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LABORATORY  
OF THE  
INLAND REVENUE DEPARTMENT  
OTTAWA, CANADA

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**BULLETIN No. 337**

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**LEMON FLAVOURING EXTRACT**

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### NOTES AND COMMENTS.

Under this heading, as occasion arises, the Bulletins issued by this Department will contain, as an appendix, such comment as may seem necessary or advisable upon matters relating to the work of the Department in connection with the administration of the Adulteration Act, the Fertilizers Act, the Feeding Stuffs Act or the Proprietary Medicines Act.

It frequently happens that correspondents ask information regarding the above Acts, of such a nature that the matter in question possesses general interest, and comment upon it would prove acceptable and useful to others than the immediate questioner. In such cases the reply may find a place in these columns. For convenience of reference these notes will be numbered in series.

A. MCGILL.  
*Chief Analyst.*

LABORATORY  
OF THE  
INLAND REVENUE DEPARTMENT  
OTTAWA, CANADA

BULLETIN No. 337

LEMON FLAVOURING EXTRACT

OTTAWA, March 31, 1916.

J. U. VINCENT, Esq.,  
Deputy Minister of Inland Revenue,

SIR,—I have the honour to report upon the results of analysis of an inspection of Lemon Flavouring Extract.

This comprises 223 samples obtained by our inspectors in July, August and September of last year.

Lemon Flavouring Extract has been made the subject of inspection on three former occasions and results reported as follows:—

Bulletin 89, 1903— 27 samples.  
Bulletin 114, 1906—110 “  
Bulletin 198, 1910— 75 “

The last named report contains information intended to furnish a basis for standardization of the article, and this information is summarized thus:—

1. Extract of lemon is valued for its characteristic flavour.
2. This flavour depends upon the presence of certain constituents of lemon oil.
3. The terpenes which constitute more than 90 per cent of lemon oil, are not important from the point of view of contributing flavour to the oil.
4. It is mainly to dissolve the terpenes of lemon oil that strong alcohol is used as a solvent.
5. The citral, citronellal, and other flavour giving components of lemon oil, constitute less than 10 per cent of the oil, and may be effectively got into solution, from the oil, by weak alcohol.
6. If these flavouring components are derived immediately from fresh peel, a strong alcohol must be employed, on account of the water present in the peel. The alcohol content of the finished extract will, however, be low.
7. A good flavouring extract can be prepared either from fresh lemon peel, from lemon oil, or from so called terpeneless lemon oil. It is according to commercial usage to prepare it from the lemon oil, rather than from the peel.



8. A weak alcohol (proof strength) suffices to dissolve the flavour giving constituents from the oil; and the employment of a stronger alcohol merely adds to the cost of the extract, without corresponding improvement of quality.

9. The citral of lemon-grass oil is not to be confounded with that from true lemon oil. Both citrals are more or less indefinite bodies, being essentially aldehydic, but associated with aromatic substances which are lemon-like in one case and more or less verberna-like in the other. The distinction between them is not, at present, evident to chemical methods.

10. Methods for the quantitative determination of citral are being studied; and it is hoped that a practical method may be discovered, thus enabling Lemon Extract to be judged by determination of the component to which it owes its commercial importance.

By an Order in Council of 17, Oct. 1912 (published as Departmental Circular G. 1045) Lemon Extract is defined as below:—

“Lemon Extract is the flavouring Extract prepared from lemon peel, or from oil of lemon, and contains, along with more or less of the terpenes of Lemon Oil, not less than two tenths (0.2) of one per cent of citral derived from Oil of Lemon.”

This definition recognizes that the terpene content of lemon oil (consisting of above 90 per cent of the whole) is of secondary importance as a flavouring material. The flavour-giving components of lemon oil are essentially citral and citronellal, with smaller amounts of other substances. It remains true, however, that some difficulty is found in fully removing these flavour-giving components of the oil, without at the same time taking into solution a large portion, or even the whole of the terpenes; and the successful manufacture of a terpeneless lemon flavouring extract demands great care, and experience, as will be seen in the further study of this report.

The Order in Council just mentioned defines a Terpene Lemon Extract, as follows:—

“Terpene lemon extract is the flavouring extract prepared as above described, and contains not less than five (5) per cent of Oil of lemon, and not less than two tenths (0.2) of one per cent of Citral, derived from oil of lemon.”

This article (terpene lemon extract), is identical with the ordinary lemon extract of the U.S.A. regulations. Its manufacture demands the use of strong alcohol, without which the terpene content of oil of lemon cannot be held in solution. It has the advantage of assuring the corresponding citral content; while, in order to obtain the required amount of citral in solution where a weaker alcohol is employed, a high degree of care and skill are demanded on the part of the manufacturer.

The method employed in Citral determination in these extracts is that described by Hiltner (Jour. Ind. and Engin. Chemistry, 1909, p. 798). The method appears in Leach, Food Inspection and Analysis, Second Edition, p. 868; also in Parry's "Food and Drugs", 1911, p. 264; and in Abstract. Journ. Soc. Chem. Industry, 1910, p. 172.

Hiltner's work indicates a degree of accuracy which makes possible the determination of citral within 0.01 gramme per 100 cc. where amounts varying from 0.025 to 0.200 are present.

Work done in this laboratory shows that a somewhat less degree of accuracy than that indicated above, is obtainable with commercial extracts, possibly due to progressive oxidation of the aldehyde in presence of sunlight, and on prolonged keeping. Still another difficulty appears where the article is artificially coloured, a concession permitted without declaration by Order in Council of 9th January, 1915 (G. 1167).

The total error due to combination of all these causes may amount to 0.03 citral; and I have taken the precaution of allowing a departure of 0.05 from the standard requirements of 0.20 citral per 100 cc, before declaring the sample adulterated, under the Act. In no case has this conclusion been reached until two more determinations were made upon the sample.

It is regrettable that the term *adulterated* must apply to samples sold as genuine, but found to contain less than the minimum amount of citral. Section 3 (g) of the Act, defines as adulteration any failure to reach a standard prescribed by Order in Council. To the ordinary reader, the word implies purposeful addition of a fraudulent kind. This meaning must not be read into the word as used in this report. It is certain that the large number of failures to meet our standards are mainly due to faulty methods of manufacture, and not to intentional fraud. As I have already pointed out, the attempt to get into solution a proper amount of citral by use of a weak alcohol (less than 50 per cent. strength) makes demands that can only be successfully met by much experience and acquired skill. That the great majority of these extracts are intended to be trepeneless, is shown by the following facts:—

Out of 223 samples, only 10 samples contain above 5 per cent lemon oil, only 15 samples above 4 per cent, only 23 samples above 3 per cent, and only 40 samples above 2 per cent. All samples containing as much as 3 per cent lemon oil are found to contain the required minimum amount of citral. It is also noteworthy that, with exception of three or four samples, all those found to contain less than the standard minimum amount of citral are made with alcohol of less than 50 per cent strength.

The results of this inspection may be summarized as follows:—

|   |       |
|---|-------|
| Samples found to meet standard. . . . . | 83    |
| “ sold as compound . . . . .            | 68    |
| “ sold mistakenly. . . . .              | 3     |
| “ adulterated under the Act. . . . .    | 69    |
|   | <hr/> |
| Total. . . . .                          | 223   |
|   | <hr/> |

I beg to recommend publication of this report as Bulletin No. 337; and I would further respectfully suggest that for this first inspection of Lemon Extract since legalization of Standards, the presence of 0.10 per cent of citral be recognized as proving good faith on the part of the manufacturer. This without prejudice to later inspections.

I have the honour to be, Sir,

Your obedient servant,

A. MCGILL,

*Chief Analyst.*

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF NOVA SCOTIA—

| 1915.   |                           |       |                                   |         |    |                                   |               |  |
|---------|---------------------------|-------|-----------------------------------|---------|----|-----------------------------------|---------------|--|
| Sept. 9 | Lemon Flavouring Extract. | 64236 | Payzant & King, Halifax.          | 3 bots. | 24 | E. Gass, Halifax.                 | Mfr. . . . .  | Maker's name on label stated Tangalla Messina, Perfecto Brand. |
| " 9     | "                         | 64237 | Nat. Drug and Chem. Co., Halifax. | 3 "     | 40 | Vendors. . . . .                  | .....         | Queen Brand.   |
| " 21    | "                         | 64238 | J. L. Wilson & Co., Halifax.      | 3 "     | 30 | Nat. Drug and Chem. Co., Halifax. | Mfrs. . . . . | Sovereign Brand.   |
| " 21    | "                         | 64239 | R. B. Seeton & Co., Halifax.      | 3 "     | 40 | Robinson Mfg. Co., Toronto.       | " . . . . .   | .....  |
| " 22    | "                         | 64240 | John Tobin & Co., Halifax.        | 3 "     | 59 | Vendors. . . . .                  | .....         | .....  |

## DISTRICT OF NOVA SCOTIA—

|         |                  |       |                                    |         |    |                                    |                                 |       |
|---------|------------------|-------|------------------------------------|---------|----|------------------------------------|---------------------------------|-------|
| Aug. 10 | Lemon E.s-tract. | 69896 | A. J. Roop, New Glasgow.           | 3 bots. | 30 | G. E. Barbour Co., Ltd., St. John. | Mfrs. . . . .                   | ..... |
| " 10    | "                | 69897 | Jas. Cavanagh, New Glasgow.        | 3 "     | 30 | Henri Jonas & Co., Montreal.       | " . . . . .                     | ..... |
| " 11    | "                | 69898 | S. M. Lockhart & Co., New Glasgow. | 3 "     | 30 | G. E. Barbour Co., Ltd., St. John. | " . . . . .                     | ..... |
| " 11    | "                | 69899 | " " " "                            | 3 "     | 75 | Pure Gold Mfg. Co., Toronto.       | " . . . . .                     | ..... |
| " 11    | "                | 69810 | Barker's Co., New Glasgow.         | 3 "     | 30 | H. C. & S. Co.                     | " . . . . .                     | ..... |
| " 13    | "                | 69811 | James McArthur, New Glasgow.       | 3 "     | 75 | Shirriff's Ltd., Toronto.          | " . . . . .                     | ..... |
| " 13    | "                | 69812 | C. Grant, New Glasgow.             | 3 "     | 45 | Maritime S. & C. Mills, St. John.  | " . . . . .                     | ..... |
| " 14    | "                | 69813 | F. W. Curry, Stellarton.           | 3 "     | 30 | F. F. Dalley Co., Hamilton, Ont.   | R. McGregor & Sons, New Glasgow | ..... |
| " 14    | "                | 69814 | C. A. Fraser & Co., Stellarton.    | 3 "     | 30 | Baird Co., Ltd., Woodstock, N.B.   | .....                           | ..... |
| " 17    | "                | 69815 | Abraham Myette, Tracadia, N.S.     | .....   | 30 | The Regal Mfg. Co., St. John, N.B. | Mfrs. . . . .                   | ..... |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.       |                    |                                      |                       |        |                          |  | No. of Samples. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|----------------------------|--------------------|--------------------------------------|-----------------------|--------|--------------------------|--|-----------------|---|
|                         | Specific gravity at 15° C. | Alcohol by volume. | Polarisation in 2 dm. tube at 20° C. | Equivalent Lemon Oil. | Citral | Refractive Index of oil. |  |                 |   |

## R. J. WAUGH, INSPECTOR.

|   |        | p. c. |       | p. c. | p. c. |       |       |   |  |
|---|--------|-------|-------|-------|-------|-------|-------|---|--|
| Tangalla & Co. Perfecto Lemon Essence.                | 0-9774 | 18.8  | 0.0   | 0.00  | 0.08  | ..... | 64236 | Below standard in citral. Adulterated.      |  |
| Nat. Drug and Chem. Co. Queen Mixture Extract Lemon.  | 0-9141 | 59.6  | + 0.4 | 0.12  | 0.22  | ..... | 64237 | Sold as Mixture. Contains 0.22 p.c. citral. |  |
| Nat. Drug and Chem. Co. Sovereign Pure Extract Lemon. | 0-9249 | 54.7  | + 0.5 | 0.16  | 0.15  | ..... | 64238 | Genuine.                                    |  |
| Robinson Mfg. Co. Quint Essence Pure Lemon Extract.   | 0-9555 | 37.7  | 0.0   | 0.00  | 0.10  | ..... | 64239 | Below standard in citral.                   |  |
| Jno. Tobin & Co. Lemon Flavouring Extract.            | 0-8951 | 67.9  | + 0.4 | 0.12  | 0.15  | ..... | 64240 | Genuine.                                    |  |

## WALTER O. PETIPAS, TEMPORARY INSPECTOR.

|   |        |      |        |      |        |       |       |  |  |
|---|--------|------|--------|------|--------|-------|-------|--|--|
| Lemon Extract.....  | 0-9340 | 50.3 | 0.0    | 0.0  | 0.17   | ..... | 69806 | Genuine.   |  |
| Lemon Mixture.....  | 0-8771 | 72.6 | + 7.8  | 2.44 | 0.18   | ..... | 69807 | Sold as Mixture. Contains 2.44 p.c. lemon oil and 0.18 citral. |  |
| G. E. Barbour Co. Lemon Extract. Acorn Brand.                     | 0-9346 | 50.0 | + 0.4  | 0.12 | 0.18   | ..... | 69808 | Genuine.   |  |
| Pure Gold Co. Pure Gold Flavouring Extract Lemon.                 | 0-9338 | 50.3 | + 0.5  | 0.16 | 0.16   | ..... | 69809 | "  |  |
| Labelled Artificial . . .   | 0-9770 | 19.3 | 0.0    | 0.00 | 0.10   | ..... | 69810 | Sold as artificial.  |  |
| True Lemon Extract....  | 0-9360 | 49.1 | + 0.5  | 0.16 | 0.20   | ..... | 69811 | Genuine.   |  |
| Labelled Compound. . .  | 0-9711 | 25.0 | 0.0    | 0.0  | 0.08   | ..... | 69812 | Sold as compound.  |  |
| Pure Lemon Extract....  | 0-8511 | 80.6 | + 12.8 | 4.00 | 0.18   | ..... | 69813 | Genuine, with 4 per cent lemon oil.                            |  |
| Baird Co. Ltd. Superior Flav. Extract Lemon. Highly Concentrated. | 0-9792 | 25.4 | + 1.5  | 0.47 | 0.26   | ..... | 69814 | Genuine.   |  |
| Lemon Extract Compound.   | 0-9670 | 28.8 | 0.0    | 0.00 | Trace. | ..... | 69815 | Sold as compound.  |  |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|--|
|                     |                   |                |                             | Quantity. | Cents. |   |  |

