1069, 1073, 1099, 1129, 1166,
1179, 1180, 1186a, 1216, 1246, 1256, 1265, 1278, 1284, 1285, 1288, 1310.

CERAMICS:

539, 550, 576, 578, 587, 589, 604, 623, 642, 691, 706, 810,
827, 848, 881, 891, 904, 922, 935, 1010, 1019, 1034, 1051, 1089,
1099, 1128, 1179, 1196, 1201, 1209, 1233, 1265, 1285, 1310.

COLLOIDS:

593, 615, 619, 635, 642, 714, 778, 842, 851, 931, 971, 1020,
1047, 1052, 1160, 1179, 1240.

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation see Page 74)

DAIRYING:

503, 607, 630, 639, 660, 663, 687, 699, 701, 742, 834, 835,
836, 838, 839, 902, 926, 961, 1027, 1032, 1038, 1040, 1053, 1075,
1076, 1087, 1118, 1170, 1172, 1215, 1223, 1225, 1234, 1242, 1268.

DYES AND INTERMEDIATES:

537, 543, 546, 551, 560, 571, 575, 578, 579, 593, 594, 595,
600, 612, 619, 622, 632, 684, 698, 713, 740, 757, 760, 775,
788, 805, 811, 841, 851, 853, 857, 872, 881, 883, 896, 901,
912, 919, 920, 930, 947, 966, 969, 971, 1008, 1014, 1026, 1045,
1046, 1049, 1055, 1060, 1069, 1083, 1085, 1103, 1124, 1142, 1150, 1164,
1173, 1271, 1284.

ELECTRICAL ENGINEERING:

514, 552, 577, 585, 606, 691, 703, 707, 708, 744, 768, 802,
814, 825, 827, 831, 845, 853, 865, 880, 884, 890, 827, 941,
945, 958, 1002, 1003, 1004, 1019, 1035, 1043, 1048, 1051, 1052, 1062,
1088, 1090, 1100, 1104, 1152, 1251, 1261.

ELECTROCHEMISTRY:

539, 576, 578, 585, 601, 619, 629, 714, 740, 744, 818, 819,
824, 852, 869, 950, 1003, 1004, 1019, 1024, 1025, 1041, 1051, 1073,
1079, 1093, 1117, 1128, 1139, 1152, 1180, 1261.

ELECTROTHERMICS:

539, 585, 629, 691, 714, 831, 884, 890, 950, 1003, 1019, 1024,
1051, 1261.

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation See Page 74)

EXPLOSIVES:

542, 578, 614, 624, 632, 649, 707, 819, 873, 1069, 1073, 1099,
1169, 1179, 1256, 1259, 1265, 1278, 1284.

FERMENTATIONS:

518, 523, 555, 566, 624, 642, 643, 650, 661, 676, 689, 751,
763, 780, 790, 808, 830, 833, 849, 856, 873, 897, 905, 957,
962, 993, 996, 1057, 1067, 1069, 1092, 1093, 1095, 1115, 1136, 1137,
1175, 1179, 1181, 1196, 1265, 1273, 1282, 1285, 1307.

FERTILIZERS:

508, 523, 525, 539, 570, 578, 593, 606, 642, 649, 691, 706,
740, 774, 793, 798, 808, 819, 820, 833, 873, 877, 881, 888,
894, 897, 922, 935, 1007, 1057, 1065, 1066, 1069, 1073, 1099, 1102,
1110, 1128, 1164, 1168, 1179, 1181, 1196, 1213, 1219, 1224, 1238, 1253,
1254, 1256, 1258, 1261, 1265, 1278, 1284, 1285, 1310, 1311.

FLOTATION:

539, 550, 609, 690, 692, 733, 819, 861, 929, 939, 950, 982,
987, 1005, 1017, 1022, 1031, 1036, 1112, 1159, 1164, 1180, 1192, 1244,
1245, 1261, 1265, 1281, 1301, 1310, 1311.

