

Vegetable drugs are to be as free as practicable from insects or other animal life, animal material or animal excreta. They are to be free from moldiness and show no discoloration, abnormal odor, sliminess, or deterioration due to any cause.

For the preservation of vegetable or animal substances from the ravages of insects, it is directed in special cases that they be preserved in tightly closed containers with a few drops of chloroform or carbon tetrachloride added. It is not intended that this precaution should be obligatory for drugs in bales or large original containers where it may be impracticable.

The following drugs are particularly liable to the attack of insects: *Angelicae Radix*, *Anisum*, *Arnica*, *Avena Sativa*, *Bryonia*, *Coriandrum*, *Crocus*, *Foeniculum*, *Ficus*, *Humulus*; *Inula*, *Iris*, *Juniperus*, *Lappa*, *Matricaria*, *Myristica*, *Pinus Alba*, *Prunum*, *Rhamnus Cathartica*, *Rumex*, *Sabal*, *Stillingia* and *Taraxacum*.

In commerce it is not possible to obtain vegetable drugs in a state of absolute purity, and a limited amount of innocuous, extraneous, or foreign matter adhering to the drug or admixed with it is usually not detrimental. The presence or admixture of any poisonous or dangerous foreign substance, however, is not permissible. Foreign organic matter refers to any part of the plant or plants yielding the drug, except that part or those parts designated as constituting the drug, and to any other plant parts, vegetable tissues, or substances.

In order that vegetable drugs be of a uniform quality and as free as practicable from foreign substances, it is required that in each vegetable drug recognized in this National Formulary the amount of foreign inorganic matter, estimated as acid-insoluble ash, be not more than 2 per cent of the weight of the drug unless otherwise specified in the monograph of the drug, and that the amount of foreign organic matter be restricted to the allowable percentage specified in the monograph of the drug. Before vegetable drugs are ground or powdered, all lumps of dirt or other foreign inorganic matter which can be separated by mechanical means should be removed.

[This matter came too late for inclusion in the first printing of National Formulary V, and is printed here for your information. If you have purchased a copy of the first issues of N. F. V, you may secure a loose leaf of these "Additions to Special Notes," gratis, by writing to the Chemical Catalog Company, 19 E. 24th St., New York City.]

---

## THE PROCTER MEMORIAL AND THE MUSEUM OF THE A. PH. A. HEADQUARTERS.

AFTER rendering his report at the recent meeting of the Maryland Pharmaceutical Association, Chairman James E. Hancock of the Procter Memorial spoke, in substance, as, follows:

"It might be well to explain that part of the report which says—'It has been the policy of the Committee on the William Procter, Jr. Memorial Fund to wait for more definite plans of the AMERICAN PHARMACEUTICAL ASSOCIATION Headquarters Building Committee, rather than attempt something that might be regretted in the near future.'

"Some time ago I gathered together certain materials with the idea that one of the features of the proposed AMERICAN PHARMACEUTICAL ASSOCIATION Headquarters Building will include a museum on Pharmacy. My hopes are that this

will not be a repository of useless things, but one of matters historically connected with the advancement of pharmacy that will educate the coming pharmacists to the economic aspects of pharmacy and its important place in the needs of the world.

"One of the books in my father's collection is a copy of the 'Pharmacopœia Lugdensis,' upon the fly leaf of which he had written the 'Father of all Pharmacopœias.' The study of this volume was most interesting with its arrangement for galenicals into Aromatics, Cerates, Confections, Electuaries, Opiates, Pills, Plasters, Salves, Syrups, Troches, etc.

"This 'Dispensatorium,' compiled by Valerius Cordus, a most precocious young man, who was born in 1515 and died in 1544, is a formulary of receipts by Greek, Roman, and Arabian physicians, such as Dioscorides, Galen, Andromachus, Rhazes, Avicenna and Nicolaus Præpositus (Salernitanus) and is a surprising effort of one who died at the early age of 29. Having been legalized by the High Council of Nuremberg and adopted by many other cities of Europe as a standard for pharmaceutical procedure, I was struck by its recommendations for substitutes such as Pellitory for Ginger, Castor Beans for Colocynth, Castor for Storax, etc., and in following out the query by collateral reading, I have become satisfied that the needs of the pharmacists largely stimulated the discovery of America. Some may think that this assumption is forced, but let us get the proper background of Europe and European trade at the time and remember that the Church had frowned on the practice of medicine for several centuries in its encouragement of cure by miracles, very much like the Christian Scientists would do now. Don't think of the fancied pictures of Medieval Courts or the apparent luxury of Kings and Nobles, but think of the average man of Central and Western Europe at that period, insufficiently clad with wooden sandals on his unstocked feet and hard put to provide even the necessities of life.