## DISTRICT OF CAPE BRETON—

|         |                           |       |                                      |         |    |                                 |       |
|---------|---------------------------|-------|--------------------------------------|---------|----|---------------------------------|-------|
| 1915.   |                           |       |                                      |         |    |                                 |       |
| July 27 | Lemon Flavouring Extract. | 63818 | H. V. Raymond, Sydney.               | 3 bots. | 75 | Gorman Eckert Co., London, Ont. | ..... |
| " 28    | "                         | 63821 | C. B. Wholesale Grocery Co., Sydney. | 3 "     | 36 | Pure Gold Mfg. Co., Toronto.    | ..... |
| " 28    | "                         | 63822 | " " "                                | 3 "     | 39 | G. E. Barbour Co., St. John.    | ..... |
| " 28    | "                         | 63823 | " " "                                | 3 "     | 36 | F. F. Dalley Co., Hamilton.     | ..... |
| " 28    | "                         | 63827 | J. J. Turnbull, Sydney               | 3 "     | 33 | Vendor                          | ..... |
| " 28    | "                         | 63828 | W. T. Cleary, Sydney                 | 3 "     | 30 | Heron Leblanc Co., Montreal.    | ..... |

## DISTRICT OF PRINCE EDWARD ISLAND—

|         |                |       |                                  |         |    |  |       |
|---------|----------------|-------|----------------------------------|---------|----|--|-------|
| July 14 | Lemon Extract. | 60343 | Beer & Goff, Charlottetown.      | 3 bots. | 30 | Nat. Drug and Chem. Co., Ltd., Halifax.      | ..... |
| " 14    | "              | 60344 | " " "                            | 3 "     | 30 | Pure Gold Mfg. Co., Ltd., Toronto.           | ..... |
| " 14    | "              | 60345 | Jenkin & Son, Charlottetown.     | 3 "     | 75 | Henri Jonas & Co., Montreal.                 | ..... |
| " 15    | "              | 60346 | Prowse & Sons, Murray Harbour.   | 3 "     | 60 | Chamberlain Med. Co., Toronto.               | ..... |
| " 15    | "              | 60347 | " " "                            | 3 "     | 30 | G. E. Barbour Co., Ltd., St. John.           | ..... |
| " 15    | "              | 60348 | Mrs. Wm. Charon, Murray Harbour. | 3 "     | 30 | The Royal Standard Mfg. Co., Woodstock, N.B. | ..... |
| " 15    | "              | 60349 | David Bull, Murray Harbour.      | 3 "     | 30 | G. E. Barbour Co.                            | ..... |
| " 16    | "              | 60350 | Coffin & Co., Charlottetown.     | 3 "     | 30 | .....  | ..... |
| " 16    | "              | 60351 | P. A. Smith, Charlottetown.      | 3 "     | 45 | The Swan Mills, Toronto.                     | ..... |
| " 16    | "              | 60352 | J. G. Passmore, Charlottetown.   | 3 "     | 30 | McLaren's, Ltd., Hamilton.                   | ..... |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.       |                    |                                      |                       |         |                          |  | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|----------------------------|--------------------|--------------------------------------|-----------------------|---------|--------------------------|--|----------------|---|
|                         | Specific Gravity at 15° C. | Alcohol by Volume. | Polarization in 2 dm. Tube at 20° C. | Equivalent Lemon Oil. | Citral. | Refractive Index of Oil. |  |                |   |

## E. T. MACKEE, INSPECTOR.

|   |        | p. c. |       | p. c. | p. c. |       |       |                                    |  |
|---|--------|-------|-------|-------|-------|-------|-------|------------------------------------|--|
| German, Eckert Co. Pure Flavouring Extract Lemon.           | 0.9341 | 50.1  | + 0.5 | 0.16  | 0.11  | ..... | 63818 | Below standard in citral.          |  |
| Pure Gold Co. Gov. Standard Lemon. Pure Flavouring Extract. | 0.9372 | 48.7  | 0.0   | 0.00  | 0.15  | ..... | 63821 | Genuine.                           |  |
| G. E. Barbour. Pure Flavouring Lemon Extract.               | 0.9361 | 49.1  | + 0.5 | 0.16  | 0.12  | ..... | 63822 | Below standard in citral.          |  |
| Dalley's Pure Fruit Lemon Extract.                          | 0.8514 | 80.1  | +14.0 | 4.37  | 0.20  | ..... | 63823 | Genuine, with 4.87 p.c. lemon oil. |  |
| J. J. Turnbull. Essence Lemon.                              | 0.8300 | 81.9  | +29.6 | 9.25  | 0.31  | ..... | 63827 | Genuine. Double normal strength.   |  |
| "Crown" Lemon Flav. Extract.                                | 0.9641 | 31.3  | 0.0   | 0.00  | 0.11  | ..... | 63828 | Below standard in citral.          |  |

## WM. A. WEEKS, INSPECTOR.

|  |        |      |       |      |      |       |       |                                    |  |
|--|--------|------|-------|------|------|-------|-------|------------------------------------|--|
| Nat. Drug and Chem. Co. Sovereign Extract Lemon.                                 | 0.9168 | 58.0 | + 1.6 | 0.56 | 0.25 | ..... | 60343 | Genuine.                           |  |
| Pure Gold Mfg. Co. Pure Gold Flavouring Extract Lemon.                           | 0.8934 | 68.6 | 0.0   | 0.0  | 0.21 | ..... | 60344 | "                                  |  |
| Henri Jonas & Co. Royal Quint Essences Pure Lemon.                               | 0.8532 | 79.4 | +14.4 | 4.50 | 0.26 | ..... | 60345 | Genuine, with 4.5 p.c. lemon oil.  |  |
| Chamberlain & Co. Superfine Lemon Extract  | 0.9385 | 47.8 | + 0.4 | 0.12 | 0.12 | ..... | 60346 | Below standard in citral.          |  |
| .....  | 0.9350 | 49.8 | 0.0   | 0.0  | 0.18 | ..... | 60347 | Genuine.                           |  |
| The Royal Standard, manufacturers of Royal Standard Fruit Flavouring Ext. Lemon. | 0.9294 | 52.4 | + 0.6 | 0.18 | 0.15 | ..... | 60348 | "                                  |  |
| G. E. Barbour Co. Acorn Brand Lemon.   | 0.9275 | 53.5 | 0.0   | 0.00 | 0.23 | ..... | 60349 | "                                  |  |
| Coffin & Co. Lemon. Pure Extract; colour added.                                  | 0.8551 | 77.6 | +18.0 | 5.62 | 0.36 | ..... | 60350 | Genuine, with 5.62 p.c. lemon oil. |  |
| White Swan Mill. Phoenix Ext. Lemon Mixture.                                     | 0.9788 | 17.4 | 0.0   | 0.00 | 0.06 | ..... | 60351 | Sold as a mixture.                 |  |
| McLaren's, Ltd. Dew Drop Lemon Mixture.  | 0.9773 | 19.0 | 0.0   | 0.00 | 0.12 | ..... | 60352 | "                                  |  |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF NEW BRUNSWICK—

|         |                           |       |   |         |    |  |                              |  |
|---------|---------------------------|-------|---|---------|----|--|------------------------------|--|
| 1915.   |                           |       |   |         |    |  |                              |  |
| July 14 | Lemon Flavouring Extract. | 66131 | W. A. Simonds, St. John.                        | 3 bots. | 36 | Pure Gold Mfg. Co., Ltd., Toronto.       |                              |  |
| " 14    | "                         | 66132 | " " "   | 3 "     | 36 | F. F. Dalley Co., Ltd., Hamilton.        |                              |  |
| " 14    | "                         | 66133 | Dearborn & Co., St. John.                       | 3 "     | 30 | Vendors.....                             |                              |  |
| " 15    | "                         | 66134 | Nat. Drug and Chem. Co., St. John.              | 3 "     | 30 | "  |                              |  |
| " 16    | "                         | 66135 | 2 Barkers, Ltd., St. John.                      | 3       | 60 | Estey & Curtis Co., Ltd., Hartland, N.B. | Imperial Flavouring Mixture. |  |
| " 19    | "                         | 66136 | Baird & Peters, St. John.                       | 3 "     | 25 | Gorman, Eckert & Co., London, Ont.       |                              |  |
| " 19    | "                         | 66137 | The Canadian Drug Co., Ltd., St. John.          | 5       | 25 | Vendors.....                             |                              |  |
| " 21    | "                         | 66138 | G. E. Barbour Co., Ltd., St. John.              | "       | 54 | "  | Acorn Brand.                 |  |
| " 21    | "                         | 66139 | Puddington, Wetmore & Morrison, Ltd., St. John. | 3 "     | 50 | "  | Signal Brand.                |  |
| Aug. 18 | "                         | 66140 | The Baird Co., Ltd., Woodstock.                 | 3 "     | 45 | "  |                              |  |

## DISTRICT OF QUEBEC PROVINCE—J. E. AUDET, O. BROCHU

|        |                |      |  |         |    |                                |  |                              |
|--------|----------------|------|--|---------|----|--------------------------------|--|------------------------------|
| July 7 | Lemon Extract. | 3607 | Dorchester Lumber Co., St. Malachi, Dorchester County. | 3 bots. | 30 |                                |  | Golden Star Brand, Montreal. |
| " 13   | Extract        | 3613 | J. A. Cloutier, St. Odilon.                            | 3 "     | 30 |                                |  | Herron & Leblanc.            |
| " 14   | Lemon.         | 3917 | P. C. M. Dechine, St. Germain.                         | 3 "     | 25 | Northrop & Lyman Co., Toronto. |  |                              |
| " 15   | "              | 3619 | A. Caillouette, St. Justine.                           | 3 "     | 30 |                                |  | E. Morin, Quebec.            |
| " 16   | "              | 3623 | P. K. Prevots, Ste. Rose.                              | 3 "     | 30 |                                |  | Dr. Morin, Quebec.           |

## LEMON FLAVOURING EXTRACT.

| Description from Label.                              | Results of Analysis.       |                    |                                      |                       |         | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|--|----------------------------|--------------------|--------------------------------------|-----------------------|---------|----------------|---|
|  | Specific Gravity at 15° C. | Alcohol by Volume. | Polarization in 2 dm. Tube at 20° C. | Equivalent Lemon Oil. | Citral. |                |   |
| Pure Gold Co. Pure Field Lemon.                      | p. c. 69.6                 | 0.0                | 0.00                                 | 0.20                  |         | 60131          | Genuine.                                  |
| F. F. Bailey Co. Pure Fruit Extract Lemon.           | 62.9                       | +11.4              | 3.56                                 | 0.18                  |         | 60132          | Genuine, with 3.96 p.c. lemon oil.        |
| Deaborn's Superior Lemon Extract.                    | 80.1                       | +7.6               | 2.06                                 | 0.17                  |         | 60133          | Genuine, with 2.06 p.c. lemon oil.        |
| Nat. Drug and Chem. Co. "Star Extract" Lemon.        | 83.8                       | +21.2              | 6.62                                 | 0.30                  |         | 60134          | Genuine, with 6.62 p.c. lemon oil.        |
| Elegy & Curtis Co. Imperial Flavouring Extract.      | 86.0                       | +19.2              | 6.00                                 | 0.32                  |         | 60135          | Genuine, with 6 p.c. lemon oil.           |
| German, Eckert & Co. (Grand Lemon) Extract Compound. | 96.88                      | 27.1               | 0.0                                  | 0.00                  |         | 60136          | Sold as compound.                         |
| Canadian Drug Co. "Evangeline Brand" Lemon.          | 89.8                       | +9.4               | 2.94                                 | 0.18                  |         | 60137          | Genuine, with 2.94 p.c. lemon oil.        |
| G. E. Barbour Co. Pure Lemon Flavouring Extract.     | 86.0                       | +21.6              | 6.76                                 | 0.20                  |         | 60138          | Genuine, with 6.76 p.c. lemon oil.        |
| Wellington. "Sifnet Brand" Lemon Flavouring Extract. | 51.4                       | +1.0               | 0.31                                 | 0.16                  |         | 60139          | Genuine.                                  |
| The Baird Co. Lemon Superior Extract.                | 83.4                       | +22.6              | 7.06                                 | 0.26                  |         | 60140          | Genuine, with 7.06 p.c. lemon oil.        |