FOODS:

500, 509, 516, 520, 523, 547, 566, 570, 578, 596, 605, 606,
624, 629, 631, 635, 637, 642, 649, 661, 664, 665, 694, 711,
736, 740, 763, 774, 776, 780, 789, 798, 801, 808, 812, 820,
842, 849, 854, 856, 868, 873, 874, 877, 881, 897, 907, 918,
928, 933, 935, 957, 960, 972, 981, 983, 989, 996, 1001, 1007,

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation see Page 74)

FOODS (Cont'd)

1009, 1011, 1021, 1026, 1042, 1057, 1059, 1067, 1069, 1072, 1073, 1084,
1092, 1093, 1095, 1099, 1110, 1115, 1125, 1128, 1141, 1148, 1149, 1160,
1161, 1164, 1171, 1173, 1175, 1176, 1179, 1180, 1186a, 1195, 1196, 1213,
1219, 1238, 1240, 1250, 1253, 1256, 1258, 1265, 1267, 1278, 1282, 1284,
1285, 1307, 1317.

FUELS:

500, 505, 512, 517, 520, 523, 524, 527, 528, 529, 539, 549,
556, 558, 565, 566, 571, 576, 578, 579, 591, 606, 618, 619,
624, 625, 632, 642, 647, 649, 652, 665, 676, 683, 689, 698,
702, 712, 714, 716, 735, 740, 748, 752, 775, 782, 793, 798,
814, 819, 820, 828, 843, 847, 851, 853, 867, 869, 873, 881,
896, 897, 900, 903, 909, 910, 913, 920, 924, 935, 939, 943,
946, 950, 964, 971, 978, 994, 1023, 1037, 1039, 1057, 1058, 1067,
1073, 1085, 1091, 1093, 1097, 1099, 1128, 1164, 1165, 1166, 1179, 1180,
1181, 1185, 1186a, 1188, 1196, 1200, 1202, 1204, 1206, 1210, 1212, 1216,
1228, 1230, 1231, 1238, 1254, 1256, 1257, 1261, 1264, 1265, 1272, 1277,
1278, 1284, 1285, 1303, 1310, 1311.

HEAT:

533, 591, 606, 740, 820, 847, 867, 879, 904, 910, 943, 1019,
1222, 1261, 1265.

IRON AND STEEL:

506, 519, 520, 539, 572, 574, 578, 591, 597, 606, 610, 617,
623, 624, 642, 646, 649, 653, 656, 657, 659, 664, 667, 673,
680, 682, 691, 698, 704, 710, 714, 720, 723, 729, 734, 735,

CLASSIFICATION OF INDUSTRIAL LABORATORIES

(For explanation see Page 74)

IRON AND STEEL (Cont'd)

748, 756, 759, 763, 767, 769, 775, 787, 792, 795, 797, 803,
804, 814, 818, 820, 827, 829, 845, 853, 867, 869, 873, 881,
882a, 884, 886, 895, 896, 898, 900, 904, 914, 935, 940, 943,
950, 963, 982, 988, 994, 1007, 1019, 1033, 1051, 1073, 1097, 1099,
1128, 1135, 1142, 1159, 1179, 1180, 1184, 1185, 1186a, 1194, 1202, 1206,
1235, 1256, 1261, 1265, 1278, 1284, 1285, 1294, 1308, 1311.

LEATHER:

537, 593, 595, 612, 619, 642, 691, 719, 754, 758, 764, 779,
844, 851, 857, 873, 881, 896, 910, 974, 1050, 1069, 1099, 1128,
1150, 1162, 1179, 1256, 1265, 1278, 1285.

LIGHT:

582, 718, 814, 820, 824, 852, 879.

