

Register October 2nd 1885

COLONIAL AND IMPORTED VINEGARS.

The following report, with a table, on samples of various vinegars, of both colonial and imported manufacture, as prepared by Professor Rennie, was laid before the Assembly on Tuesday:—

“The appended tabular statement gives the results of analyses of samples submitted and also of analyses of samples of imported vinegar for the sake of comparison. In order to a correct understanding of these results it will be necessary to make some remarks as to what may be expected in genuine vinegars of different kinds. The only kinds of vinegar of any importance in this case are malt vinegar and wine vinegar. Malt vinegar, if genuine, should give a high percentage of extract (according to some authorities from 5 to 6 per cent.), should not contain glucose, and inasmuch as malt contains considerable quantities of phosphates the ash should give indications of the presence of these compounds in large amounts. The ash should be distinctly but not necessarily very strongly alkaline. These will be seen to be the characteristics of the imported samples by Potts, of Gloucester, Hill, Evans, & Co., of Gloucester, and the ‘Malt’ No. 2 also by Hill, Evans, & Co. Wine vinegar, if genuine, should yield an extract varying, according to the best authorities, from about 1.7 to 2.4 per cent. It should not contain glucose, should give a high percentage of acid, and should contain bitartrate of potassium (cream of tartar)—this being a constituent of all genuine wines. Finally, the ash should be very strongly alkaline owing to the presence of cream of tartar in the vinegar. In reporting on the samples in detail, I may first remark that I have found no indications of the presence of free sulphuric acid in any of them. The sulphuric acid indicated is in a state of combination, and therefore harmless. Waverley 18, 20, and 24 (brown) Vinegars.—All of these give a low amount of extract if compared with imported samples, the ash gives indications of fair amounts of phosphates (though not so much as in imported samples.) They all contain glucose and large quantities of sulphate of lime (the latter constituent is always present in commercial glucose). As to acidity, the first (No. 18) sample is decidedly weak, the third (No. 24) is up to the mark for a good vinegar in this respect, and the second (No. 20) is intermediate. The inference I draw from these results is that these vinegars have been made from a moisture of malt and glucose, or, what comes to the same thing, from beer which has been brewed by the aid of glucose, and further that as the extract is low (for a beer vinegar) the second and third samples have probably been ‘fortified’ with acetic acid. These vinegars are similar to the sample imported from Potts, of Gloucester (which is marked ‘Common’), except that the latter contains more extract and more phosphates, indicating to that extent superiority. Anderson & Co.’s Lorne Vinegar (white).—The excessively low amount of extract and the negative results as regards other constituents indicate without

