

MEMORANDA REGARDING THE FOREGOING.

ALCOHOLIC PREPARATIONS OF GINGER.

Alcoholic preparations of ginger appear under three distinct names in the Canadian market, viz:—

Tincture of Ginger.
Essence of Ginger.
Extract of Ginger.

The first of these is the only one which has an official and legal status. It is the Tinctura Zingiberis of the British Pharmacopœia.

The latest (1898) edition of the Pharmacopœia defines Tincture Zingiberis as follows:—

Ginger, in No. 40 powder, 2 ounces.
Alcohol (90 per cent), a sufficient quantity.

Moisten the powder with two fluid ounces of the alcohol, and complete the percolation process. The resulting tincture should measure one pint.

This gives a solution of 1 in 10.

Earlier editions of the B.P. prescribed the use of Rectified Spirit, instead of 90 per cent alcohol; and 12.5 parts ginger to 100 volumes of tincture; being a solution of 1 in 8. Rectified Spirit, as now defined by the Pharmacopœia, is 90 per cent alcohol. The older editions defined it as 88.76 per cent alcohol.

	Specific Gravity.	Alcohol p.c.
Rectified Spirit of 1898.....	0.834	90.00
“ “ Older Editions....	0.838	88.76

This slight difference in strength makes no important change in the character of the tincture. The decreased weight of ginger employed since 1898, will naturally reduce the amount of oleo-resin in solution.

According to *Siggins* (The National Dispensary) the amounts of oleo-resins dissolved by alcohol, from different varieties of ginger to 1 in 10 solution, are as follows:

Jamaica Ginger (unbleached).....	0.48
“ “ (bleached).....	0.50
East India Ginger.....	0.66
African “.....	0.62 to 0.70

(parts by weight of oleo-resin in 100 volumes of the tincture).

C. G. Moor (Suggested Standards, etc., p. 140) quotes many authorities on this point, who find numbers varying from 0.29 to 0.68 per cent. *T. Barclay* (Pharm. Journal, Dec. 1898) proposes 0.40 per cent as a standard.

In six samples of tincture of ginger reported in Bulletin 34 (1893) of this laboratory, the following solids per cent were found:—

Tincture	11859	gave	1.17	per cent	residue.
“	11872	“	0.82	“	“
“	11864	“	0.467	“	“
“	11880	“	0.48	“	“
“	11871	“	0.58	“	“
F. W. Fletcher &c.	“	“	0.40	“	“

It is natural that the amount of resins in solution should vary with the character of the ginger rhizome used, as well as with the strength of the alcohol, and the time during which the solvent is permitted to act upon the ginger. In order to study the influence of time, in this regard, I made nine tinctures, after the directions of the British Pharmacopœia, allowing the solvent to act during periods of 20, 44, and 68