

iodine, and afterwards the bromine *by drops*, when the reaction has ceased, add the nitric acid, adjust the funnels, place the apparatus in a stoneware dish, and surround the flask or jar with cold water to about the same level as the acid mixture, and allow it to stand for twenty-four hours, at the end of which time it may be gently heated to dissolve the remaining phosphorus, when the heat may be increased to expel the nitric acid, and continued until, on testing, no traces of nitric acid are found. It may then be diluted with distilled water until it has the specific gravity of 1.056.

With the above proportions, and by following the manipulation given, it is impossible that any accident should occur.

Further experiments have proved that the use of water as one of the ingredients in the formula may even be dispensed with, and yet no accident occur, if the addition of bromine be *by drops only*, and the vessel containing the mixture of nitric acid and phosphorus be such as will give free vent to the vapours which are formed on the addition of the bromine. The rapidity of action is moderated by the use of ice cold water in the outer vessel.

The vapours given off in this modification of the process are the result of the decomposition of the nitric acid, and their presence in the jar or flask prevents the combustion of the phosphorus.

Another result of the experiments have been to prove that the proportion of nitric acid is in excess, and wasteful, when conducted on a manufacturing process, as nearly double the amount of phosphorus can be dissolved by the quantity of nitric acid employed, at the expenditure of a little more bromine.

The result of these further experiments will be given at a future time, the object of this note being simply to correct the idea that the process is dangerous when it is properly conducted.

The unfortunate accident which befell Dr. Pile was due to the addition of about *one hundred drops* of bromine, at *one time* to the phosphorus and nitric acid in a *glass retort*. Under such circumstances the rapid action would necessarily cause combustion, and the neck of the retort not giving free access to the products of the combustion, an explosion was inevitable.

In order that such an accident may not occur, the writer has given full details, *which, if followed*, will entirely avert any risk or danger.

SELECTIONS FROM DANISH JOURNALS.*

BY HANS M. WILDER.

I. *Syrupus Arseniatis Ferrosus*. By H. P. Madsen.—Having seen a circular from Clermont, a French pharmacist, recommending

*From the American Journal of Pharmacy, December.