doubt that this vinegar is simply a mixture of acetic acid and water, with a little flavouring essence, probably acetic ether. Anderson & Co.'s Lorne Vinegar (brown).—The ash from this vinegar gives very faint indications of the presence of phosphates, and the extract is very low, therefore it cannot be a genuine malt or beer vinegar. It does not contain glucose, therefore this material cannot have been used to any extent in its manufacture. On the other hand the ash is only faintly alkaline, therefore it is not a genuine wine vinegar. The only conclusion I can come to is that it has been prepared by diluting some form or other of vinegar and then strengthening by acetic acid, possibly with the addition of a little harmless colouring matter. Barton & Co.'s Brown Vinegar.—This is a weak vinegar, and from the results obtained is probably very dilute beer vinegar, probably with the addition of some acetic acid. Barton & Co.'s White Vinegar.—From the results simply a mixture of acetic acid and water with a trace of flavouring matter. (The remarks on Messrs. Anderson & Co.'s sample of white Lorne vinegar apply to this sample.) Stephen and Co.'s Brown Vinegar.—On referring to the remarks on the Waverley vinegars it will be seen that this has probably been prepared from beer which has been brewed with the aid of small quantities of glucose. The ash is very deficient in phosphates. Seppelt's Vinegars (brown and white).—I believe these to be genuine wine vinegars, though I cannot state positively that they have not been 'fortified' with acetic acid. The ash in both of them is very strongly alkaline, and they contain cream of tartar. The white vinegar is especially good. London Condiment Company Vinegar (brown).—Similar in some respects to Stephen & Co.'s brown vinegar, but it is stronger and has probably been 'fortified' in acetic acid. The analyses of the imported vinegars by Crosse & Blackwell (white wine vinegar), Hill, Evans, & Co., of Gloucester (Malt No. 1 and Malt No. 2 vinegars), and by Champion (malt vinegar) show them to be decidedly superior to all the colonial samples, except Seppelt's white and brown wine vinegars. Even the imported vinegar by Potts, of Gloucester, which is marked 'Common,' is better than any of the colonial samples with the same exceptions. All yield a higher percentage of extract (except Champion's), all are rich in phosphates, possess high acidity, and contain no glucose. The specific gravity is also higher. At the same time I am by no means certain that even these are pure malt vinegar. Finally, I am inclined to believe that in most cases (in some cases undoubtedly) the samples received are partly made up by the aid of acetic acid, and that consequently they are deficient in the extractive matter which constitutes an important element in a good vinegar. As regards their use for pickling purposes, the first samples of Waverley vinegar and Barton & Co.'s brown and white vinegars are manifestly too weak for the purpose; Anderson & Co.'s Lorne vinegar (white), being simply a mixture of acetic acid and water, is also unfit; the others (Seppelt's vinegars excepted) are not what I should call good vinegars for pickling purposes. This investigation has occupied more time than I anticipated, owing to the difficulty of obtaining proper samples for comparison."

Description.	Specific gra- vity.	Extract per cent.	Acid reckoned as acetic acid per cent.	Sulphuric acid per cent.
Waverley, No. 18, brown ..	1.015	2.30	3.6	0.11
Do., No. 20, brown	1.016	2.30	4.3	0.09
Do., No. 24, brown	1.017	2.14	5.6	0.12
Anderson & Co., Lorne vine- gar, white	1.002	0.14	5.0	0.01
Do., brown	1.014	1.45	5.3	0.05
Barton & Co., brown	1.010	1.34	3.7	0.14
Do., white	1.005	0.12	3.7	*
Stephen & Co., brown	1.015	2.95	4.6	*
Seppelt's wine vinegar, brown	1.010	1.42	5.6	0.03
Do. white	1.015	1.16	7.5	0.02
London Condiment Company, Maylands, brown	1.015	2.16	5.9	*
Crosse & Blackwell, white wine vinegar	1.020	3.00	7.1	*
Potts, Gloucester, marked "Common"	1.019	3.00	5.5	0.16
Malt vinegar, No. 1, by Hill, Evans, & Co., Gloucester ..	1.019	2.86	6.7	0.14
Do., No. 2, do.	1.019	2.74	6.5	0.14
"Malt," by Champion	1.013	1.85	4.9	*

* Small quantities.

The following table is a comparison of samples, with a report following, of English and colonial vinegars, prepared by Mr. G. Goyder, jun.:—"In some instances more than one sample of vinegar by the various manufacturers was obtained from various sources. In the table the numbers of the samples will be explained by referring to the following list of manufacturers, the numbers in the list and in the table corresponding:—1 Seppelt's white, 2 and 3 Seppelt's brown, 4 Lorne white, 5 Grimble's (English) brown, 6 and 7 Lorne brown, 8 Barton & Co.'s brown, 9 Hill, Evans, & Co.'s brown, 10 Waverley brown, 11 Champion's brown, 12 Barton & Co.'s brown, 13 Lorne brown, 14 Grimble's brown, 15 Waverley brown, 16 Hill, Evans, & Co.'s brown, 17 Slee Slee (English) brown, 18 Waverley brown, 19 and 20 London Condiment Company's brown, 21 Barton & Co.'s white, 22 London Condiment Company's white."

