The late Chief Analyst was guided in his decisions regarding teas, by the following Order in Council, of date September 11, 1894.

"Tea shall be considered as adulterated which contains leaves other than those of the tea-plant; or previously infused leaves or leaves of inferior quality to such an extent as to reduce the amount of extract or substances soluble in hot water to less than thirty per cent, or cause the proportion of ash soluble in hot water to be less than two and three-quarters per cent; or any admixture of chemicals or other deleterious substances, or such an amount of mineral matter as will cause the amount of ash to exceed eight per cent reckoned on the sample dried at 100° C."

The Order in Council fixes 30 per cent as a minimum of extractive matter, without however defining a method by which the extract shall be made. It is seen from Professor Kenrick's figures, that the so-called *domestic method*, does not extract 30 per cent of soluble matter in black teas, and it follows that this method cannot be regarded as authoritative under present regulations. For this reason it has not been adopted in the performance of the work now recorded.. The extract has been determined by the following process.

To 5 grammes of the sample, ground to a tolerable degree of fineness, 200 cc. of water is added, and boiled on a sand-bath, in a glass flask, for two hours. It is then thrown on a filter, and the residue washed 3 times with warm water. The filtrate and washings, are made up to a definite volume and an aliquot portion is evaporated to dryness, at 100° C.

Working by this method, it will be seen that 157 samples (= 71 per cent. of the collection) yielded 30 per cent of extractive. If a reasonable margin of error (1 per cent) be allowed, the number reaching the standard is 172 (78 per cent) Of 50 samples which fail to reach the standard of extractive, 31 are black teas, and 19 green teas It has already been pointed out that the mean extractive matter in green tea is normally higher than in black.

It is impossible to describe the fifty samples falling below 30 per cent extractive, as adulterated under the Act, because the Order in Council of September 11, 1894, does not describe the method by which the extractive is to be determined. It is well known that if the boiling of vegetable matter be long continued, although readily soluble substances are dissolved in an hour, or less, the more difficult soluble material continues to go into solution for several hours, and a greatly prolonged boiling may bring about decomposition products which are more or less soluble, so that a definite end point is difficult to reach. It is evidently not the intention of this test, as applied to tea, that the boiling should be continued to the point of decomposition of tissues; but the mode of operating should be exactly defined.

In order to demonstrate the importance of this point, four samples which gave distinctly less than 30 per cent extractive by the method already described, were subjected to more vigorous extraction, and gave the following results :—

Number of Sample.	Extractive as per Tables.	Extraction continued.	Mean.	Difference.
37600	23·52	{ 34·84 / 34·66 }	34·74	11·22
36872	23·68	{ 26·72 / 25·36 }	26·04	2·36
40017	22·56	{ 33·00 / 31·00 }	32·00	9·44
29903	21·72	{ 25·20 / 25·40 }	25·30	3·58

These very large differences suffice to show the necessity of exactly defining the method by which extractive is to be determined.

Two samples, both invoiced as *Tea Dust* exceed the limit of 8 per cent of ash. It is open to question whether the article sold as *Tea Dust* should be regarded as a com-