NON-FERROUS METALS:

519, 520, 538, 539, 550, 569, 574, 576, 578, 580, 585, 591,
593, 606, 610, 616, 617, 623, 624, 642, 645, 649, 652, 653,
655, 659, 667, 674, 677, 680, 682, 690, 691, 698, 704, 706,
710, 714, 720, 728, 735, 748, 750, 752, 769, 775, 784, 792,
795, 796, 797, 814, 818, 819, 820, 823, 824, 829, 852, 862,
864, 873, 881, 882, 887, 896, 900, 914, 935, 950, 956, 963,
994, 999, 1004, 1007, 1019, 1024, 1033, 1036, 1041, 1051, 1069, 1070,
1073, 1097, 1099, 1112, 1114, 1128, 1131, 1139, 1142, 1159, 1160, 1164,
1167, 1179, 1180, 1186a, 1194, 1202, 1216, 1220, 1256, 1261, 1265, 1278,
1279, 1284, 1285, 1301, 1310, 1311.

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ORGANIC CHEMISTRY:

523, 540, 546, 578, 579, 593, 606, 612, 622, 624, 634, 635,
649, 672, 677, 684, 707, 714, 740, 760, 763, 783, 805, 811,
824, 828, 833, 853, 869, 920, 935, 946, 993, 1019, 1041, 1057,
1069, 1073, 1085, 1093, 1098, 1113, 1142, 1160, 1164, 1179, 1186a, 1193,
1196, 1245a, 1253, 1256, 1261, 1265, 1269, 1278, 1284, 1285.

PAINTS:

539, 540, 549, 553, 576, 578, 580, 591, 593, 599, 606, 611,
618, 619, 623, 624, 642, 649, 669, 675, 686, 691, 704, 714,
717, 726, 735, 760, 767, 778, 806, 811, 814, 819, 820, 851,
853, 858, 873, 879, 881, 896, 903, 906, 914, 935, 946, 947,
951, 955, 994, 1006, 1041, 1044, 1069, 1073, 1077, 1094, 1097, 1099,
1107, 1127, 1128, 1129, 1130, 1144, 1164, 1176, 1179, 1182, 1186a, 1193
1196, 1198, 1226, 1245a, 1256, 1265, 1269, 1278, 1284, 1285.

PAPER:

515, 521, 524, 529, 579, 628, 651, 698, 702, 709, 712, 740,
749, 762, 765, 775, 777, 796, 806, 876, 949, 1039, 1073, 1119,
1183, 1292, 1300.

PETROLEUM:

512, 520, 526, 539, 549, 556, 579, 606, 619, 624, 642, 647,
649, 670, 716, 724, 725, 740, 744, 752, 775, 778, 782, 805,
807, 814, 820, 828, 833, 845, 850, 858, 869, 873, 875, 881,
884, 896, 903, 909, 910, 935, 946, 947, 955, 968a, 994, 1041,
1051, 1069, 1073, 1094, 1099, 1109, 1128, 1142, 1144, 1164, 1165, 1176,
1179, 1181, 1186a, 1187, 1188, 1196, 1199, 1202, 1204, 1206, 1208, 1208a,

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PETROLEUM (Cont'd)

1210, 1211, 1212, 1228, 1229, 1230, 1231, 1237, 1255, 1256, 1265, 1276,
1277, 1278, 1284, 1285, 1299, 1303, 1305, 1306.

PHARMACEUTICALS:

535, 547, 561, 608, 613, 614, 624, 631, 634, 635, 642, 644,
654, 666, 672, 677, 688, 696, 730, 736, 738, 739, 740, 753,
755, 783, 785, 833, 875, 881, 885, 932, 948, 1000, 1026, 1029,
1063, 1069, 1073, 1074, 1093, 1096, 1113, 1114, 1126, 1132, 1140, 1142,
1146, 1151, 1157, 1160, 1164, 1176, 1179, 1186, 1247, 1256, 1265, 1278,
1284.

PHYSICAL CHEMISTRY:

578, 624, 629, 635, 672, 714, 740, 821, 833, 879, 946, 950,
1004, 1019, 1052, 1093, 1097, 1132, 1191, 1202, 1261, 1285, 1310.