Ref'rence No.	Acetic acid.	Sulphu- ric acid.	Saccha- rine matter.	Solid matter.	Specific gravity.
1	7.00	.0233	.02	0.963	1.017
2	5.66	.0169	.03	1.048	1.016
3	5.28	.0311	.18	1.017	1.015
4	5.11	.0237	nil	0.099	1.007
5	5.05	.0874	.28	1.749	1.018
6	4.75	.0207	.11	0.906	1.014
7	4.40	.0095	.14	0.732	1.012
8	4.32	.0004	.21	0.953	1.013
9	4.10	.1353	.30	2.421	1.020
10	4.03	.2064	.41	1.838	1.018
11	4.03	.0207	.30	1.748	1.016
12	3.96	.0047	.19	0.593	1.011
13	3.89	.1661	.44	3.162	1.021
14	3.87	.0907	.28	1.464	1.017
15	3.83	.1323	.41	2.630	1.019
16	3.73	.1428	.30	2.439	1.021
17	3.53	.0700	.30	1.653	1.014
18	3.50	.1930	.47	1.790	1.019
19	3.32	.0066	.09	0.419	1.009
20	3.16	.0804	.25	0.859	1.012
21	2.78	.0120	nil	*	*
22	1.86	.0323	.09	*	*

* Not comparable.

From the above analyses it may be gathered that Seppelt's vinegars are probably natural vinegars made from wine. They are stronger than English vinegars by 1 to 2 per cent., contain less sulphuric acid than any English sample tried by me, appear to have been well fermented, and to be specially adapted for making pickles. The sulphuric acid they contain may be attributed to the natural sulphates of the waters employed, and so the probable use of burning sulphur for cleansing the casks. Of the colonial vinegars the best samples of

each firm appear to be wholly or in part factitious, one sample, "The Lorne white," is almost undoubtedly so, and although these vinegars appear eminently suitable for pickle manufacture, and for other purposes where the articles to which they may be added have a strong natural flavour they are probably deficient in the fine taste and aroma only appreciable to connoisseurs. The apparently natural colonial vinegars contain more free sulphuric acid than legal (if any free sulphuric acid is legal), and do not appear to have been thoroughly fermented, as they contain more saccharine matter than the English samples. Of the English samples tried two contained above the legal quantity of free sulphuric acid. The vinegar contained in Barton & Co.'s bottle of pickles appears to be a factitious vinegar. From the analysis that contained in the London Condiment Company's a mixture of natural and factitious, although both are stated on the bottles to be the English Champion Vinegar. The vinegar for pickling is of about half the strength of that used for ordinary purposes.

Register October 3rd 1885

"Anti-Humbug" writes as follows:—"To illustrate the reliance that may be placed on the report of Professor Rennie on colonial vinegar, as published and laid before Parliament, I may state that I am in a position to prove conclusively that one at least of the samples which he reports on as colonial vinegar, and that most unfavourably, was Hill, Evans, and Co.'s very best (imported) brand and manufacture. It is needless to say more, though I challenge either Professor Rennie or Mr. Goyder to disprove it."

Register October 5th 1885.

THE VINEGAR ANALYSIS ANALYSED.

TO THE EDITOR.

Sir—I notice that one of your correspondents signing himself "Anti-Humbug" states that he is in a position to prove conclusively that one at least of the samples which I reported on unfavourably as colonial vinegar was Hill, Evans, & Co.'s very best imported brand and manufacture. Permit me through your columns to call upon "Anti-Humbug" for the proofs of his statement.

I am, Sir, &c.,

EDWARD H. RENNIE,

The University, October 3.

THE ANALYSIS OF COLONIAL VINEGAR ANALYSED.

TO THE EDITOR.