## N. CADIEUX, T. GENDREAU, TEMPORARY INSPECTORS.

|  |        |       |       |      |       |      |  |
|--|--------|-------|-------|------|-------|------|--|
| Lemon Extract.....   | 0.9731 | 23.01 | + 0.7 | 0.2  | 0.04  | 3607 | Below standard in citral. Adulterated. |
| Extracts.....  | 0.9772 | 18.96 | 0.0   | ..   | 0.00  | 3615 | Adulterated.                           |
| Nestlé's & Lyman Co. Pure Concentrated Flavouring Extract. | 0.9886 | 47.69 | + 0.2 | ..   | 0.20  | 3617 | Genuine.                               |
| Windsor Spice Mills. Lemon Mixture.                        | 0.9607 | 15.86 | + 0.8 | 0.20 | None. | 3619 | Sold as a mixture.                     |
| Lemon Double Strength.                                     | 0.9766 | 20.33 | + 0.8 | ..   | 0.03  | 3625 | Adulterated.                           |



| Date of Collection. | Nature of Sample.        | No. of Sample. | Name and Address of Vendor.                                 | Quantity. |                             | Name and Address of Manufacturer or Furnisher. | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|--------------------------|----------------|---|-----------|-----------------------------|--|--|
|                     |                          |                |   | Gals.     | Cents.                      |  |  |
| 1915.               |                          |                |   |           |                             |  |  |
| July 17             | Extract Lemon.           |                |   |           |                             |  |  |
| " 26                | " "                      | 36299          | Garthole, Ste. Peespee... 3 bds.                            | 30        | .....                       | Carriere & Fils, L'Arche.                      |  |
| " 29                | " "                      | 3634           | J. A. Proulx, Valley Jct. 3 "                               | 30        | J. B. Renaud & Co., Quebec. |  |  |
| " 29                | " "                      | 3639           | J. O. Gagné, Ste. Henri-3 " dme.                            | 30        | .....                       | Carriere & Fils, L'Arche.                      |  |
| " 22                | Lemon Extract.           | 3696           | Louis Corriveau, St. 3 "                                    | 30        | .....                       | Carriere & Fils, L'Arche.                      |  |
| " 22                | " "                      | 3699           | (Geo. Roy, St. Michel... 3 "                                | 30        | .....                       | Carriere & Fils, L'Arche.                      |  |
| " 22                | " "                      | 4407           | J. A. Lemieux, St. Michel, 3 "                              | 60        | .....                       | INSEFFLEY Mills, Toronto.                      |  |
| " 22                | " "                      | 4414           | J. E. Boutilard, St. Ger-3 " vale.                          | 33        | .....                       | Henri, Jones Co., Montreal.                    |  |
| " 22                | " "                      | 4418           | Benoit, Aubin, Ste. Lazarre, 3 "                            | 33        | .....                       | Imperial Flouring.                             |  |
| " 22                | " "                      | 4420           | Alphonse Audet, St. 3 " Lacarne.                            | 23        | .....                       | Herron, Lablanc, L'Arche.                      |  |
| " 23                | " "                      | 4434           | Jean Ruel, Hochland ... 3 "                                 | 36        | .....                       | Drouin, Frenon, Hestray, Quebec.               |  |
| July 12             | Lemon Purifying Extract. | 296            | J. B. Gougeon, St. Jerome, 3 "                              | 60        | .....                       | J. B. Benoit and Hudson & Orsall.              |  |
| " 19                | " "                      | 308            | L. W. Brieste, Ste. 3 " Agathe des Monts.                   | 30        | Jonas.                      |  |  |
| " 19                | " "                      | 309            | F. D. Hall, Ste. Agathe 3 " des Monts.                      | 75        | Daley's.                    |  |  |
| " 19                | Lemon Extract.           | 314            | H. Garreau, St. Paulin 3 " Station.                         | 20        | Jonas.                      |  |  |
| " 19                | " "                      | 317            | H. Côté, St. Paulin 3 " Station.                            | 30        | Northrop & Lyman Co.        |  |  |
| " 19                | " "                      | 318            | Jos. Garrau, St. Paulin, 3 "                                | 30        | "                           |  |  |
| Sept. 14            | Extrait de Lemon.        | 325            | E. St. Maurice, St. 3 " Montagne, Co. des deux Montagnes.   | 30        | E. Lubon, Nive.             |  |  |
| " 14                | " "                      | 328            | Beaur & Paquette, St. 3 " Montagne, Co. des deux Montagnes. | 34        | Henri Jonas & Co.           |  |  |

DISTRICT OF QUEBEC PROVINCE—

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.         |                    |  |                       |         |                          | No. of Sample. | Remarks and opinion of the Chief Analyst. |
|-------------------------|------------------------------|--------------------|--|-----------------------|---------|--------------------------|----------------|---|
|                         | Specific gravity at 15.5° C. | Alcohol by volume. | Evaporation in 2 hours in tube at 20° C. | Equivalent Lemon Oil. | Citral. | Refractive Index of Oil. |                |   |

Continued.

|  |        |       |        |       |      |        |       |      |   |
|--|--------|-------|--------|-------|------|--------|-------|------|---|
| Morins' Citron Extract.                                | 0.9667 | 29.04 | + 0.2  | ..... | 0.07 | .....  | ..... | 3629 | Adulterated.  |
| J. B. Renaud. Lemon Mixture.                           | 0.9695 | 26.49 | + 0.8  | 0.20  | 0.04 | .....  | ..... | 3634 | Sold as a mixture.  |
| Lemon Mixture .....                                    | 0.9720 | 24.08 | + 0.2  | ..... | 0.03 | .....  | ..... | 3639 | " "   |
| Lemon Extract .....                                    | 0.9699 | 26.13 | 0.0    | ..... | 0.10 | .....  | ..... | 3596 | Below standard in citral.                                       |
| Labelled Vanilla Mixture. Sample is Lemon.             | 0.9605 | 34.18 | 0.0    | ..... | 0.05 | .....  | ..... | 3599 | Sold as a mixture.  |
| Mixture .....  | 0.8765 | 19.78 | + 7.1  | 2.5   | 0.10 | 1.4730 | ..... | 4407 | Sold as a mixture. Contains 2.5 p.c. lemon oil.                 |
| Pure Gold Mfg. Co. Imperial Flavoured Mixture Extract. | 0.9830 | 39.47 | + 0.1  | ..... | 0.08 | .....  | ..... | 4414 | Sold as a mixture.  |
| Red Cross Lemon Extract.                               | 0.9652 | 30.40 | + 0.1  | ..... | 0.05 | .....  | ..... | 4418 | Adulterated.  |
| Lemon Flavoured Extract.                               | 0.9788 | 17.37 | - 0.1  | ..... | 0.02 | .....  | ..... | 4420 | "   |
| Lemon Mixture .....                                    | 0.9705 | 25.57 | 0.0    | ..... | 0.01 | .....  | ..... | 4424 | Sold as Mixture.  |
| Artificial Lemon Extract.                              | 0.9562 | 37.20 | + 0.2  | ..... | 0.20 | .....  | ..... | 296  | Sold as artificial; but contains 0.20 p.c. citral.              |
| Lemon Extract .....                                    | 0.8721 | 76.91 | + 7.8  | 2.4   | 0.14 | .....  | ..... | 308  | Below standard in citral, with 2.4 p.c. lemon oil.              |
| Dalley's Pure Lemon Extract.                           | 0.8479 | 85.63 | + 15.3 | 4.8   | 0.30 | .....  | ..... | 309  | Genuine, with 4.8 p.c. lemon oil.                               |
| Lemon Mixture .....                                    | 0.8750 | 75.83 | + 7.0  | 2.1   | 0.16 | .....  | ..... | 314  | Sold as a mixture. Contains 2.1 p.c. lemon oil and 0.16 citral. |
| Lemon Extract .....                                    | 0.9476 | 42.62 | + 0.3  | ..... | 0.10 | .....  | ..... | 317  | Below standard in citral.                                       |
| Gold Seal Lemon Extract.                               | 0.9260 | 54.19 | 0.0    | ..... | 0.31 | .....  | ..... | 318  | Genuine.  |
| Triple Flavoured Extract Lemon.                        | 0.9503 | 41.16 | + 0.2  | ..... | 0.15 | .....  | ..... | 325  | "   |
| Triple Concentrated Mixture Extract Lemon.             | 0.8727 | 76.68 | + 8.1  | 2.4   | 0.11 | 1.4740 | ..... | 328  | Contains 2.4 p.c. lemon oil. Sold as a mixture.                 |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF QUEBEC PROVINCE—

| 1915.   |                 |      |                                       |   |       |    |                              |  |
|---------|-----------------|------|---------------------------------------|---|-------|----|------------------------------|--|
| July 20 | Essence Citron. | 2779 | Joseph Dubé, Cap St. Ignace.          | 3 | bots. | 30 | Gagnon & Garent, Quebec.     |  |
| " 21    | "               | 2782 | Jean Bte. Poirier, Montmagny.         | 3 | "     | 30 | Herron, Leblanc, Quebec.     |  |
| " 21    | "               | 2785 | Jos. Fournier, St. Thomas, Montmagny. | 3 | "     | 30 | The Chem. Wks., Hamilton.    |  |
| " 27    | Extract Lemon.  | 2793 | Desiré Fradette, N. D. du Rosaire.    | 3 | "     | 30 | Golden Star Brand, Montreal. |  |

## DISTRICT OF THREE RIVERS—

|         |                           |       |                                  |   |       |    |                                  |                                 |
|---------|---------------------------|-------|----------------------------------|---|-------|----|----------------------------------|---------------------------------|
| July 15 | Lemon Flavouring Extract. | 69122 | W. H. Lacasse, L'Assomption.     | 3 | bots. | 25 | Henri Jonas & Cie, Montreal.     |                                 |
| " 15    | "                         | 69123 | Arthur Lafontaine, L'Assomption. | 3 | "     | 25 | .....                            | Hudon, Orsali, Montreal.        |
| " 14    | "                         | 69137 | L. Pauze, L'Assomption.          | 3 | "     | 25 | International Food Co., Toronto. |                                 |
| " 19    | "                         | 69138 | W. Perreault, Joliette           | 3 | "     | 43 | Henri Jonas & Cie, Montreal.     |                                 |
| " 20    | "                         | 69141 | A. L. Caisse, Berthierville.     | 3 | "     | 45 | "                                |                                 |
| " 20    | "                         | 69142 | " " "                            | 3 | "     | 45 | "                                |                                 |
| " 20    | "                         | 69143 | " " "                            | 3 | "     | 45 | "                                |                                 |
| " 21    | "                         | 69151 | O. Paquette, Berthierville.      | 3 | "     | 39 | Litster, Toronto.                |                                 |
| " 21    | "                         | 69152 | O. Daviault, Berthierville.      | 3 | "     | 30 | .....                            | Pierre Beaudoin, Berthierville. |
| " 21    | "                         | 69153 | " " "                            | 3 | "     | 60 | Henri Jonas & Cie, Montreal.     |                                 |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.        |                                     |                       |         |                    |                          | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|-----------------------------|-------------------------------------|-----------------------|---------|--------------------|--------------------------|----------------|---|
|                         | Specific Gravity at 15.5°C. | Polarization in 2 dm. tube at 20°C. | Equivalent Lemon Oil. | Citral. | Alcohol by Volume. | Refractive Index of Oil. |                |   |

## Concluded.

|  |        |       | p. c. | p. c. | p. c. |       |                               |
|--|--------|-------|-------|-------|-------|-------|-------------------------------|
| Gagnon & Garent. Seal Brand Lemon Extract Mixture. | 0.9627 | + 0.1 | ..... | 0.01  | 32.42 | ..... | 2779 Sold as a mixture.       |
| Herron, Leblanc, Red Cross Extract Lemon Mixture.  | 0.9807 | 0.0   | ..... | 0.02  | 15.58 | ..... | 2782 " "                      |
| Hamilton Chem. Works. Lemon Extract.               | 0.9639 | 0.0   | ..... | 0.04  | 31.48 | ..... | 2785 Citral low. Adulterated. |
| Golden Star Brand Extract. Double Strength Lemon.  | 0.9741 | 0.0   | ..... | 0.00  | 22.69 | ..... | 2793 Adulterated.             |

## DR. V. P. LAVALLEE, INSPECTOR.

|                           |        |       |       |       |       |        |  |
|---------------------------|--------|-------|-------|-------|-------|--------|--|
| Lemon Mixture.....        | 0.8869 | + 6.5 | 2.0   | 0.12  | 71.22 | .....  | 69122 Sold as a mixture. Contains 2 p.c. lemon oil and 0.12 citral.  |
| Lemon Extract.....        | 0.9730 | 0.0   | ..... | 0.06  | 23.10 | .....  | 69123 Adulterated.   |
| Pure Fruit Extract Lemon. | 0.8960 | + 6.4 | 1.8   | 0.20  | 67.53 | 1.4740 | 69137 Genuine, with 1.8 p.c. lemon oil.                              |
| Lemon Extract.....        | 0.8725 | + 8.0 | 2.6   | 0.08  | 76.76 | 1.4736 | 69138 Citral low. Adulterated. Contains 2.6 p.c. lemon oil.          |
| Mixture.....              | 0.8748 | + 8.0 | 2.4   | 0.06  | 75.90 | 1.4735 | 69141 Sold as a mixture. Contains 2.4 p.c. lemon oil.                |
| .....                     | 0.9034 | + 0.5 |       |       |       |        | 69142 Collected by mistake.  |
| .....                     |        |       |       |       |       |        | 69143 " "  |
| Artificial.....           | 0.9709 | 0.0   | ..... | 0.04  | 25.17 | .....  | 69151 Sold as artificial.  |
| Lemon Mixture.....        | 0.9717 | + 0.6 | 0.18  | None. | 24.38 | .....  | 69152 Sold as a mixture.   |
| Lemon Extract.....        | 0.8739 | + 7.8 | 2.3   | 0.08  | 76.24 | .....  | 69153 Citral low. Adulterated; although contains 2.3 p.c. lemon oil. |