PLASTICS:

542, 549, 562, 577, 578, 593, 618, 619, 624, 642, 691, 714,
740, 744, 760, 814, 821, 851, 879, 881, 1019, 1044, 1094, 1101,
1128, 1133, 1179.

RUBBER:

533, 557, 560, 564, 583, 593, 615, 619, 642, 654, 679, 691,
722, 802, 814, 815, 819, 820, 851, 869, 878, 881, 893, 896,
910, 911, 917, 921, 935, 959, 1018, 1033, 1044, 1051, 1068, 1098,
1101, 1128, 1134, 1158, 1179, 1241, 1285.

SANITATION:

567, 593, 596, 606, 624, 642, 650, 740, 776, 794, 816, 833,

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SANITATION (Cont'd)

842, 853, 854, 935, 1020, 1073, 1091, 1095, 1099, 1110, 1155, 1164,
1171, 1179, 1186a, 1233, 1253, 1265, 1280, 1284.

SOAP AND GLYCERINE:

530, 546, 570, 575, 578, 606, 622, 624, 632, 642, 648, 649,
654, 691, 724, 727, 736, 740, 754, 774, 775, 778, 798, 805,
816, 820, 828, 833, 843, 850, 851, 853, 868, 872, 873, 881,
903, 919, 920, 935, 953, 969, 975, 978, 1014, 1037, 1041, 1046,
1069, 1073, 1093, 1099, 1108, 1128, 1142, 1155, 1160, 1164, 1176, 1179,
1181, 1186a, 1190, 1196, 1213, 1236, 1238, 1256, 1265, 1278, 1284, 1285,
1297.

SOILS:

512, 560, 570, 606, 623, 642, 647, 649, 735, 740, 789, 793,
798, 807, 819, 820, 873, 881, 946, 1066, 1073, 1099, 1102, 1110,
1128, 1154, 1164, 1179, 1181, 1186a, 1196, 1204, 1224, 1230, 1252, 1253,
1261, 1265, 1277, 1284, 1285, 1310.

SOLVENTS:

512, 540, 556, 575, 578, 593, 598, 599, 606, 618, 619, 624,
635, 642, 647, 714, 716, 740, 760, 775, 778, 782, 783, 793,
811, 815, 819, 820, 824, 828, 829, 843, 850, 853, 863, 873,
881, 896, 897, 903, 910, 920, 930, 935, 946, 947, 955, 969,
1026, 1033, 1041, 1069, 1073, 1085, 1094, 1098, 1099, 1107, 1108, 1127,
1128, 1164, 1179, 1193, 1204, 1212, 1226, 1230, 1241, 1245a, 1252, 1265,
1269, 1277, 1278, 1284, 1285.

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TEXTILES:

546, 551, 560, 578, 580, 583, 594, 595, 619, 620, 620a, 622,
623, 624, 626, 632, 638, 642, 648, 654, 684, 691, 707, 731,
805, 811, 813, 815, 819, 820, 821, 851, 853, 866, 869, 872,
873, 878, 881, 883, 892, 896, 910, 911, 912, 919, 920, 921,
930, 935, 937, 966, 969, 1014, 1033, 1045, 1046, 1049, 1055, 1068,
1069, 1073, 1083, 1086, 1108, 1128, 1155, 1163, 1164, 1176, 1179, 1265,
1285.

VEGETABLE OILS:

516, 523, 540, 546, 549, 560, 570, 575, 578, 593, 595, 599,
606, 618, 622, 624, 635, 637, 642, 649, 665, 691, 717, 724,
726, 736, 740, 753, 774, 775, 781, 798, 799, 801, 805, 806,
811, 814, 820, 833, 843, 850, 851, 853, 868, 869, 873, 881,
903, 910, 920, 930, 935, 946, 947, 953, 955, 969, 978, 1007,
1014, 1026, 1037, 1041, 1047, 1057, 1065, 1069, 1073, 1093, 1094, 1099,
1107, 1108, 1110, 1125, 1128, 1142, 1144, 1150, 1155, 1160, 1162, 1164,
1168, 1176, 1179, 1193, 1213, 1219, 1238, 1240, 1245a, 1253, 1254, 1255,
1256, 1265, 1269, 1278, 1284, 1285, 1297.

