CALCIUM GLYCEROPHOSPHATE.

By H. B. Eigelberner.

Glycerophosphoric acid was discovered in 1840 by Pelouse, who obtained it by interaction of anhydrous phosphoric acid and glycerin. (American Journal of Pharmacy.) The formula being $C_3H_9PO_6$, consisting of a molecule of glycerin, a molecule of phosphoric acid, a molecule of water being set free in the active union.

Glycerin + Phosphoric acid = Glycerophosphoric acid + Water.

$$C_3H_5(OH)_3 + H_3PO_4 = C_3H_9PO_6 + H_2O$$

It was, however, not until 1894 that the salts of the acid were introduced in medicine by Dr. Albert Robbin of Paris. Dr. Robbin discovered them in Dr. Brown Sequard's Orchitic Extract, and declared them to be the active principle of that famous "Elixir of Life." Chemically they are compounds of various bases with glycerophosphoric acid. The rationale of the use of glycerophosphates is that they contain phosphorus in the same state as it exists in the nerve tissues of the body, and constitutes, therefore, a natural form of administering phosphorus, it being at once assimilated without further change. This is based upon the theory that the lecithin of food is converted into glycerophosphoric acid before assimilation, the theory resting upon the fact that the glycerophosphate salts are found in Orchitic Extract and in the extract or nerve tissue generally. (*American Druggist.*)

A. and L. Lumiere and F. Perrin have succeeded in preparing glycerophosphorous acid by treating a slight excess of glycerin with phosphoric trichloride, keeping the mixture cool. The hydrochloric acid formed is removed from the mixture by means of moist silver oxide, after filtration from the AgCl thus formed, the glycerophosphorous acid is saturated with a base, such as lime, and the excess of glycerin removed by means of alcohol, or the original acid mixture may be directly neutralized with lime, evaporated at a low temperature and then treated with alcohol, which removes calcium chloride and glycerin, but precipitates calcium glycerophosphite. Free glycerophosphorous acid has not been isolated, since it tends to saponify on evaporating its solutions. (Proceedings of the Pharmaceutical Association, 1902.)

A good method of manufacture for calcium glycerophosphate is that proposed some years since by Portes and Primier in the *Repertoire de Pharmacie.* (American Journal of Pharmacy.)

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