Sir—If all Parliamentary reports presented for the instruction of our legislators are as bewilderingly inconsistent and periphrastic as that just furnished by Messrs. Rennie and Goyder *re* colonial vinegar, the outside public on becoming acquainted with the fact will, doubtless, no longer be at a loss to understand how it is that our laws are not always as plain and concise as they might wish, for a more inconsistent, contradictory string of inferences could hardly have been crowded into the space occupied had all the analytical or other talent in the colony been brought to bear on the subject with

this intention. And I purpose showing a few of the instances in this report which bear out my statement. The first vinegar treated of (the Waverley) is reported to contain certain ingredients which led Mr. Rennie, who prepared the report, to say—"The inference I draw from these results is that these vinegars have been made from a moisture of malt and glucose, or what comes to the same thing, from beer brewed by the aid of glucose, &c., and has probably been fortified with acetic acid." Now, Sir, I ask is it reasonable or just that such inferences and suppositions should be distributed for publication by a man who is called in as one qualified to speak with authority, and who, by the very uncertainty of his assertions, is sure to do an irreparable injury to a manufactured article of which he confesses he cannot "positively" give any definite information. The next vinegar, that of Anderson & Co.'s (brown), is reported "not to contain glucose, and therefore (mark this) this material cannot have been used in its manufacture." The Professor seems here to be even too uncertain of the result of his researches to be positive that if glucose is not in it it cannot have been used in its manufacture, and says, with his characteristic indecision, that "the only conclusion I can come to is that it has been prepared by diluting some form or other of vinegar and then strengthening with acetic acid." Oh, how definite all this is, and how glad our members of Parliament must be to have the thing put before them so distinctly and conclusively.

Barton & Co.'s vinegar is next spoken of as "probably very dilute beer vinegar, probably (again this useful word) with the addition of acetic acid." Stephens & Co.'s brown vinegar is spoken of as "probably" prepared "from beer brewed with small quantities of glucose." Now, I take it that the object of the analysis ordered by Parliament was to show the relative values of English and colonial vinegar, and I will point out how this has been done, first drawing attention to the fact that Mr. Rennie says with reference to the English article that "I am by no means certain that even these are pure malt vinegar." What in the name of fortune then is this gentleman certain of, and of what use are his investigations practically? However, here is a specimen of the comparison.

Mr. Rennie says nothing about the suitability of imported vinegar for pickling purposes, but that the colonial article is not what he would call "good vinegar for pickling purposes." But lo! Mr. Goyder, a little further down the report, says of colonial vinegar—"These vinegars appear eminently suitable for pickle manufacture;" whereas the colonial vinegar contains, according to Mr. Goyder, more free sulphuric acid than legal (and a certain quantity is allowed to be added by law in England). Mr. Rennie finds no traces of free sulphuric acid in any of them.

Mr. Rennie says again that the most of the colonial vinegars are too weak for pickling purposes, and they show about 5 per cent. of acid. But Mr. Goyder asserts that the vinegar used for pickling is about half the strength of that used for ordinary purposes, and so on. I could add many more instances of a like nature, but it is surely unnecessary; but I think that it must be quite clear to every one that the value of the report cannot be gauged by the minds of ordinary individuals.

the minds of ordinary individuals, and if it is expected to enlighten our representatives in proportion to the harm it will do our manufactures, the Professor has, nevertheless, reason to be proud of his achievement. We are not informed what the acetic acid spoken of in the report is made of, nor that all malt vinegar is essentially acetic acid, though it would be as well that it should be known. Therefore I give Dr. Ure's definition, viz., acetic acid is formed out of alcohol in the acetous fermentation, or is produced in the dry distillation of most non-volatile organic compounds as of wood, gum, starch, &c. It contains in a very eminent degree anti-putrescent properties, *vide* Dr. Ure's "Dictionary of Arts and Manufactures," pages 1 and 13. The peculiarities of the report have caused me to take up rather more space than I had intended; but the whole thing is so vague that I beg you to excuse this, and let those who feel interested in the matter judge of its worth.

I am, Sir, &c.,

JAMES ROBERTSON.

