

surprising as being in contradiction to the statements of authorities on emetine, who represented it as scarcely soluble in ether, and only obtained colourless with difficulty. The researches of M. Lefort, in 1869, again called the author's attention to this subject, and the experiments made since then form the basis of the paper under review. In the experiment first described 100 grains of alcoholic extract of ipecac were heated in a water bath, with water; sufficient slaked lime—about 150 grams—was added to bring the whole to the state of powder. This was percolated with ether until apparently exhausted. The calcareous residue was examined, and found to contain a very small quantity of emetine; so small as to be practically of little account. The ethereal solution was agitated with 100 c. c. of distilled water, containing 5 grains of hydrochloric acid, and allowed to separate. The aqueous layer was coloured yellow, with a slight fluorescence, and contained the emetine. It was divided into two parts. To one of these was added ammonia, which threw down an abundant white precipitate. This was washed and dried, and during the process it diminished in bulk and finally appeared in small, hard, resinous fragments. This substance, when powdered, possessed all the characters of pure emetine. The other portion of the solution was, with great care, evaporated to about one-fourth its original volume, and set aside. Small crystals began to form, and, after a short time, the liquid solidified into a crystalline mass, which was made up of round, fine needles, embracing each other, and radiating from a common centre. This result is completely at variance with other authorities, who describe the salts of emetia as uncrystallizable, and especially with that of M. Lefort, who speaks particularly in regard to the hydrochlorate. On the strength of this experiment, M. Glenard claims that by the use of lime and ether we may remove from the extract of ipecac all the emetine it contains, and that the alkaloid so obtained differs so much in purity from that prepared by other methods that it may be readily brought to the state of crystallized hydrochlorate, which cannot be done with emetine as previously known. It is not necessary that the extract of ipecac be employed, as the powdered root may be employed with as good results. It should be moistened, mixed with lime, dried, and then percolated with ether. This plan is attended with the inconvenience of operating with ether on a very bulky powder. The author prefers the following method: Ipecac, in powder not too fine, is mixed with two and a-half times its weight of distilled water, containing 20 grams of sulphuric acid to the litre. The mixture is allowed to stand a few hours, and filtered. The powder is washed until the washings are colourless. To the liquor is added a large excess of thick milk of lime, and the deposit collected on a filter and washed. The greater portion of the emetine is contained in this deposit, but the liquor also contains a small portion of alkaloidal matter. For