

## ELIXIR OF VALERIANATE OF AMMONIA.

Take of—

Valerianate of Ammonia . . . . .	256 grains.
Simple Elixir . . . . .	16 ounces.
Water of Ammonia . . . . .	sufficient.

Dissolve the valerianate of ammonia in two ounces of elixir, carefully neutralize with water of ammonia, then mix with the remainder of the elixir, and filter.

ANN ARBOR, MICH.

# CONVERSION OF THE SULPHATES OF THE ALKALIES INTO THE CARBONATES, TARTRATES, ETC., IN THE MOIST WAY.

BY J. LAWRENCE SMITH.

Having had occasion more than once to convert small quantities of the sulphates of the alkalies into carbonates, I have for several years employed a process that has been found both certain and convenient ; in some recent investigations it has been used, and as it has never been described, it may not be unimportant to explain the nature of the process and its results. The agent used to produce the conversion is carbonate of baryta, made by precipitation ; where precise results are required, the carbonate should be prepared by carbonate of ammonia. The manner of producing the decomposition is as follows : Dissolve the sulphate of potash in water, using about twenty or thirty grammes of water to every gramme of the sulphate, and saturate the solution with carbonic acid by passing a current of carbonic acid into it ; or, what is better, dissolve in the beginning the sulphate in water already saturated with carbonic acid ; now add to this solution precipitated carbonate of baryta, in the proportion of about one and a half of the carbonate to one part of the sulphate. It is always best in adding the carbonate to rub it up in a mortar with a little water so as to form a thick cream, for by so doing it mixes well in the solution.

This operation is performed in a bottle that can be well corked with a cork or gum stopper ; now agitate the bottle frequently, or, what is still better, attach to a piece of machinery that will agitate the bottle. Many laboratories have such, and it is a very useful one in many experiments. In a longer or shorter space of time, the decomposition will be completed, pour the solution into a capsule and heat to the boiling point ; the solution will then contain only carbonate of potash.