

THE WEIGHTS AND MEASURES OF THE BRITISH PHARMACOPOEIA.  
AT THE TEMPERATURE OF 60° FAHRENHEIT.

## WEIGHTS.

The Avoirdupois pound = 16 oz. = 7000 grains.  
1 oz. = 437·5 grains.  
1 gr. = 1 grain.

In addition to the use of the Imperial weights it is permitted in the Act of 1878 that drugs when sold by retail may be sold by apothecaries' weight. The use in trade of a weight or measure of the metric system was made lawful by the Weights and Measures (Metric System) Act, 1897.

The Preface to the British Pharmacopœia states: 'It is strongly urged upon all medical men to avoid the use of the terms ounce and pound with reference to any other than the avoirdupois or Imperial Standard weight; but it is still optional with the physician *in prescribing* to use the symbols  $\mathfrak{z}$  (scruple) and  $\mathfrak{ʒ}$  (drachm), the former representing 20 and the latter 60 grains. . . . In the measurement of liquids the Imperial measure is used for higher denominations, and the fluid ounce and its subdivisions into fluid drachms and minims for the lower denominations of volume.'

## MEASURES.

The Imperial gallon contains 277·274 cubic inches of distilled water at 60° F.

C	1 gallon	= 8 pints,	weighing 10 pounds,	contains 76,800 minims.
O	1 pint	= 20 fluid ounces	" 1½ "	" 9,600 "
fl. oz.	1 fluid ounce	= 8 fluid drachms	" 437·5 grains	" 480 "
fl. drm.	1 fluid drachm	= 60 minims	" 54·68 "	" 60 "
℥	1 minim		" ·91 grain	" 1 minim.

It must be remembered that the minim is less than the grain measure; 109·7143 minims (taken as 110 minims throughout B.P. '98) = the volume of 100 grains of Water at 60° F. (15·5° C.).

To find the capacity in gallons of any rectangular vessel, multiply the length in inches by the breadth, and the product by the depth in inches, then divide the total by 277·278, which is the number of cubic inches contained in the gallon.

To find the capacity in gallons of a cylindrical vessel, multiply the square of half the diameter in inches by 3·1416 and the resulting figure by the depth in inches; divide the result by 277·278.

Graduated measures may be checked with good weights and scales, and distilled water. Every fluid ounce of distilled water at 60° F. (15·5° C.) weighs an ounce avoirdupois, but there are two lines on the surface of a liquid; the upper one is that of capillary attraction to the sides of the vessel; the lower one the exact surface of the fluid. This should be on a line with the eye to measure accurately.

The Continental Pharmacopœias give the formulas in parts by weight; in some instances the gramme is indicated as the unit. The formulas in the United States Pharmacopœia are given in grammes and cubic centimetres.

The British Pharmacopœia still gives the formulas in weights and measures, both by the Imperial and the metric systems. Liquids are as a rule ordered by measure, but there is no uniformity in this; for instance, in *Linimentum Terebinthinæ Æthiopicum* the Glacial Acetic Acid is weighed, but in *Acetum Cantharidis* it is measured; in *Oxymel* the clarified Honey is weighed, but in *Oxymel Scilla* it is measured. Glycerin and other fluids, in some preparations are weighed, in others they are measured.