

deceased, or in some mixture in which it has been administered. In these cases it is first necessary to separate the strychnine, and obtain it in such a form as will enable the analyst to apply his tests without chance of error. The sulphuric acid and bichromate test is capable of detecting so small a quantity as the $\frac{1}{80000}$ th of a grain, when freed from other matter. At the trial of Palmer in England in the year 1856, it was stated that strychnine could not be detected in the body after death. In conjunction with Mr. Rodgers, of London, I at that time made a large series of experiments, the results of which we published in the *London Lancet*. In the course of these experiments we arrived at the following as the best mode of separating strychnine from organic matters: The substance is to be cut into small pieces, covered with distilled water, and acidulated with one-sixth the quantity of pure hydrochloric acid, and heated over a water bath until the tissues are completely disintegrated; this is now to be filtered, and the filtrate neutralized with excess of ammonia. If there be any deposit it should be filtered again. The filtrate is now agitated for some minutes with a small quantity of chloroform in a long glass tube, and allowed to settle. When the chloroform is separated from the liquid, it is to be drawn off with a pipette, and transferred to an evaporating basin, and the chloroform expelled on a water bath. The residue is then moistened with concentrated sulphuric acid, and kept on a water bath for an hour. It is then diluted with water, filtered, the acid neutralized with excess of ammonia and again agitated with chloroform: the chloroform drawn off as before. This will generally yield the strychnine in a sufficiently pure state for testing. If now a small quantity of the chloroform be evaporated to dryness on a small piece of white porcelain, and moistened with strong sulphuric acid, and no change takes place, a minute crystal of bichromate of potash may be drawn across the spot, and if strychnine be present the characteristic purple color will immediately be seen, but if the sulphuric acid be discolored, it must be put back with the remaining chloroform, and the whole agitated with a portion of diluted sulphuric acid, which will extract the strychnine from the chloroform, leaving behind some fatty matters that may have been taken up by the chloroform. The acid solution is carefully separated from the chloroform, again neutralised with excess of ammonia, and agitated with a fresh portion of chloroform. This chloroform will now yield the whole of the strychnine pure, and may be tested as before with sulphuric acid and bichromate of potash, or any of the other tests for strychnine.

This process is founded, firstly, on the fact that strychnine resists the action of concentrated sulphuric acid at a temperature of 212° ; and,