| Date of Collection.            | Nature of Sample.         | No. of Sample. | Name and Address of Vendor.                                      | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |                            | Inspector's Report. (Is not an expression of opinion.) |
|--------------------------------|---------------------------|----------------|--|-----------|--------|---|----------------------------|--|
|                                |                           |                |  | Quantity. | Cents. | Manufacturer.   | Furnisher.                 |  |
| DISTRICT OF EASTERN TOWNSHIPS— |                           |                |  |           |        |   |                            |  |
| 1915.                          |                           |                |  |           |        |   |                            |  |
| Aug. 11                        | Lemon Flavouring Extract. | 51390          | S. W. Fortier, Sherbrooke.                                       | 3 bots.   | 30     | White Cross Mfg. Co., Toronto.  | Compound..                 |  |
| " 11                           | "                         | 51391          | A. Boisvert, Sherbrooke.   | 3 "       | 30     | "   | Bee brand..                |  |
| " 11                           | "                         | 51392          | G. E. Robitaille, Sherbrooke.                                    | 3 "       | 30     | Hamilton Chem. Wks.   | Labelled mixture compound. |  |
| " 12                           | "                         | 51393          | Farley & Burroughs, Coaticook.                                   | 3 "       | 30     | "   | Bee brand..                |  |
| " 12                           | "                         | 51394          | D. S. Bashand, Coaticook.  | 3 "       | 25     | S. H. Ewing & Sons, Montreal.   | Mixture..                  |  |
| " 17                           | "                         | 51395          | Mercure & Frere, Granby.   | 3 "       | 30     | Tropical Extract Co., Toronto.  | Artificial...              |  |
| " 17                           | "                         | 51396          | Beaudry & Beauchemin, Granby.                                    | 3 "       | 30     | The Hamilton Chem. Wks.   | "                          |  |
| " 18                           | "                         | 51397          | W. Hamel, Magog ...  | 3 "       | 30     | Integrity Mills, Toronto.   | Mixture....                |  |
| " 18                           | "                         | 51398          | B. E. Goyette, Magog ...   | 3 "       | 75     | Litster Pure Food Co.   | "                          |  |
| " 18                           | "                         | 51399          | I. M. Bachelier & Co., Magog.                                    | 3 "       | 45     | Davis, Lawrence Co., Montreal.  | Royal brand.               |  |
| DISTRICT OF MONTREAL—          |                           |                |  |           |        |   |                            |  |
| Aug. 25                        | Lemon Flavouring Extract. | 67436          | J. A. Villeneuve, 195 Ottawa St., Montreal.                      | 3 bots.   | 30     | S. H. Ewing & Sons.   | "                          |  |
| " 26                           | "                         | 67437          | A. Silverstone, 646 St. Catherine St. W., Montreal.              | 3 "       | 30     | Henri Jonas & Co.   | "                          |  |
| " 26                           | "                         | 67438          | H. Russell, 847 St. Catherine St. W., Montreal.                  | 3 "       | 75     | McLaren's, Ltd.   | "                          |  |
| " 26                           | "                         | 67439          | Murphy & Riordon, 871 St. Catherine St. W., Montreal.            | 3 "       | 30     | Holly Packing Co.   | "                          |  |
| " 26                           | "                         | 67440          | J. G. Côté, 887 St. Catherine St. W., Montreal.                  | 3 "       | 75     | "   | Mr. Sillcocks.             |  |
| " 26                           | "                         | 67441          | W. J. Brown, 888 St. Catherine St. W., Montreal.                 | 3 "       | 75     | The Albrecht Pure Food Co.  | "                          |  |
| " 26                           | "                         | 67442          | Jas. Graham, 4451 St. Catherine St., Westmount.                  | 3 "       | 30     | Imperial Extract Co.  | Sold as mixture. Not pure. |  |
| " 30                           | "                         | 67443          | G. Greenberg, 1221 Green Ave., Westmount.                        | 3 "       | 75     | L. Silverman..  | Sold as compound.          |  |
| Sept. 1                        | "                         | 67444          | Prince Arthur Liquor Grocery, 20 Prince Arthur St. E., Montreal. | 3 "       | 75     | "   | Unknown.                   |  |
| " 1                            | "                         | 67445          | S. Dever & Son, Prince Arthur St. and Colonial Ave., Montreal.   | 3 "       | 25     | "   | "                          |  |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.         |                                       |                       |         |                    |                            | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|------------------------------|---------------------------------------|-----------------------|---------|--------------------|----------------------------|----------------|---|
|                         | Specific Gravity at 15.5° C. | Reduction in 2 c.c. in tube at 20° C. | Equivalent Lemon Oil. | Citral. | Alcohol by Volume. | Refractive Index at 20° C. |                |   |

## J. J. COSTIGAN, ACTING INSPECTOR.

|  |        | p. c. | p. c. | p. c. |  |       |                    |
|--|--------|-------|-------|-------|--|-------|--------------------|
| White Cross Manufacturing Co. Compound Lemon.                            | 0.9682 | 0.0   | 0.02  | 27.68 |  | 51390 | Sold as compound.  |
| Hamilton Chemical Wks. Tropical Compound Extract Lemon.                  | 0.9708 | 0.0   | 0.68  | 25.27 |  | 51391 | " mixture.         |
| Mixture. "Bee Brand" Lemon Extract.                                      | 0.9669 | 0.0   | 0.06  | 28.86 |  | 51392 | " compound.        |
| S. H. Ewing & Son. Lemon Mixture Flavouring Extract.                     | 0.9706 | 0.0   | 0.08  | 25.47 |  | 51393 | " mixture.         |
| Tropical Extract Co. "Eagle Brand" Artificial Flavouring Ess., coloured. | 0.9668 | 0.0   | 0.06  | 28.95 |  | 51394 | " "                |
| Hamilton Chemical Wks. Prime Extract Lemon. Artificial.                  | 0.9638 | 0.0   | 0.06  | 31.57 |  | 51395 | " artificial.      |
| Integrity Mills. Lemon Extract Mixture.                                  | 0.9668 | 0.0   | 0.08  | 28.95 |  | 51396 | " "                |
| Lister Pure Food Co. Lemon Extract.                                      | 0.9694 | 0.0   | 0.08  | 26.58 |  | 51397 | " mixture.         |
| Davis, Lawrence. Royal Extract Lemon.                                    | 0.9329 | + 0.1 | 0.11  | 50.87 |  | 51398 | Too low in citral. |
|  | 0.9171 | 0.0   | 0.20  | 58.32 |  | 51399 | Genuine.           |

## D. J. KEARNEY, INSPECTOR.

|   |        |       |      |       |       |        |  |
|---|--------|-------|------|-------|-------|--------|--|
| S. H. Ewing & Son. Club Lemon Extract.                                      | 0.9741 | - 0.2 | 0.02 | 22.69 |       | 67436  | Too low in citral Adulterated.               |
| Henri Jonas Co. Extract Lemon. Mixture.                                     | 0.8807 | + 6.9 | 2.2  | 0.12  | 73.65 | 1.4730 | 67437 Sold as mixture.                       |
| McLaren's Ltd. Invincible True Lemon.                                       | 0.9396 | + 0.2 | 0.16 | 47.35 |       | 67438  | Genuine.                                     |
| Holly Packing Co. Artificial Coloured Compound. Concentrated Extract Lemon. | 0.9714 | - 0.1 | 0.06 | 24.68 |       | 67439  | Sold as artificial.                          |
| Sturiff's Imperial Quint Essence True Lemon.                                | 0.9210 | + 1.1 | 0.20 | 56.54 |       | 67440  | Genuine.                                     |
| Allredie P. F. Co. "Allredie Brand" Lemon Extract.                          | 0.9501 | + 0.1 | 0.05 | 41.26 |       | 67441  | Citral too low. Adulterated.                 |
| Imperial Extract Co. Our 1890 Mixture Lemon.                                | 0.9827 | 0.0   | 0.06 | 13.71 |       | 67442  | Sold as mixture                              |
| Silverman's Compound Lemon.   | 0.9704 | + 0.2 | 0.20 | 25.67 |       | 67443  | Sold as compound; contains 0.20 p.c. citral. |
| McLaren's "Dew Drop" Extract Lemon, Mfg. H. C. & S. Co., Ltd.               | 0.9475 | 0.0   | 0.05 | 42.67 |       | 67444  | Citral too low. Adulterated.                 |
| I. E. C. Our 1890 Soluble Extract Lemon.                                    | 0.9760 | 0.0   | 0.04 | 20.24 |       | 67445  | " "  |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF VALLEYFIELD—

| 1913.   |                           |       |  |         |    |  |                                   |                                 |
|---------|---------------------------|-------|--|---------|----|--|-----------------------------------|---------------------------------|
| July 15 | Lemon Flavouring Extract. | 58186 | Victor Gregoir, St. Charles St., St. Johns.        | 3 bots. | 30 |  | Integrity Mills, Toronto.         | Labelled Artificial.            |
| " 15    | "                         | 58187 | " " "  | 3 "     | 30 |  | Henri Jonas Co., Montreal.        | Mixture stencilled on label.    |
| " 15    | "                         | 58188 | M. A. Comtois, St. Charles St., St. Johns.         | 3 "     | 30 |  | "                                 | "                               |
| " 15    | "                         | 58189 | Joseph Chartier, Market Place, St. Johns.          | 3 "     | 60 |  | "                                 | Triple concentrated.            |
| " 15    | "                         | 58190 | J. E. Lariviere & Co., St. Jacques St., St. Johns. | 3 "     | 30 |  | Herron Leblanc, Ltd.              | Labelled Mixture.               |
| " 20    | "                         | 58191 | W. J. McPherson, Cecil St., Valleyfield.           | 3 "     | 60 |  | Pure Gold Co., Ltd., Toronto.     | Labelled Govt. Standard.        |
| " 20    | "                         | 58192 | " " "  | 3 "     | 60 |  | F. F. Dalley Co., Ltd., Hamilton. | "                               |
| " 21    | "                         | 58193 | J. A. Tremblay & Cie., Victoria St., St. Lambert.  | 3 "     | 30 |  | "                                 | Labelled Mixture.               |
| " 21    | "                         | 58194 | E. Beauchamp, Front St., St. Lambert.              | 3 "     | 30 |  | Holly Packing Co., Montreal.      | Labelled Compound.              |
| " 22    | "                         | 58195 | D. Seward, Main St., Hawkesbury.                   | 3 "     | 30 |  | Birks Corner Co., Montreal.       | Labelled Artificially Coloured. |

## DISTRICT OF OTTAWA—

|         |                           |       |                                |         |    |  |                               |  |
|---------|---------------------------|-------|--------------------------------|---------|----|--|-------------------------------|--|
| July 12 | Lemon Flavouring Extract. | 63659 | E. Carpenter, Mills Roches.    | 3 bots. | 30 |  | Vendor                        | Labelled Lemon Quality Extracts.           |
| " 13    | "                         | 63660 | Wm. Jenkins, Carleton Place.   | 3 "     | 75 |  | Shirriff's, Toronto.          | Labelled Imperial Quintessence True Lemon. |
| " 13    | "                         | 63661 | Thos. Stevens, Carleton Place. | 3 "     | 30 |  | N. C. Polson & Co., Kingston. | Labelled Perfection Brand Pure.            |
| " 13    | "                         | 63662 | " " "                          | 3 "     | 75 |  | Pure Gold Mfg. Co., Toronto.  | Pure Gold.                                 |

## LEMON FLAVOURING EXTRACT.

| Description from Label | Results of Analysis        |                                      |         |                      |                   |                    | No. of Samples | Remarks and Opinion of the Chief Analyst. |
|------------------------|----------------------------|--------------------------------------|---------|----------------------|-------------------|--------------------|----------------|---|
|                        | Specific gravity at 15° C. | Polarization in 2 dm. tube at 20° C. | Citral. | Separated Lemon Oil. | Refractive Index. | Alcohol by volume. |                |   |

J. J. COSTIGAN, ACTING INSPECTOR.

|  |        |        | p. c. | p. c. | p. c.  |       |                           |
|--|--------|--------|-------|-------|--------|-------|---------------------------|
| Integrity Mills. Artificial Coloured Lemon Extract.        | 0.9705 | 0.0    | 0.00  | ..... | 25.57  | ..... | 58186 Sold as artificial. |
| H. Jonas & Co., Triple Concentrated Extract Lemon Mixture. | 0.8809 | + 7.8  | 0.08  | 2.4   | 1.4739 | 73.57 | 58187 Sold as mixture.    |
| H. Jonas & Co., Ex. Lemon Mixture.                         | 0.8775 | + 8.0  | 0.07  | 2.4   | 1.4733 | 74.89 | 58188 " "                 |
| Henri Jonas Co., Jonas Triple Concentrated Lemon Extract.  | 0.8746 | + 8.0  | 0.10  | 2.7   | 1.4739 | 75.98 | 58189 Citral too low.     |
| Herron Leblanc, Ltd. Lemon Mixture. Red Cross.             | 0.9816 | 0.0    | 0.04  | ..... | 14.74  | ..... | 58190 Sold as mixture.    |
| Pure Gold Co., Standard Ext. Lemon.                        | 0.8937 | 0.0    | 0.18  | ..... | 68.44  | ..... | 58191 Genuine.            |
| F.F. Dalley Co., Lemon Pure Fruit Extract.                 | 0.8439 | + 11.4 | 0.16  | 3.6   | 1.4739 | 86.32 | 58192 "                   |
| Lemon Ext. Mixture....                                     | 0.9775 | 0.0    | 0.04  | ..... | 18.78  | ..... | 58193 Sold as mixture.    |
| Holly Pack Co., Concentrated Ext. Lemon Compound.          | 0.9716 | 0.0    | 0.08  | ..... | 24.48  | ..... | 58194 " compound.         |
| Mixture. ....  | 0.9717 | 0.0    | 0.04  | ..... | 24.38  | ..... | 58195 " mixture.          |

