

Poisons.

By Miss E. L. B. FORSTER.

No. IX.

TABLE No. 2.

ORGANIC.*Chloroform.*

Of the numerous poisons, chloroform is the most interesting, on account of its great anæsthetic properties and its use for that purpose. Chloroform, or trichloromethane CHCl_3 , is prepared by distilling together chlorinated lime, slacked lime, ethylic alcohol, and water. The distillate is then treated with sulphuric acid and lime.

It is redistilled, and constitutes pure chloroform. But the official, that is to say, as ordered in the British Pharmacopœia, must have a specific gravity of 1.490 to 1.495, so absolute alcohol is added until the desired point is obtained and the density reduced to the amount required. This addition preserves the chloroform.

The process for the preparation of chloroform is as follows:—The alcohol and water are placed in a still, the chlorinated lime and slacked lime are added. The distillation is then started; as the chloroform passes over it is condensed and collected.

The crude chloroform is treated with water, afterwards with sulphuric acid, after which it is neutralised by being agitated with lime, then placed in a vessel containing chloride of calcium. The sulphuric acid removes any hydro-carbons. The water removes the spirit of wine, and is itself taken up by the chloride of calcium, a substance which has a strong affinity for water.

The use of chloroform as an anæsthetic dates back to 1847, when it was used by Sir James Simpson, who administered it for the first time. This is of special interest just now, as at the beginning of the year the death took place of Dr. John Webb Watkins, who was the patient rendered unconscious by chloroform at the hands of Dr. Simpson on that memorable occasion.

Since then its use as an anæsthetic has continued up to the present day, and although other things, such as ether, nitrous oxide, &c., have rivalled and, for certain things, superseded it, yet chloroform has always held its own, and seems likely to do so.

The actual discovery of chloroform is of earlier date than its use as an anæsthetic. It was discovered in 1831 by Liebig in England, and by Guthrie in America, and in 1836 Dumas found out its exact composition.

Liebig called it perchloride of carbon, thinking it to be a mixture of chlorine and carbon. But Dumas gave it the name of chloroform on finding formic acid and chloride of potassium were formed when it was treated with an alkali.

It may be taken internally in doses of 1 to 5 minims. There is a preparation, spirits of chloroform, dose 5 to 20 minims if often taken, or for a single dose 40 minims. It is composed of chloroform and alcohol. It is frequently called chloric ether, or spirits of chloric ether.

There is a water, made by shaking chloroform up with distilled water; its strength is 1 minim in 400 minims of water. There is no official dose, but a large amount may be given.

There is a tincture of chloroform and morphine, containing $\frac{3}{4}$ minim of chloroform in 10 minims of the tincture. The dose is 5 to 15 minims.

There is a liniment, made by adding chloroform to liniment of camphor.

Chloroform liniment often enters into prescriptions, for external use, simply as an ingredient.

The chief use of chloroform is, of course, as an anæsthetic; but, as will be seen by the preparation containing it, there are other properties which it possesses which render it a useful drug for internal use. It is prescribed as a narcotic and antispasmodic, ordered for asthma and whooping-cough. It is a good stimulant, also a diaphoretic. For external use it is also a stimulant.

There is no chemical antidote for chloroform. In cases of poisoning by the internal administration of the drug the same treatment must be applied as for an irritant poison. Emetics should be given, stomach-pump used; milk, thick gruel, or barley-water should be given; artificial respiration must be employed, also cold affusion.

The King and Queen at the East End.

As we go to press the King and Queen are paying their long-promised visit to the London Hospital to open the new out-patient department. The Queen's interest in the hospital is well known, and many sufferers have cause to be grateful to Her Majesty for introducing into this country the Finsen-light treatment of the dread disease of lupus. After opening the new building, which has been erected at a cost of £75,000, towards which an anonymous donor has contributed £25,000, their Majesties will inspect the rest of the building.

In commemoration of this visit, the Lord Mayor is desirous of obtaining a sufficient number of donors of £1,000 each to name all the beds in one ward. His appeal for contributions for this purpose has met with a very gratifying response, and it is hoped that shortly the scheme of endowment may be completed. A brass tablet will be placed over each bed with the name of the donor. It is a happy idea, happily conceived, and we have no doubt will be brought to a satisfactory conclusion.

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