Register October 7th 1885

Mr. ROUNSEVELL moved to reduce the duty on vinegar to 6d. He read the following extract from a letter from Messrs. Chance & Co.:—"In regard to vinegar, largely used in making tomato sauce, after considerable outlay some years back we were successful in establishing an export trade in this sauce with the eastern colonies, and for several years sent away large quantities to those places, notwithstanding the fact that we had to pay duties, upon vinegar 150 per cent., 10 per cent. on bottles, and 2d. per lb. on spices, but latterly, through competition of makers on the spot, we had to reduce prices until the trade became unprofitable, and the only alternative left us was to give up exporting altogether or open a branch establishment in Sydney. We adopted the latter plan two years ago, transferring portion of our plant for the purpose, and we now supply the Sydney and Queensland markets from there; but if the duty were removed from vinegar we should resume manufacturing here. Previous to this our annual purchases of tomatoes totalled from 220 to 250 tons, representing about £2,000; but since commencing the manufacture in Sydney our annual purchases for the supply of sauce for this colony have not exceeded 40 tons, representing say £300. Thus you will perceive the very great loss our market gardeners have sustained. With regard to pickles, we discontinued the manufacture of this article two years ago, finding the duties on vinegar, bottles, and spices amounted to more than the duty and freight on the imported pickles." Mr. Smith had said that half a dozen men could produce all the vinegar we required in the colony. The pickling industry would employ hundreds of men, and yet they imposed a duty that would have the effect of destroying it. Professor Rennie had reported that the colonial vinegar was not suitable for pickling. Mr. JOHNSON opposed the amendment, and pointed out that the pickle manufacturers were to receive their bottles free. He referred to the report of Professor Rennie. The Professor was a new chum, and all new chums believed that the hub of the universe was the place they came from, and that they were going to teach colonists what they did not know before. He maintained that the colonial vinegar was as good as the imported. Mr. ROUNSEVELL—Do not attack a gentleman who cannot defend himself. Mr. JOHNSON—I am not a coward. I would attack him as soon to his face as behind his back. Mr. ROUNSEVELL said that a gentleman like Professor Rennie would not jeopardize his position by making an inaccurate report, nor would he be likely to say anything prejudicial to the colony from which he was deriving his income. The Professor certainly would not lend himself to the publication of a garbled report. (Mr. Johnson—"I did not say so.") The inference was that it was a garbled report. (Mr. Johnson—"He is a prejudiced gentleman.") Men of science were distinguished for their strict adherence to truth. The ATTORNEY-GENERAL said it was true that scientific men were active in the pursuit of truth, but it was equally notorious that in pursuing that object they arrived at absolutely different conclusions. (Laughter.) It was, therefore,

difficult to know who was the real enunciator of truth. Mr. Goyder's report was in favour of the colonial vinegar; Professor Rennie's report was not. The proprietors of the Waverley Vinegar Works had had another analysis made by Mr. Francis, an analytical chemist, who took the same view as Mr. Goyder. (Hear, hear.) He said that the Waverley vinegar was an excellent malting vinegar, and might be fairly compared with the imported article. Amendment negatived; line passed.

Register October 9th 1885

PROFESSOR RENNIE'S REPORT ON COLONIAL VINEGAR.

TO THE EDITOR.

Sir—The proofs of "Anti-Humbug's" statement that one of the samples of vinegar sent to me as colonial was really Hill, Evans, and Co.'s best imported brand do not appear to be forthcoming. Now, Sir, all the samples sent to me were contained in bottles sealed by the Inspector of Distilleries, and bearing the labels of colonial firms. If "Anti-Humbug's" statement be correct, then the persons who handed the sample to the Inspector of Distilleries, or his agent, representing as colonial what was really imported, were manifestly guilty of fraud, with what object I leave your readers to judge. But if "Anti-Humbug's" statement were correct, it would not in the least alter my opinion of the sample in question. I may state, however, that by the courtesy of Messrs. Acraman, Son, & Co., of this city, I was furnished with the two samples of Hill, Evans, & Co.'s vinegar referred to in my report. These were from different shipments imported by themselves from Hill, Evans, & Co., and were taken direct from the bonded store, where the vinegar had been stored for some time. These samples were very much superior to any of those furnished to me by the Inspector of Distilleries, a fact which might have been recognised by any one gifted with a sense of smell without chemical analysis.

I am, Sir, &c.,

EDWARD H. RENNIE.

The University of Adelaide, October 8.