J. A. RICKEY, INSPECTOR.

|  |        |        |      |       |       |       |                                |
|--|--------|--------|------|-------|-------|-------|--------------------------------|
| Carpenter. Lemon Quality Extract.                                    | 0.9801 | 0.0    | 0.4  | ..... | 16.15 | ..... | 63659 Citral low. Adulterated. |
| Shiriffs. Imp. Quintessence True Lemon.                              | 0.9490 | 0.0    | 0.10 | ..... | 41.84 | ..... | 63660 Citral below standard.   |
| N. C. Polson & Co., Perfection Brand Pure Conc. Flav. Extract Lemon. | 0.9948 | + 16.2 | 0.02 | ..... | 18.58 | ..... | 63661 Citral low. Adulterated. |
| Pure Gold Co. Pure Gold Lemon Ext.                                   | 0.9370 | + 0.2  | 0.17 | ..... | 48.75 | ..... | 63662 Genuine.                 |



| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF OTTAWA—

|         |                           |       |                                |         |    |  |             |   |
|---------|---------------------------|-------|--------------------------------|---------|----|--|-------------|---|
| 1915.   |                           |       |                                |         |    |  |             |   |
| July 16 | Lemon Flavouring Extract. | 63663 | G. A. Ellis, Renfrew . . .     | 3 bots. | 30 | Integrity Mills, Toronto.                | Mfrs. . . . | World Brand                                       |
| " 16    | "                         | 63664 | P. J. Campbell, Renfrew .      | 3 "     | 75 | Gorman, Eckert & Co., Ltd., London, Ont. | " . . . .   | Double Strength Pure.                             |
| " 16    | "                         | 63665 | H. Brydger, Renfrew . . .      | 3 "     | 30 | The J. M. Lowes Co., Ltd., Toronto.      | " . . . .   | Monarch Concentrated True Fruit Flavour. Extract. |
| " 24    | "                         | 63666 | T. F. Dextras, Cornwall .      | 3 "     | 80 | Gorman, Eckert & Co., Ltd., London, Ont. | .....       | Oriental . . . .                                  |
| " 24    | "                         | 63667 | D. J. Gillies, Cornwall . .    | 3 "     | 75 | The F. F. Dalley Co., Ltd., Hamilton.    | .....       | Guaranteed Pure.                                  |
| " 26    | "                         | 63628 | Wm. F. Nesbitt, Britannia Bay. | 3 "     | 30 | L. Crossman, Ottawa.                     | .....       | Our 1910 Pure Concentrated Extract of Lemon.      |
| Aug. 7  | "                         | 63671 | P. A. Gagne, South Indian.     | 3 "     | 30 | Northop & Lyman Co., Ltd., Toronto.      | .....       | .....   |
| " 7     | "                         | 63673 | Stephen Pilon, Rockland.       | 3 "     | 75 | International Food Co., Toronto.         | .....       | Reliance . . . .                                  |

## DISTRICT OF KINGSTON—

|         |                           |       |                               |         |    |                 |               |   |
|---------|---------------------------|-------|-------------------------------|---------|----|-----------------|---------------|---|
| July 29 | Lemon Flavouring Extract. | 70231 | N. C. Polson & Co., Kingston. | 3 bots. | 30 | Vendors . . . . | .....         | .....   |
| Aug. 2  | "                         | 70232 | H. C. Hampton, Belleville.    | 3 "     | 30 | .....           | R. Fenn & Co. | This sample was in stock when vendor bought the business. |

## LEMON FLAVOURING EXTRACT.

## Results of Analysis.

| Description from Label. | Specific gravity at 15°-5° C. |  | Citral. | Separated Lemon Oil. | Refractive Index. | Alcohol by volume. | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|-------------------------------|--|---------|----------------------|-------------------|--------------------|----------------|---|
|                         |                               |  |         |                      |                   |                    |                |   |
|                         |                               |  |         |                      |                   |                    |                |   |

## Continued.

| Description from Label.                            | Specific gravity at 15°-5° C. |      | Citral. | Separated Lemon Oil. | Refractive Index. | Alcohol by volume. | No. of Sample. | Remarks and Opinion of the Chief Analyst. |     |
|--|-------------------------------|------|---------|----------------------|-------------------|--------------------|----------------|---|-----|
|  |                               |      |         |                      |                   |                    |                |   |     |
| Lemon Extract.....                                 | 0.9702                        | 0.00 | 0.06    | .....                | 25.86             | .....              | 63663          | Citral too low. Adulterated.              |     |
| German, Eckert Co.'s Lemon Ext.                    | 0.9882                        | 0.00 | 0.16    | .....                | 49.71             | .....              | 63664          | Genuine.                                  |     |
| J. M. Lawson Co.'s Lemon Concentrated. "Mon arch." | 0.9732                        | 0.00 | 0.06    | .....                | 22.92             | .....              | 63665          | Citral too low. Adulterated.              |     |
| German, Eckert Co.'s Oriental Lemon Flav. Ext.     | 0.9699                        | 0.00 | 0.05    | .....                | 34.61             | .....              | 63666          | " "                                       |     |
| Dalby's Pure Fruit Extract Lemon.                  | 0.9696                        | 0.15 | 3.61    | 47.20                | 84.74             | .....              | 63667          | Genuine.                                  |     |
| L. Grossman's Concentrated Flav. Lemon.            | 0.9733                        | 0.00 | 0.04    | .....                | 20.89             | .....              | 63668          | Citral too low. Adulterated.              |     |
| Northrop & Lyman's Real Seal Brand Lemon Extract.  | 0.8687                        | 0.00 | 0.18    | .....                | 47.88             | .....              | 63671          | Genuine.                                  |     |
| Lemon Extract.....                                 | 0.8682                        | 5.6  | 0.16    | 1.91                 | 47.39             | 67.88              | .....          | 63673                                     | " " |

## JAMES HOGAN, INSPECTOR.

| Description from Label.                   | Specific Gravity at 15°-5° C. |       | Polarization in 2 dm. tube at 20° C. | Alcohol by Volume. | Citral.    | Equivalent Lemon Oil. | Refractive Index of Oil. | No. of Sample. | Remarks and Opinion of the Chief Analyst. |                              |
|---|-------------------------------|-------|--------------------------------------|--------------------|------------|-----------------------|--------------------------|----------------|---|------------------------------|
|   |                               |       |                                      |                    |            |                       |                          |                |   |                              |
| N. C. Robson Co.'s Lemon Brand. Arith.    | 0.9731                        | +34.4 | .....                                | P. C. ....         | P. C. 0.25 | P. C. 0.41            | 47.10                    | .....          | 70231                                     | Sold as artificial.          |
| R. Fenn & Son's Flavouring Extract Lemon. | 0.9800                        | 0.00  | 16.24                                | 0.06               | .....      | .....                 | .....                    | .....          | 70232                                     | Citral too low. Adulterated. |

| Date of Collection.   | Nature of Sample.         | No. of Sample. | Name and Address of Vendor.                            | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|-----------------------|---------------------------|----------------|--|-----------|--------|---|------------|--|
|                       |                           |                |  | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |
| DISTRICT OF KINGSTON— |                           |                |  |           |        |   |            |  |
| 1915.                 |                           |                |  |           |        |   |            |  |
| Aug. 2                | Lemon Flavouring Extract. | 70233          | S. R. Artis, Belleville....                            | 3 bots.   | 30     | Vendor.   | .....      | .....  |
| " 2                   | "                         | 70234          | R. Elvins, Belleville.....                             | 3 "       | 30     | .....   | .....      | .....  |
| " 3                   | "                         | 70235          | S. P. Harvey & Sons, Cobourg.                          | 3 "       | 75     | McLaren's, Hamilton.  | .....      | .....  |
| " 3                   | "                         | 70236          | W. Burnet, Cobourg.....                                | 3 "       | 75     | "   | .....      | .....  |
| " 3                   | "                         | 70237          | Thompson, Macdonald, Cobourg.                          | 3 "       | 25     | Gorman, Eckert Co., London.   | .....      | .....  |
| " 3                   | "                         | 70238          | Sam Sleeman, Port Hope.                                | 3 "       | 30     | White Swan, Toronto.  | .....      | .....  |
| " 3                   | "                         | 70239          | F. Rosevear, Port Hope.                                | 3 "       | 30     | Vendor.   | .....      | .....  |
| " 3                   | "                         | 70240          | F. H. Brown, Port Hope.                                | 3 "       | 30     | Tropical Extract, Toronto.  | .....      | .....  |
| DISTRICT OF TORONTO—  |                           |                |  |           |        |   |            |  |
| Aug. 8                | Extract of Lemon.         | 70084          | David Bell, 1364 Bathurst St., Toronto.                | 3 bots.   | 75     | Pure Gold Mfg. Co., Toronto.  | .....      | .....  |
| " 10                  | "                         | 70085          | W. Massen, 1346 St. Clair Ave., Toronto.               | 3 "       | 15     | .....   | Unknown.   | Star brand..   |
| " 10                  | "                         | 70086          | F. Kelsey, 1738 St. Clair Ave., Toronto.               | 3 "       | 15     | .....   | "          | .....  |
| " 11                  | "                         | 70087          | T. R. Franklin, 165 Danforth Ave., Toronto.            | 3 "       | 75     | Imperial Extract Co., Toronto.  | .....      | Shirriff's Imperial Quintessence true lemon.           |
| " 12                  | "                         | 70088          | The T. Eaton Co., Ltd., Queen and Yonge Sts., Toronto. | 3 "       | 45     | G. F. Sutton Sons, London, Eng.                                       | .....      | Labelled essence of lemon.                             |
| " 13                  | "                         | 70089          | Conway & Co., 1995 Dundas St., Toronto.                | 3 "       | 30     | Eby, Blain, Ltd., Toronto.  | .....      | Anchor brand.  |
| " 16                  | "                         | 70090          | Mead's Grocery, 806 Coleridge St., Toronto.            | 3 "       | 75     | McLaren's, Hamilton.  | .....      | McLaren's invincible.                                  |
| " 17                  | "                         | 70091          | W. J. Snell, 2165 Queen St. E., Toronto.               | 3 "       | 75     | Pure Gold Mfg. Co., Ltd., Toronto.                                    | .....      | "  |
| " 17                  | "                         | 70092          | W. Black, 1960 Queen St. E., Toronto.                  | 3 "       | 60     | "   | .....      | "  |
| " 18                  | "                         | 70093          | W. Forester, 177 Roncesville Ave., Toronto.            | 2 "       | 20     | Integrity Mills, Toronto.   | .....      | Integrity World brand. Double strength.                |

## LEMON FLAVOURING EXTRACT.

| Description from Label.  | Results of Analysis.         |                                      |                    |         |                |                   | No. of Sample. | Remarks and Opinion of the Chief Analyst.   |
|--|------------------------------|--------------------------------------|--------------------|---------|----------------|-------------------|----------------|---|
|  | Specific Gravity at 15.5° C. | Polarization in 2 mm. Tube at 20° C. | Alcohol by Volume. | Citral. | Separated Oil. | Refractive Index. |                |   |
| <i>Continued.</i>  |                              |                                      |                    |         |                |                   |                |   |
| S. R. Artis. Maple Leaf Artificial Lemon.                                | 0.9774                       | 0.0                                  | 18.88              | 0.10    |                |                   | 70233          | Sold as artificial.                         |
| J. M. Lowes Co. Monarch Compound Flavouring Ext. Lemon.                  | 0.9677                       | 0.0                                  | 28.13              | 0.08    |                |                   | 70234          | " compound.                                 |
| True Lemon Extract....   | 0.9453                       | 0.0                                  | 44.00              | 0.10    |                |                   | 70235          | Citral low.                                 |
| McLaren's True Lemon..   | 0.9493                       | 0.0                                  | 41.69              | 0.10    |                |                   | 70236          | "   |
| Forest City Lemon Extract Mixture.                                       | 0.9648                       | 0.0                                  | 30.73              | 0.20    |                |                   | 70237          | Sold as mixture. Contains 0.20 p.c. citral. |
| Lemon Mixture.....   | 0.9775                       | 0.0                                  | 18.78              | 0.10    |                |                   | 70238          | Sold as mixture.                            |
| F. Rosevear. Maple Leaf Artificial Ext. Lemon.                           | 0.9758                       | -0.1                                 | 18.48              | 0.10    |                |                   | 70239          | " artificial.                               |
| Tropical Extract Co. Oriental Artificial Coloured Lemon Extract Mixture. | 0.9653                       | 0.0                                  | 30.31              | 0.06    |                |                   | 70240          | " "   |
| <b>H. J. DAGGER, INSPECTOR.</b>  |                              |                                      |                    |         |                |                   |                |   |
| Pure Gold Govt. Standard Lemon Extract.                                  | 0.9337                       | +0.4                                 | 68.44              | 0.15    |                |                   | 7008           | Genuine.                                    |
| Star Brand Lemon Flavouring Extract.                                     | 0.9819                       | -0.6                                 | 14.46              | 0.06    |                |                   | 70085          | Citral too low. Adulterated.                |
| Strongest Flavouring Extract Lemon.                                      | 0.9783                       | +2.3                                 | 17.92              | 0.05    |                |                   | 70086          | " "   |
| Shiriff's Imperial Quint Essence True Lemon.                             | 0.9214                       | +0.9                                 | 60.34              | 0.18    |                |                   | 70087          | Genuine.                                    |
| G. F. Sutton & Son Co. Essence of Lemon.                                 | 0.9373                       | +0.5                                 | 48.59              | 0.11    |                |                   | 70088          | Citral too low.                             |
| Ely, Blain, Ltd. Finest Quality "Anchor Brand" Lemon Extract.            | 0.9090                       | +2.1                                 | 61.84              | 0.25    |                |                   | 70089          | Genuine.                                    |
| McLaren's Invincible True Lemon.   | 0.9466                       | 0.0                                  | 43.19              | 0.14    |                |                   | 70090          | Citral below standard.                      |
| Pure Gold Mfg. Co. Pure Gold Extract Lemon.                              | 0.9402                       | +0.2                                 | 47.02              | 0.19    |                |                   | 70091          | Genuine.                                    |
| Pure Gold Mfg. Co. Pure Gold Extract Lemon.                              | 0.9411                       | +0.2                                 | 46.53              | 0.16    |                |                   | 70092          | "   |
| Double Strength Lemon Extract.   | 0.9690                       | 0.0                                  | 26.96              | 0.08    |                |                   | 70093          | Citral too low. Adulterated.                |

spector's  
report.  
(not an  
analysis of  
alcohol.)