WATER:

517, 519, 520, 523, 524, 527, 529, 537, 539, 542, 546, 549,
550, 551, 560, 566, 567, 570, 571, 575, 578, 579, 606, 618,
619, 622, 624, 625, 632, 635, 640, 642, 649, 675, 684, 689,
691, 694, 706, 707, 711, 718, 740, 744, 748, 754, 767, 772,
775, 776, 794, 808, 811, 819, 820, 824, 829, 833, 842, 851,
853, 858, 869, 873, 881, 897, 900, 910, 913, 920, 922, 930,

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WATER (Cont'd)

935, 938, 950, 969, 971, 975, 1012, 1019, 1024, 1026, 1035, 1037,
1039, 1047, 1049, 1057, 1058, 1067, 1069, 1073, 1085, 1091, 1093, 1095,
1099, 1108, 1110, 1128, 1130, 1142, 1147, 1150, 1153, 1160, 1164, 1171,
1179, 1180, 1181, 1186a, 1196, 1206, 1213, 1214, 1231, 1238, 1253, 1254,
1256, 1257, 1261, 1265, 1270, 1278, 1284, 1285, 1307, 1310.

WOOD:

521, 524, 527, 528, 529, 533, 542, 549, 558, 559, 571, 579,
623, 625, 636, 642, 649, 691, 698, 702, 709, 713, 718, 740,
775, 803, 814, 820, 821, 833, 853, 879, 913, 935, 964, 971,
1023, 1039, 1085, 1091, 1128, 1179, 1183, 1249, 1256, 1265, 1278, 1284,
1285, 1292, 1302, 1305.

OTHERS:

Abrasives: 536, 800, 810, 813.

Air handling equipment: 807a.

Arsenic collection: 550, 990.

Arsenical compounds: 1113.

Asphalt: 562, 599, 820, 1255.

Brake lining and clutch facings: 545.

Casein: 1133.

Chemical reagents: 677.

Coal products: 548a, 621, 871, 924, 1097.

Corrosion: 714.

Cosmetics: 693, 934, 1054.

Curing solutions for meat: 1219.

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OTHERS (Cont'd)

Embalmers supplies: 944.
Fatty acids: 798.
Felt: 1055.
Fish meal: 513.
Galvanized sheets: 985.
Galvanized wire: 984.
Gas and electric meters: 685.
Gas appliances: 847.
Grain: 568, 1232.
Gypsum products: 522, 817, 922, 1274.
Hormones: 547.
Hydraulic equipment: 1293.
Hydraulic turbines: 715.
Industrial radiography: 574, 616.
Insulators: 958.
Malt: 1218.
Metallizing glass: 879.
Metrology: 691, 925.
Milling and baking: 1240.
Phosphates: 858, 1093.
Phosphates and chlorates: 629.
Plant analysis: 648.
Plating: 818, 956.
Polishes: 1020, 1105, 1121.
Printing inks: 799, 889, 992, 1078.

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OTHERS (Cont'd)

Pyroxylin products: 722.
Radio: 585, 1052.
Radioactive elements: 882.
Refrigerator compressors: 829.
Ropes (fibre & wire): 1256, 1278.
Salt: 870.
Service station equipment: 1071.
Sodium sulphate: 1203.
Sound films: 991.
Storage batteries: 641, 1152, 1263.
Strength of materials: 586.
Sugar: 664, 763, 793, 1093, 1221.
Transformer oils: 958.
Vitamins: 547, 1093.

UNCLASSIFIED:

534, 548, 554, 573, 592, 603, 658, 668, 705, 732, 741, 855,
865, 916, 942, 980, 997, 1080, 1082, 1111, 1120, 1156, 1205, 1217,
1227, 1243, 1248, 1287, 1309.

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