

Tablet Triturates.

By D. J. THOMAS.

From a paper read before the Pennsylvania Pharmaceutical Association.

Although triturate tablets possess, in many instances, an obvious superiority over pills, they are, however, objectionable in others. For example, in exhibiting the bitter substances, such as strychnine, quinine, aloes, etc. Owing to the absence of a coating it is quite impossible to swallow a tablet containing any of the bitter medicaments without leaving some indication of its bitterness upon the sense of taste. An occasional objection is found in some instances where the active constituent of the tablet is crystalline in character; owing to the recrystallization in the tablet, it becomes hard, and consequently is rendered difficult to reduce to a powder unless subjected to extraordinary pressure; thus destroying, to some extent, one of the advantages claimed for it. Again, if the quantity of adhesive matter introduced into the tablet for the purpose of maintaining its form and holding it together has been used to excess, its ready reduction to powder is impeded. Care, therefore, should be intelligently exercised in their preparation, or, again, their superiority over coated pills becomes weakened. From personal observation it must be admitted that in proportion to the increased demand for triturate tablets there appears to be a decreased demand for pills, capsules, and powders. While there still remains an active demand for pills, powders are being rapidly supplanted by tablets. It is not claimed by the writer that this condition exists wherever tablets have been introduced. The reverse of this condition may exist in many sections.

It is a settled fact that triturate tablets have come to stay, at least until some better means has been discovered that will accomplish the same end. As there is no secret about the modus operandi for the manufacture of triturate tablets they can be produced by the average pharmacist through the employment of ordinary skill and the utensils he now has at hand. With mortar and pestle, glass or porcelain slab, spatula, and a few sets of hard rubber or metallic molds, he finds himself equipped for the production, on a small scale, of any tablet that the large manufacturer is capable of making, with the exception, as in all other things, that they can be made on a larger scale at a greatly reduced cost. The possible danger of ultimate injury to the prescription business can only result where the pharmacist fails to recognize the preference the physician is disposed to show towards the triturate tablets, and refuses to supply them when prescribed.

The electric centrifuge is an apparatus invented by Doctor C. W. Purdy, of Chicago. It is designed for the centrifugal analysis of urine.

Rice Paper.

The rice paper tree, one of the most interesting of the flora of China, has recently been successfully experimented with in Florida, where it now flourishes with other sub-tropical and Oriental species of trees and shrubs. When first transplanted in American soil, the experimenters expressed doubt of its hardiness, fearing that it would be unable to stand the winters. All these fears have vanished, however, and it is now the universal opinion that it is as well adapted to the climate of this country as to that of the famed Flowery Kingdom.

It is a small tree, growing to a height of less than 51 feet, with a trunk from 3 to 5 inches in diameter. Its canes, which vary in color according to the season, are large, soft and downy, the former somewhat resembling that noticed in those of the castor bean plant. The celebrated rice paper, the product of this queer tree, is formed of thin slices of pith, which is taken from the body of the tree in beautiful cylinders, several inches in length.

The Chinese workmen apply the blade of a sharp, straight knife to these cylinders, and turning them round, either by rude machinery or by hand, dexterously pare the pith from circumference to centre. This operation makes a roll of extra quality paper, the scroll being of equal thickness throughout. After a cylinder has thus been pared it is unrolled, and weights are placed upon it until the surface is rendered uniformly smooth throughout its entire length.

It is altogether probable that if rice paper making becomes an industry in the United States these primitive modes will be done away with.—*St. Louis Republic*.

Be Wise.

If a man is content to follow in one beaten path all his life; if he is so wise in his own conceit that he thinks he knows it all, and that nobody can teach him anything; if he is content to remain in sodden ignorance because he cannot see that in the knowledge offered him is going to bring him an immediate return in cash—then, and in all such cases, a man cannot afford to pay for a trade journal. But if he would keep abreast of the times in his calling, if he would know what new inventions and discoveries are being made that directly effect his own interests; if he would profit by the experience of others as told in print; if he would know everything possible connected with his own calling, so that he may be able to converse intelligently, not only with his co-workers but with outsiders seeking information—then the trade journal is indispensable. Says the *British Printer*:—It is a power in the land, and he who rejects its friendly aid will soon find himself at the rear end of the procession. He cannot know too much of his own feeling.—*Ex.*

Vegetable Life a Necessary Condition of Animal Life.

By DR. S. DE BONNIERE.

Everyone knows that atmospheric air is composed of twenty-three units of oxygen and seventy-three units of nitrogen, besides five six thousandths of carbonic acid and a variable proportion of vapor of water. This composition is remarkably unvarying, allowing for differences in countries and altitudes. The oxygen is a little less abundant on the surface of the sea, which absorbs some continually for the respiration of fish. It is transformed into carbonic acid in all confined centres where animals breathe. It would disappear from the surface of the globe if the green parts of vegetation were not here to release it from carbonic acid and under the influence of the solar rays to throw it back into the atmosphere.

However, oxygen has not always existed; sulphides and graphite are found in the primitive rocks which would have burned if oxygen had been contemporaneous with them. These rocks have cooled in a medium composed of carbonic acid, nitrogen, and hydrogen. This is the atmosphere in which the first plants have been developed. How do our plants, those of the present day, behave in this medium? This is the problem which has been investigated for some years by an English chemist, J. L. Phipson.

His experiments were tried upon plants of the genera poa, agrostis, trifolium, myosotis, antirrhinum, and convolvulus. He had the roots placed in fertile soil and exposed the upper parts of the plants in glass covers regulated to the light of the sky, with a temperature vary from 15° to 26°C. during the day.

In carbonic acid the plants do not prosper, in hydrogen they do better; the hydrogen is gradually absorbed and disappears at the end of a few weeks. In nitrogen the convolvulus arvensis lives for a long time, provided that carbonic acid is kept freely in the water which bathes its roots. In this experiment the roots were kept in water. In nitrogen containing a third part of carbonic acid the vegetation prospered, and after a few weeks the analysis found inside the glass cover nearly the composition of air, without its volume having changed. The plant had made oxygen.

A curious cosmogonic fact results from these experiments; we must attribute the genesis of oxygen to vegetable life, a condition sine qua non of animal life.—*Popular Science News*.

GENESIS OF NATURAL PHOSPHATE.—According to Gautier, it has been experimentally established that at least a part of the tribasic calcium phosphate has resulted from the action of ammonium phosphate upon limestone, the ammonium phosphate having itself been derived from the bacterian destruction of ammonium.