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| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF HAMILTON—

|         |                   |       |  |           |    |                                      |  |   |
|---------|-------------------|-------|--|-----------|----|--------------------------------------|--|---|
| 1915.   |                   |       |  |           |    |                                      |  |   |
| July 21 | Extract of Lemon. | 70021 | A. R. Phipps, 78 Queenston St., St. Catharines.        | 3 bots.   | 30 | Vendor . . . . .                     |  | Labelled Our Leader, Mig. expressly for vendor.                 |
| " 22    | "                 | 70023 | E. Gander, King and Queen Sts., St. Catharines.        | 3 " . . . | 75 | F. F. Dalley, Co., Hamilton.         |  |   |
| " 22    | "                 | 70024 | L. McMann, Thorold ..                                  | 3 " . . . | 30 | Balfour Smye & Co., Hamilton.        |  | Tartan Brand.   |
| " 23    | "                 | 70025 | John Muir, 29 Queen St., Niagara Falls.                | 3 " . . . | 75 | Imperial Extract Co., Ltd., Toronto. |  | Shirri's Imperial Qu-intessence Truc.                           |
| " 23    | "                 | 70026 | O. E. Dores, 41 Queen St., Niagara Falls.              | 3 " . . . | 15 | Gorman Eck-ert Co., Ltd., London.    |  | Pure Con-centrated.   |
| " 23    | "                 | 70027 | Extence & Norton, Bolton                               | 3 " . . . | 30 | Vendors. . . . .                     |  |   |
| Aug. 3  | "                 | 70028 | Deeves & Co., Brampton.                                | 3 " . . . | 30 | " . . . . .                          |  | Labelled Maple Leaf.  |
| " 4     | "                 | 70029 | McKay Bros., George-town.                              | 3 " . . . | 60 | Tropical Ex-tract Co., Toronto.      |  | Labelled Imperial Prepa red by Trop-ical Ex-tract Co., Toronto. |
| " 5     | "                 | 70030 | The F. F. Dalley Co., Ltd., 71 Hughson St., Hamilton.  | 3 " . . . | 45 | Vendors. . . . .                     |  |   |
| " 5     | "                 | 70034 | Imperial Spice Co., Ltd., 33 McNabb St., N., Hamilton. | 3 " . . . | 25 | " . . . . .                          |  | Red Feather   |
| " 5     | "                 | 70035 | McLaren's, Ltd., Park and Merrick Sts., Hamilton.      | 3 " . . . | 30 | " . . . . .                          |  | Invincible.   |
| " 5     | "                 | 70062 | Young Windfield Ltd., 87 Cannon St., W., Ham-ilton.    | 3 " . . . | 20 | " . . . . .                          |  | Young's Im-proved.  |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.       |                                      |                    |         |                |                   | No. of St. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|----------------------------|--------------------------------------|--------------------|---------|----------------|-------------------|------------|---|
|                         | Specific gravity at 15° C. | Polarization in 1 cu. tube at 20° C. | Alcohol by volume. | Citral. | Separated Oil. | Refractive Index. |            |   |

H. J. DAGER, ACTING INSPECTOR.

|  |        |        | p.c.  | p.c. | p.c.  |       |       |                               |
|--|--------|--------|-------|------|-------|-------|-------|-------------------------------|
| A. R. Phipps, Our Leaf<br>or Pure Extract Lemon.   | 0.9731 | + 0.1  | 23.01 | 0.06 | ..... | ..... | 70021 | Citral low. Adult-<br>erated. |
| Dalley's Pure Fruit Ex-<br>tracts Lemon.   | 0.8527 | + 11.7 | 84.04 | 0.15 | 3.51  | 4.740 | 70023 | Genuine.                      |
| Balfour Smye Co. Pure<br>Lemon Flav. Extract.  | 0.9649 | 0.0    | 30.65 | 0.14 | ..... | ..... | 70024 | Citral below stand-<br>ard.   |
| Shiriffs Imperial Quint-<br>essence True Lemon.  | 0.9358 | + 0.2  | 49.40 | 0.16 | ..... | ..... | 70025 | Genuine.                      |
| Pure Concentrated Ex-<br>tract Lemon.  | 0.9688 | 0.0    | 27.13 | 0.06 | ..... | ..... | 70026 | Citral low. Adult-<br>erated. |
| Extence & Norton.<br>Lemon Flav. Extract.  | 0.9727 | - 9.2  | 23.38 | 0.14 | ..... | ..... | 70027 | Citral below stand-<br>ard.   |
| Devos & Co. Maple<br>Leaf Flav. Ext.<br>Lemon.   | 0.9792 | 0.0    | 16.98 | 0.02 | ..... | ..... | 70028 | Citral low. Adult-<br>erated. |
| Tropical Ext. Co. Im-<br>perial Flav. Ext.<br>Lemon.   | 0.9469 | - 0.1  | 43.01 | 0.08 | ..... | ..... | 70029 | " "                           |
| Dalley's Pure Fruit Ex-<br>tract Lemon.  | 0.8482 | + 11.4 | 85.53 | 0.15 | 4.01  | 4.726 | 70030 | Genuine.                      |
| Imp. Spice Co., Ltd.<br>Red Feather Quality<br>Lemon Ext.  | 0.9395 | 0.0    | 47.40 | 0.23 | ..... | ..... | 70034 | "                             |
| Guaranteed a higher<br>grade than Govt.<br>Standard. McLaren's,<br>Ltd. Invincible True<br>Lemon. This is the<br>highest grade of ex-<br>tract made. | 0.9414 | + 0.2  | 46.37 | 0.16 | ..... | ..... | 70035 | "                             |
| Young Winfield Im-<br>proved Extract Lemon.  | 0.9285 | + 0.5  | 53.01 | 0.11 | ..... | ..... | 70062 | Citral low.                   |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF WINDSOR—

| 1915.  |                           |       |                          |         |    |                                 |  |   |
|--------|---------------------------|-------|--------------------------|---------|----|---------------------------------|--|---|
| Aug. 2 | Lemon Flavouring Extract. | 54632 | J. A. Kelly, Lambeth...  | 3 bota. | 30 | L. X. L. Spice Co., London      |  | Honey Drip                              |
| " 2    | "                         | 54634 | G. T. Carley, Lambeth .. | 3 "     | 30 | "                               |  | Lemon Artificial Sweetheart Brand.      |
| " 2    | "                         | 54635 | Earle & Son, Lambeth. .  | 3 "     | 30 | E. Adams Co., London.           |  | Fan Brand, Artificial.                  |
| " 4    | "                         | 54636 | Willis & Co., London.... | 3 "     | 30 | Vendors.....                    |  | Willis Own Fruit Flav. Extract Mixture. |
| " 4    | "                         | 54637 | Blinn Bros., London..... | 3 "     | 30 | M. Masfrett & Co., London.      |  | Eagle.....                              |
| " 4    | "                         | 54638 | Dan Carter, London.....  | 3 "     | 75 | Shirriff's, Toronto.            |  | Shirriff's Imperial Quintessence.       |
| " 4    | "                         | 54640 | R. W. James, London ...  | 3 "     | 30 | White Cross Mfg., Co., Toronto. |  | White Cross Pure.                       |
| " 13   | "                         | 54667 | Butler Bros., St. Thomas | 3 "     | 25 | Gorman Eckert Co., Toronto      |  | Artificial....                          |
| " 13   | "                         | 54671 | W. E. Ross, St. Thomst.  | 3 "     | 45 | Imperial Extract Co., Toronto.  |  | Eclipse.....                            |

## DISTRICT OF MANITOBA—

|         |                           |       |   |         |    |                             |  |  |
|---------|---------------------------|-------|---|---------|----|-----------------------------|--|--|
| Aug. 18 | Lemon Flavouring Extract. | 61345 | Sutherland & Robertson, 136 Tenth St., Brandon. | 3 bota. | 75 | McLaren's Ltd., Hamilton.   |  |  |
| " 18    | "                         | 61354 | The A. I. Grocery, 416 Tenth St., Brandon.      | 3 "     | 75 | Codville Co., Winnipeg.     |  |  |
| " 18    | "                         | 61355 | W. J. Youngs, 1013 Rosser Ave., Brandon.        | 3 "     | 75 | Imperial Ext. Co., Toronto. |  |  |
| " 18    | "                         | 61358 | Smith & Burton, Brandon.                        | 3 "     | 75 | Vendors.....                |  |  |

## LEMON FLAVOURING EXTRACT.

No. 337—

| Inspector's Report.<br>(Is not an expression of opinion.) | Description from Label. | Results of Analysis.       |                                      |                    |         |                |                   | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|---|-------------------------|----------------------------|--------------------------------------|--------------------|---------|----------------|-------------------|----------------|---|
|   |                         | Specific Gravity at 15° C. | Polarization in 2 dm. tube at 20° C. | Alcohol by Volume. | Citral. | Separated Oil. | Refractive Index. |                |   |

INDSOR—

JOHN TALBOT, INSPECTOR.

|   |  |        | p. c. | p. c. | p. c. |  |       |   |
|---|--|--------|-------|-------|-------|--|-------|---|
| Honey Drip  | Is a Syrup.  |        |       |       |       |  | 54632 | Not lemon Extract. Collected by mistake.  |
| Lemon Artificial Sweetheart Brand. Fan Brand, Artificial. | I. X. L. Spice & Coffee Co. Sweetheart Brand. Lemon Ext. Artificial. | 0.9776 | 0.0   | 18.68 | 0.06  |  | 54634 | Sold as artificial.                       |
| Willis Own Fruit Flav. Extract Mixture. Eagle.            | Ed. Adam & Co. Artificial Ext. Lemon. Coloured.                      | 0.9869 | + 0.1 | 9.93  | 0.11  |  | 54635 | " "                                       |
| Shirriff's Imperial Quintessence. White Cross Pure.       | Willis & Co. Lemon Mixture.  | 0.9644 | 0.0   | 31.07 | 0.06  |  | 54636 | " mixture.                                |
| Artificial....  | M. Mauret & Co. Lemon Extract.                                       | 0.9761 | + 0.1 | 20.15 | 0.03  |  | 54637 | Citral low. Adulterated.                  |
| Eclipse....   | Shirriff's Imp. Quintessence True Lemon.                             | 0.9217 | + 0.9 | 56.21 | 0.21  |  | 54638 | Genuine.                                  |
|   | White Cross Mfg., Co. Lemon Ext.                                     | 0.9732 | 0.0   | 22.92 | 0.04  |  | 54640 | Citral low. Adulterated.                  |
|   | Gorman Eckert & Co. Artificial Lemon Flav. Ext.                      | 0.9740 | - 0.1 | 22.18 | 0.16  |  | 54667 | Sold as artificial. Contains 0.16 citral. |
|   | Imperial Ext. Co. Lemon Pure Eclipse.                                | 0.9424 | 0.0   | 45.77 | 0.08  |  | 54671 | Citral low. Adulterated.                  |

NITABA—

J. B. COSGROVE, TEMPORARY INSPECTOR.

|       |   | Specific Gravity at 15° C. | Rotation 2 dm. tube at 20° C. | Lemon Oil Calculated. | Sp. Gr. of Distillate to Vol. at 15° C. | Alcohol by Volume. | Citral. |                    |       |             |
|-------|---|----------------------------|-------------------------------|-----------------------|---|--------------------|---------|--------------------|-------|-------------|
| ..... | McLaren's Invincible True Lemon.                  | 0.9422                     | 1.0                           | 0.31                  | 0.9395                                  | 47.29              | 0.20    | .....              | 61345 | Genuine.    |
| ..... | Gold Stand. Mfg. Co. Lemon artificially coloured. | 0.8501                     | 20.0                          | 6.25                  | 0.8581                                  | 82.16              | 0.22    | Glycerine present. | 61354 | "           |
| ..... | Shirriff's Imperial Quintessence True Lemon.      | 0.9379                     | 1.0                           | 0.31                  | 0.9351                                  | 49.76              | 0.15    | .....              | 61355 | "           |
| ..... | Smith & Burton. Exact Lemon.                      | 0.9682                     | 1.0                           | 0.31                  | 0.9664                                  | 29.31              | 0.10    | .....              | 61358 | Citral low. |



| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF MANITOBA—

|         |                           |       |   |   |    |                                   |  |  |
|---------|---------------------------|-------|---|---|----|-----------------------------------|--|--|
| 1915.   |                           |       |   |   |    |                                   |  |  |
| Aug. 18 | Lemon Flavouring Extract. | 61359 | McDonald & Foreman, 829 Princess Ave., Brandon. | 3 | 75 | Gold Standard Mfg. Co., Winnipeg. |  |  |
| " 20    | "                         | 61360 | W. & D. Mayrs, 1056 Main St., Winnipeg.         | 3 | 75 | Dyson Co., Winnipeg.              |  |  |
| " 20    | "                         | 61361 | J. R. Royle, 1116 Main St., Winnipeg.           | 3 | 75 | McLaren's, Ltd., Hamilton.        |  |  |
| " 20    | "                         | 61362 | St. John's Grocery, 1238 Main St., Winnipeg.    | 3 | 75 | Codville Co., Winnipeg.           |  |  |
| " 20    | "                         | 61363 | Wilton & Conley, 1352 Main St., Winnipeg.       | 3 | 75 | Blue Ribbon Co., Winnipeg.        |  |  |
| " 20    | "                         | 61364 | W. H. Stone Co., 14103 Main St., Winnipeg.      | " | 75 | "                                 |  |  |

