

The following have 7.0% and upward.

	Number.	
Halifax.....	76726.....	7.33
Ottawa.....	78936.....	7.1
".....	78937.....	7.1
".....	78939.....	7.0
".....	80415.....	7.4
".....	79924.....	7.4
".....	80884.....	7.0
".....	80885.....	7.6
".....	80872.....	7.1
Winnipeg.....	79559.....	7.15
".....	79562.....	7.3
".....	79563.....	7.35
Vancouver.....	68498.....	7.35

#### Volatile extractive—

Parry says 3.0 to 6.5 per cent but quotes 1.64 to 3.67 for samples known to be pure (*loc. cit.*, p. 224).

Leach says 3.0 to 4.5 but quotes 1.34 to 3.5 for 22 genuine ground samples and up to 5.21 for whole.

The following samples have more than 4.5 volatile extractive.

	Number.	
Winnipeg.....	78527.....	4.60
	78533.....	5.25
	52756.....	5.0
	79554.....	5.6
	79563.....	4.8
	79590.....	4.8

Eight samples have less than 1.3 per cent with the following analyses, all done at Ottawa.

#### ETHER EXTRACT.

Number.	Volat.	Non-vol.	Total.	Tannic Acid.
79959.....	1.03	7.04	8.07	7.7
78944.....	0.41	2.59	3.0	3.6
78945.....	1.22	6.52	7.74	8.7
78842.....	1.23	4.39	5.62	9.8
79925.....	1.2	5.4	6.6	9.8
80884.....	1.2	7.05	8.25	8.4
65280.....	1.2	5.0	6.2	9.7
78670.....	0.9	6.3	7.2	9.2

Number 78944 contains shells. The others meet the U.S. requirements for tannic acid (8 per cent) (78939 = 7.7 per cent).

The method used here was precisely as given in U.S.A. Bulletin 107 (Revised) p. 163. Extraction with ether that had been washed with water and dried over sodium; evaporation of the ether at room temperature, drying 18 hours over sulphuric acid and weighing for total and heating to constant weight at 110° C. for non-volatile.

There is certainly some loss of volatile matter, shown by discoloration of the acid of the desiccator. However, a constant weight is reached in the time given and experiment showed no further loss of weight in a week. Somewhat numerous check