## DISTRICT OF SASKATCHEWAN—

|         |                           |       |                                |   |    |                                    |                                    |  |
|---------|---------------------------|-------|--------------------------------|---|----|------------------------------------|------------------------------------|--|
| July 20 | Lemon Flavouring Extract. | 66404 | W. McLeod, Melville....        | 3 | 60 | Pure Gold Mfg. Co., Toronto.       | Pure Gold brand.                   |  |
| " 20    | "                         | 66405 | A. W. Gunn & Co., Melville.    | 3 | 60 | Campbell Bros. & Wilson, Winnipeg. | Royal Shield brand.                |  |
| " 20    | "                         | 66406 | J. D. Miller & Sons, Melville. | 3 | 45 | Gorman, Eckert & Co., London.      | Jewel brand.                       |  |
| " 20    | "                         | 66407 | Love & Wahlman, Melville.      | 3 | 40 | Unknown                            | Campbell Bros. & Wilson, Winnipeg. |  |
| " 20    | "                         | 69408 | M. Bay Company, Melville.      | 3 | 45 | Gt. West Spice Mills, Winnipeg.    | Baker's ....                       |  |
| " 21    | "                         | 66409 | Hudson's Bay Co., Yorkton.     | 3 | 60 | Vendors.....                       |                                    |  |
| " 21    | "                         | 66413 | Levi Beck, Yorkton....         | 3 | 75 | Tropical Extract Co., Toronto.     | Eagle-brand.                       |  |
| " 22    | "                         | 66415 | J. F. Cairns, Saskatoon..      | 3 | 75 | Imperial Spice Co., Hamilton.      | Red Feather brand.                 |  |
| " 23    | "                         | 66422 | Nicholls & Laidlay, Saskatoon. | 3 | 45 | White Star Mfg. Co., Winnipeg.     | White Star brand.                  |  |
| " 23    | "                         | 66424 | A. McDonald Co., Saskatoon.    | 3 | 50 | Imperial Ex Co., Toronto.          | Shirriff's....                     |  |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.       |                               |                       |                                       |                    |         | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|-------------------------|----------------------------|-------------------------------|-----------------------|---------------------------------------|--------------------|---------|----------------|---|
|                         | Specific Gravity at 15° C. | Rotation 2 dm. Tube at 20° C. | Lemon Oil Calculated. | Sp. Gr. of Dis-tilled. Vol. at 15° C. | Alcohol by Volume. | Citral. |                |   |

Continued.

|   |        |      | p. c. |        | p. c. | p. c. |                    |       |             |
|---|--------|------|-------|--------|-------|-------|--------------------|-------|-------------|
| Gold Standard Mfg. Co. Gold Standard Lemon. | 0.8510 | 20.0 | 6.25  | 0.8581 | 82.16 | 0.22  | Glycerine present. | 61359 | Genuine.    |
| Dyson Co. Red Cross Lemon.                  | 0.8544 | 16.0 | 5.00  | 0.8679 | 78.47 | 0.19  | .....              | 61360 | "           |
| McLaren's Invincible True Lemon Extract.    | 0.9474 | 2.0  | 0.62  | 0.9453 | 44.0  | 0.10  | .....              | 61361 | Citral low. |
| Gold Standard Mfg. Co. Gold Standard Lemon. | 0.8522 | 20.0 | 6.25  | 0.8581 | 82.16 | 0.22  | Glycerine present. | 61362 | Genuine.    |
| Blue Ribbon Co. True Lemon Extract.         | 0.9330 | 1.0  | 0.31  | 0.9334 | 50.62 | 0.28  | .....              | 61363 | "           |
| Blue Ribbon Co. True Lemon Extract.         | 0.9367 | 1.0  | 0.31  | 0.9374 | 48.54 | 0.23  | .....              | 61364 | "           |

## L. H. HALL, TEMPORARY INSPECTOR.

|   |        |      |      |        |       |      |                       |       |  |
|---|--------|------|------|--------|-------|------|-----------------------|-------|--|
| Pure Gold Mfg. Co. Govt. Standard Pure Gold Flavouring Extract Lemon. | 0.8906 | 1.2  | 0.38 | 0.8916 | 69.26 | 0.20 | .....                 | 66404 | Genuine.                                       |
| Campbell Bros. & Wilson. Royal Shield Brand Flavouring Extract Lemon. | 0.9114 | 38.0 | 2.50 | 0.8922 | 69.08 | 0.19 | Cane sugar 7.78 p.c.  | 66400 | "  |
| German, Eckert C. O. "Jewel" Lemon Extract. Artificial.               | 0.9750 | 3.0  | 0.94 | 0.9729 | 23.19 | 0.15 | .....                 | 66406 | Sold as artificial. Contains 0.15 p.c. citral. |
| The Best Lemon Flavouring Extract.                                    | 1.0149 | 46.0 | 0.31 | 0.9672 | 28.59 | 0.26 | Cane sugar 12.80 p.c. | 66407 | Genuine.                                       |
| The Great West Spice Mill. Baker's Extract Lemon. Artificial.         | 0.9828 | 2.0  | 0.62 | 0.9805 | 15.77 | 0.16 | .....                 | 66408 | Sold as artificial. Contains 0.16 p.c. citral. |
| Hudson's Bay Co. Pure Flavouring Extract Lemon.                       | 0.9359 | 1.4  | 0.44 | 0.9367 | 48.91 | 0.20 | .....                 | 66409 | Genuine.                                       |
| Tropical Extract Co. Eagle Brand Lemon Mixture.                       | 0.9634 | 1.0  | 0.31 | 0.9603 | 34.33 | 0.16 | .....                 | 66413 | Sold as a mixture. Contains 0.16 p.c. citral.  |
| Imperial Spice Co. Red Feather Quality Flavouring Ext. Lemon.         | 0.9391 | 1.0  | 0.31 | 0.9374 | 48.54 | 0.22 | .....                 | 66415 | Genuine.                                       |
| White Star Mfg. Co. White Star Flavouring Extract Lemon.              | 0.8915 | 5.0  | 1.56 | 0.8868 | 71.26 | 0.27 | .....                 | 66422 | "  |
| Shirriff's Imperial Quintessence True Lemon.                          | 0.9359 | 2.0  | 0.62 | 0.9343 | 50.16 | 0.20 | .....                 | 66424 | "  |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF ALBERTA—

| 1915.   |                           |       |                                     |        |      |                                   |       |                            |
|---------|---------------------------|-------|-------------------------------------|--------|------|-----------------------------------|-------|----------------------------|
| Aug. 11 | Lemon Flavouring Extract. | 52236 | J. H. Morris & Co., Edmonton.       | 3 bts. | 75   | Pure Gold Mfg Co., Toronto        | ..... | Pure Gold.                 |
| " 11    | "                         | 52237 | Hallier & Aldridge, Edmonton.       | 3 "    | 60   | McLaren's.....                    | ..... | Invisible....              |
| " 11    | "                         | 52238 | " " .....                           | 3 "    | 1.00 | Jas. Turner & Co.                 | ..... | .....                      |
| " 11    | "                         | 52239 | Johnston-Walker, Ltd., Edmonton.    | 3 "    | 60   | Revillon Wholesale Ltd., Ed'n.    | ..... | Molliver Brand.            |
| " 12    | "                         | 52240 | Banner Grocery, Wetaskiwin.         | 3 "    | 75   | Alberta Empress Co., Ltd. Calgary | ..... | Alberta's Best.            |
| " 12    | "                         | 52241 | Lake & Co., Wetaskiwin..            | 3 "    | 75   | Pure Gold Mfg Co., Toronto        | ..... | .....                      |
| " 13    | "                         | 52242 | R. G. Gilmour, Lacombe.             | 3 "    | 75   | Campbell Bros & Wilson, Winnipeg. | ..... | Royal Shield               |
| " 16    | "                         | 52243 | The John Irwin Co., Calgary.        | 3 "    | 75   | Georgeson & Co., Ltd., Calgary.   | ..... | Tuxedo Brand               |
| " 19    | "                         | 52244 | Pryce-Jones (Canada) Ltd., Calgary. | 3 "    | 1.06 | Seeley's, Windsor, Ont.           | ..... | .....                      |
| " 19    | "                         | 52245 | " " .....                           | 3 "    | 75   | Imperial Extract Co., Toronto.    | ..... | Shiriff's Supreme Quality. |

## DISTRICT OF ROCKY MOUNTAINS—

|         |                           |       |                            |        |      |                                    |       |                  |
|---------|---------------------------|-------|----------------------------|--------|------|------------------------------------|-------|------------------|
| July 20 | Lemon Extract.            | 61844 | Trail Grocery Co., Trail.. | 3 bts. | 75   | F. F. Dalley Co., Hamilton.        | ..... | .....            |
| " 20    | Lemon Flavouring Essence. | 61845 | " " .....                  | 3 "    | 1.35 | W.A. Jameson Coffee Co., Victoria. | ..... | .....            |
| " 20    | Lemon Extract.            | 61849 | T. Lauriente & Son, Trail  | 3 "    | 75   | W. H. Malkin Co., Vancouver.       | ..... | .....            |
| " 20    | "                         | 61855 | Hunter Bros., Rossland ..  | 3 "    | 60   | Empress Mfg. Co., Vancouver.       | ..... | .....            |
| " 20    | "                         | 61856 | " " .....                  | 3 "    | 1.20 | Kelley Douglas, Vancouver.         | ..... | Nabob....        |
| " 20    | Lemon Flavouring Extract. | 61857 | Agnew & Co., Rossland...   | 3 "    | 60   | " .....                            | ..... | Columbia Mixture |

## LEMON FLAVOURING EXTRACT.

| Inspector's Report.<br>(Is not an expression of opinion.) | Description from Label. | Results of Analysis.       |                                  |            |                    |         |                                   | No. of Sample. | Remarks and Opinion of the Chief Analyst. |
|---|-------------------------|----------------------------|----------------------------------|------------|--------------------|---------|-----------------------------------|----------------|---|
|   |                         | Specific gravity at 20° C. | Rotation in 2 dm. tube at 20° C. | Lemon Oil. | Alcohol by volume. | Citral. | Refractive Index of oil at 20° C. |                |   |

A. W. R. MARKLEY, INSPECTOR.

|                             |   |        |        |         |       |      |        |       |                        |                |
|-----------------------------|---|--------|--------|---------|-------|------|--------|-------|------------------------|----------------|
| Pure Gold..                 | Pure Gold Mfg. Co. Pure Gold Flavouring Extract Lemon.            | 0.8906 | + 0.8  | 0.20    | 64.75 | 0.16 | .....  | 52236 | Genuine                |                |
| Invisible...                | McLaren's Invincible "True Lemon".                                | 0.9436 | 0.0    | trace.. | 42.96 | 0.14 | .....  | 52237 | Citral below standard. |                |
| .....                       | Jas. Turner & Co. Triangel Lemon.                                 | 0.9348 | 0.0    | "       | 48.32 | 0.18 | .....  | 52238 | Genuine.               |                |
| Molliver Brand.             | Revillon Ltd. Lemon Molliver Brand.                               | 0.9368 | + 0.8  | 0.10    | 42.50 | 0.15 | .....  | 52239 | "                      |                |
| Alberta's Best.             | Alberta Empress Co. Flavouring Extract Lemon.                     | 0.9524 | 0.0    | trace.. | 37.60 | 0.12 | .....  | 52240 | Low in citral.         |                |
| .....                       | Pure Gold Mfg. Co. Pure and Lemon Flavouring Extract.             | 0.8920 | 0.0    | "       | 67.80 | 0.14 | .....  | 52241 | Citral below standard. |                |
| Royal Shield                | Campbell Bros. & Wilson. Royal Shield Brand. Lemon Flav. Extract. | 0.9058 | + 36.6 | 2.96    | 67.00 | 0.12 | 1.4740 | ..... | 52242                  | Low in citral. |
| Tuxedo Brand                | Georgeson Co. Limited. Tuxedo Lemon Flavouring Extract.           | 0.8267 | + 14.8 | 3.80    | 83.25 | 0.21 | 1.4742 | ..... | 52243                  | Genuine.       |
| .....                       | Sesley's Extra Concentrated Lemon.                                | 0.9000 | + 14.7 | 1.50    | 62.50 | 0.11 | 1.4743 | ..... | 52244                  | Citral low.    |
| Shirriff's Supreme Quality. | Shirriff's Supreme Quality Lemon. Imperial Extract Co.            | 0.9549 | + 0.6  | 0.20    | 45.68 | 0.18 | .....  | ..... | 52245                  | Genuine.       |

TNTAINS-

THOS. PARKER, INSPECTOR

|                  |  |        |        |         |       |      |        |       |       |                        |
|------------------|--|--------|--------|---------|-------|------|--------|-------|-------|------------------------|
| .....            | F. F. Dalley & Co. Pure Fruit Lemon Extract.     | 0.8457 | + 10.3 | 3.70    | 78.50 | 0.14 | 1.4740 | ..... | 61844 | Citral below standard. |
| .....            | Jameson's Flavouring Essence Lemon.              | 0.9234 | 0.0    | trace.. | 54.52 | 0.36 | .....  | ..... | 61845 | Genuine.               |
| .....            | Malkins best finest quality. Flavouring Extract. | 0.8652 | + 12.0 | 3.70    | 72.00 | 0.23 | 1.4742 | ..... | 61849 | "                      |
| .....            | Empress Mfg. Co. "Empress Brand" Lemon Extract.  | 0.9464 | 0.0    | trace.. | 42.52 | 0.12 | .....  | ..... | 61855 | Citral low.            |
| Nabob....        | Nabob Brand. Flavouring Extract Lemon.           | 0.8810 | + 4.8  | 1.70    | 72.75 | 0.15 | 1.4743 | ..... | 61856 | Genuine.               |
| Columbia Mixture | Columbia Powder Mixture. Lemon Extract.          | 0.9682 | 0.0    | 0.00    | 25.68 | 0.03 | .....  | ..... | 61857 | Sold as mixture.       |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report.<br>(Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|---|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |   |

## DISTRICT OF ROCKY MOUNTAINS—

|         |                           |       |                                |         |      |                                |  |             |
|---------|---------------------------|-------|--------------------------------|---------|------|--------------------------------|--|-------------|
| 1915.   |                           |       |                                |         |      |                                |  |             |
| July 20 | Artificial Lemon Extract. | 61858 | Agnew & Co. Rossland...        | 3 bots. | 60   | Hamilton Chem. Works Hamilton. |  | Oak Leaf... |
| " 20    | Lemon Extract.            | 61859 | " " "                          | 3 "     | 60   | Wilson Bros. Victoria.         |  | Diamond W.  |
| Aug. 6  | Lemon Flavouring Extract. | 61862 | The O'Kanagan Grocery, Vernon. | 3 "     | 30   | Tropical Extract Co., Toronto. |  | Eagle. .... |
| " 6     | Lemon Extract.            | 61865 | W. R. Megaro, Vernon...        | 3 "     | 1.30 | Climax Extract Co., Vancouver. |  |             |

## DISTRICT OF VANCOUVER—

|         |                           |       |   |         |    |  |   |                                    |
|---------|---------------------------|-------|---|---------|----|--|---|------------------------------------|
| July 15 | Lemon Flavouring Extract. | 55310 | D. McGregor, Bute and Pender St., Vancouver.                  | 3 bots. | 30 | Sterling Extract Co., Vancouver.       |   | Sold as imitation.                 |
| " 15    | "                         | 55311 | W. Couling, 1374 Pender St., Vancouver.                       | 3 "     | 45 | W. Braid & Co., Vancouver.             |   | Big Four Brand. Sold as imitation. |
| " 15    | "                         | 55312 | Almas Grocery, Robson and Richards Sts., Vancouver.           | 3 "     | 30 | Pure Fruit Extract Co., Vancouver.     |   | Sold as a mixture.                 |
| " 15    | "                         | 55313 | The Home Grocery Co., Robson and Homer St., Vancouver.        | 3 "     | 30 | Empress Mfg. Co., Vancouver.           |   | Climax Brand. Sold as a mixture.   |
| " 15    | "                         | 55314 | " " "   | 3 "     | 60 | "                                      |   | Empress Brand.                     |
| " 15    | "                         | 55315 | L. Havird, 300 Dunsmuir St., Vancouver                        | 3 "     | 30 | "                                      | Nelson, Shakespear, Watkins, Ltd., Vancouver. | Quakers Brand. Sold as a compound  |
| " 16    | "                         | 55316 | Slater Bros., 126 Hastings St., W., Vancouver.                | 3 "     | 30 | Kelly, Douglas & Co., Ltd., Vancouver. |   | Columbia Brand. Sold as a mixture. |
| " 16    | "                         | 55317 | Woodward Dept. Stores, Vancouver.                             | 3 "     | 75 | "                                      |   | Nubob Brand.                       |
| " 16    | "                         | 55318 | A. & C. Grocery Co., 520 Granville St., Vancouver.            | 3 "     | 75 | W. Braid & Co., Vancouver.             |   | Braid's Best.                      |
| " 16    | "                         | 55319 | Clover Leaf Butter Store, Nelson & Granville Sts., Vancouver. | 3 "     | 30 | Royal Mfg. Co., Vancouver.             |   | Royal Brand. Sold as a mixture.    |

## LEMON FLAVOURING EXTRACT.

| Description from Label.   | Results of Analysis.       |                                     |            |                    |         |                                   | No. of Sample. | Remarks and opinion of the Chief Analyst.       |
|---|----------------------------|-------------------------------------|------------|--------------------|---------|-----------------------------------|----------------|---|
|   | Specific gravity at 20° C. | Rotation in 25° fine tube at 20° C. | Lemon Oil. | Alcohol by volume. | Citral. | Refractive Index of oil at 20° C. |                |   |
| <i>Concluded.</i>   |                            |                                     |            |                    |         |                                   |                |   |
|   |                            |                                     | p. c.      | p. c.              | p. c.   |                                   |                |   |
| Han. Chemical Works. Oak Leaf Artificial Lemon Extract.                         | 0.9734                     | 0.0                                 | 6.00       | 22.20              | 0.17    | .....                             | 61858          | Sold as artificial. Contains 0.17 p. c. citral. |
| Wilson Bros. Lemon Diamond Fla. Extract Compound, coloured, extra concentrated. | 0.9618                     | 0.0                                 | 0.00       | 34.76              | 0.10    | .....                             | 61859          | Sold as compound.                               |
| Trop. Extract Co. Eagle Quintessence Lemon Extract.                             | 0.9638                     | 0.0                                 | 0.00       | 29.64              | 0.09    | .....                             | 61862          | Citral low. Adulterated.                        |
| No Label.....   | 0.9751                     | 0.0                                 | 0.00       | 19.88              | 0.02    | .....                             | 61865          | "   |

E. J. MORGAN, INSPECTOR.

|   |        |       |      |       |      |        |       |                    |
|---|--------|-------|------|-------|------|--------|-------|--------------------|
| Sterling Ext. Co. Lemon. Imitation.           | 0.9666 | 0.0   | 0.00 | 28.12 | 0.12 | .....  | 55310 | Sold as imitation. |
| Wm. Braid & Co. Imitation Lemon.              | 0.9604 | 0.0   | 0.00 | 32.92 | 0.13 | .....  | 55311 | " "                |
| Pure Fruit Extract Co. Lemon Mixture.         | 0.9824 | 0.0   | 0.00 | 14.40 | 0.03 | .....  | 55312 | " mixture.         |
| Empress Mfg. Co. Flav. Mixture. Lemon Clinax. | 0.9683 | 0.0   | 0.00 | 26.32 | 0.10 | .....  | 55313 | " "                |
| Emp. Mfg. Co. Empress Brand. Lemon Extracts.  | 0.9599 | 0.0   | 0.00 | 32.00 | 0.10 | .....  | 55314 | Citral low.        |
| Qualcross Brand. Compound Lemon.              | 0.9585 | 0.0   | 0.00 | 33.08 | 0.10 | .....  | 55315 | Sold as compound.  |
| Columbia Brand. Best Flav. Ext. Mixture.      | 0.9725 | 0.0   | 0.00 | 22.32 | 0.03 | .....  | 55316 | " mixture.         |
| Lemon Flav. Ext. Nabb Brand.                  | 0.9282 | + 0.6 | 0.10 | 48.80 | 0.18 | .....  | 55317 | Genuine.           |
| Wm. Braid & Co. Best Flav. Ext. Lemon.        | 0.9053 | + 1.6 | 0.50 | 57.85 | 0.16 | 1.4742 | 55318 | "                  |
| Royal Mfg. Co. Royal Flav. Mixture. Lemon.    | 0.9759 | 0.0   | 0.00 | 19.60 | 0.03 | .....  | 55319 | Sold as mixture.   |

| Date of Collection. | Nature of Sample. | No. of Sample. | Name and Address of Vendor. | Cost.     |        | Name and Address of Manufacturer or Furnisher as given by the Vendor. |            | Inspector's Report. (Is not an expression of opinion.) |
|---------------------|-------------------|----------------|-----------------------------|-----------|--------|---|------------|--|
|                     |                   |                |                             | Quantity. | Cents. | Manufacturer.   | Furnisher. |  |

## DISTRICT OF VANCOUVER—

|         |                           |       |  |         |    |                                |       |  |
|---------|---------------------------|-------|--|---------|----|--------------------------------|-------|--|
| 1915.   |                           |       |  |         |    |                                |       |  |
| July 19 | Lemon Flavouring Extract. | 55329 | F. W. Walford, 950 Granville St., Vancouver. | 3 bots. | 75 | W. H. Malkin & Co., Vancouver. | ..... | Malkin's Best.   |
| " 19    | "                         | 55321 | City Cash Grocery, 712 Davie St., Vancouver. | 3 "     | 80 | Vendor.....                    | ..... | Rose Brand. Sold as a mixture Packed specially for Vendor. |

## DISTRICT OF VICTORIA—

|         |                           |       |   |         |      |                                     |       |                                     |
|---------|---------------------------|-------|---|---------|------|-------------------------------------|-------|-------------------------------------|
| July 21 | Lemon Flavouring Extract. | 66759 | Windsor Grocery Co., 817 Govt. St., Victoria.             | 3 bots. | 75   | Wm. Braid & Co., Vancouver.         | ..... | Braid's Best.                       |
| " 21    | "                         | 66762 | West End Grocery, 1002 Govt. St., Victoria.               | 3 "     | 1.05 | Crosse & Blackwell, London, Eng.    | ..... | Essence of Lemon.                   |
| " 21    | "                         | 66768 | " " "   | 3 "     | 75   | Empress Mfg. Co., Vancouver.        | ..... | Empress Brand.                      |
| " 21    | "                         | 66767 | Dixie H. Ross & Co., 1317 Govt. St., Victoria             | 3 "     | 75   | Vendors.....                        | ..... | Dixie Brand.                        |
| " 23    | Extract of Lemon.         | 66768 | Copas & Young, 631 Fort St., Victoria.                    | 3 "     | 75   | Pure Gold Mfg. Co., Toronto.        | ..... | Pure Gold Flavouring Extract.       |
| " 23    | Lemon Flavouring Extract. | 66770 | Erskine & Co., 861 Johnson St., Victoria.                 | 3 "     | 75   | Imperial Extract Co., Toronto.      | ..... | Shirriff's Quintessence True Lemon. |
| " 23    | "                         | 66771 | Henry W. Driver, 856 Yates St., Victoria.                 | 3 "     | 60   | Pure Gold Mfg. Co., Toronto.        | ..... | Pure Gold Flavouring Lemon Extract. |
| " 27    | "                         | 66673 | Linden Grocery, Linden and May Sts., Victoria.            | 3 "     | 60   | Empress Mfg. Co., Vancouver.        | ..... | Empress Brand. Extract of Lemon.    |
| " 28    | "                         | 66775 | Gladstone Grocery, Gladstone and Fernwood Sts., Victoria. | 3 "     | 75   | W. A. Jameson Coffee Co., Victoria. | ..... | Jameson's Victoria Brand.           |
| " 28    | "                         | 66777 | E. B. Jones, 1800 Cook St., Victoria.                     | 3 "     | 75   | Wm. Braid & Co., Vancouver.         | ..... | Braid's Best.                       |

## LEMON FLAVOURING EXTRACT.

| Description from Label. | Results of Analysis.       |                                  |            |                    |         |                                   | N <sup>o</sup> . of Sample. | Remarks and opinions of the Chief Analyst. |
|-------------------------|----------------------------|----------------------------------|------------|--------------------|---------|-----------------------------------|-----------------------------|--|
|                         | Specific gravity at 20° C. | Rotation in 2 dm. tube at 20° C. | Lemon Oil. | Alcohol by volume. | Citral. | Refractive Index of oil at 20° C. |                             |  |

## Continued.

|   |        |       | p. c. | p. c. | p. c. |        |       |       |                  |
|---|--------|-------|-------|-------|-------|--------|-------|-------|------------------|
| W. H. Malkins Co. Mal-<br>kin's Best Flav. Ext.<br>Lemon. | 0.8771 | +12.2 | 3.86  | 67.70 | 0.25  | 1.4742 | ..... | 55320 | Genuine.         |
| City Cash Grocery. Le-<br>mon Mixture.                    | 0.9808 | 0.0   | 0.00  | 15.68 | 0.03  | .....  | ..... | 55321 | Sold as mixture. |

## D. OSULLIVAN, INSPECTOR.

|  |        |       |        |       |      |        |       |       |                               |
|--|--------|-------|--------|-------|------|--------|-------|-------|-------------------------------|
| Wm. Braid & Co. Braid's Best Flav. Ext. Lemon.                               | 0.9017 | + 2.3 | 0.60   | 60.45 | 0.14 | 1.4745 | ..... | 66759 | Citral below stand-ard.       |
| .....  | 0.8218 | +64.1 | 20.4   | 93.54 | 0.67 | 1.4774 | ..... | 66762 | Genuine.                      |
| Empress Mfg. Co. Em-<br>press Brand. Lemon<br>Extract.                       | 0.9538 | 0.0   | 0.00   | 36.52 | 0.07 | .....  | ..... | 66763 | Citral low. Adul-<br>terated. |
| Dixi H. Ross & Co. Pure<br>"Dixi" Lemon Flav.<br>Ext.                        | 0.8568 | + 4.0 | 1.50   | 63.50 | 0.14 | 1.4740 | ..... | 66765 | Citral below stand-<br>ard.   |
| PureGold Mfg. Co. Pure<br>Gold Flav. Ext. Le-<br>mon.                        | 0.9366 | 0.0   | Trace. | 46.52 | 0.14 | .....  | ..... | 66768 | "                             |
| Sherriff's Imp. Quintes-<br>sence True Lemon.                                | 0.9154 | + 1.1 | 0.30   | 54.75 | 0.36 | .....  | ..... | 66770 | Genuine.                      |
| Pure Gold Co. Pure<br>Gold Lemon extract.                                    | 0.9401 | 0.0   | 0.00   | 44.68 | 0.09 | .....  | ..... | 66771 | Citral low. Adul-<br>terated. |
| Empress Mfg. Co. Em-<br>press Brand. Lemon<br>Extract.                       | 0.9019 | + 2.5 | 0.70   | 57.50 | 0.19 | 1.4743 | ..... | 66773 | Genuine.                      |
| Govt. Standard. W. A.<br>Jameson Co. Lemon<br>Ext. Artificial Col-<br>oured. | 0.9321 | 0.0   | Trace. | 53.32 | 0.36 | .....  | ..... | 66775 | "                             |
| Wm. Braid & Co. Braid's<br>Best Flav. Ext. Lemon                             | 0.8915 | + 3.5 | 1.30   | 63.35 | 0.16 | 1.4743 | ..... | 66777 | "                             |