"Those who returned from the Crusades brought back some idea of a better civilization. They had become acquainted with silks, precious stones, drugs, dyes, and spices. Take note of these five items and remember that precious stones were frequently used in medicines at that period and you will see that four out of these five were identified with the drug trade. The commerce for these made practically the first shops of Western Europe and they were brought by caravan from China, Japan, India and Persia to the Mediterranean ports from which they were distributed by Venetian and Genoese traders. And then largely as reprisals against the cruelty and the looting of the Christians during the several centuries of the Crusades, the people of Asia Minor developed a greater strength that culminated in the rise of the Ottoman Turk, who captured Constantinople in 1453 and cut off these caravan routes from the East. For more than 100 years following, the Turk or the Saracen controlled the Mediterranean and drove the European ships from that sea. As some one has expressed it, it is a question whether the Europeans voluntarily crossed the Atlantic or were pushed across. In any event, it was the need for these materials that had become the important interests of European commerce, and while it may sound more romantic to speak of these expeditions being financed by Kings and Queens, the real incentive was new trade routes to the East and all of these early adventurers were financed by merchants and, as you will see, largely in the search of materials needed by the Apothecary.

"Supplementing these records of the development of pharmacy, I am sure that an interesting exhibit of the early American appliances and models can still be obtained for such a museum. The proposed statue of Procter as the 'Father of American Pharmacy' could be made the dominating feature of such a museum, or it could be erected on a plot in front of the proposed Building and thus increase public interest in the Headquarters Building for American Pharmacy. Or should a mezzanine rotunda be provided at the entrance of the building with Procter's statue in the centre and the walls lined with portraits of those men who had devoted their lives to the promotion of pharmaceutical interests, it might be more acceptable. These might include the portraits of the Ex-Presidents of the AMERICAN PHARMACEUTICAL ASSOCIATION, for instance, in which event I would be glad to donate the portrait of John F. Hancock.

"The Committee on the AMERICAN PHARMACEUTICAL ASSOCIATION Headquarters Building will understand that no one wishes to interfere in any way with their duties. The members of the Committee are competent; their plans will need building stones, however, and if we have offered anything worth while in the way of suggestions, we hope that they, as its architects, will use what they see fit. Also I am personally interested in devising a memorial to my father, who initiated the Procter Memorial Fund and who was always sincere in his efforts for the advancement of American Pharmacy."

---

## MERCUROCHROME AS A HISTOLOGICAL STAIN.

BY PAUL DAVID CARPENTER AND E. N. GATHERCOAL.

Mercurochrome can be used as a stain for histological material. Starch in particular takes the dye very readily assuming a light red color after treatment for one minute with a one per cent solution of mercurochrome in water. The stratifications are displayed clearly and the hilum is especially well defined. One striking advantage of this stain for starch is the fact that the color is not removed from the starch even after prolonged washing with alcohol, oil of cloves or water, hence botanical sections containing starch and stained with this dye can be thoroughly dehydrated without loss of color. Maranta starch stained with mercurochrome was washed with water for 96 hours and retained the red color. Starch so stained, dehydrated and mounted in balsam makes an excellent study. As a cytological stain it colors the protoplasm a bright red but is not good for differentiating the nucleus. It has the same advantages as with starch in that the color is not removed by washing with alcohol, water or oil of cloves.

In very dilute aqueous solution it rapidly stains the cilia of protozoa even while the organism is yet alive. Cellulose, suberized and lignified walls readily stain, taking a red color. The color is not lost by washing with alcohol, water or oil of cloves but rather improved by prolonged immersion in oil of cloves. It can, however, be covered with other dyes.

In the use of mercurochrome for double staining care should be exercised to avoid the use of acid dyes. It is very sensitive to acid, the mercurochrome being converted by even very dilute acids to a yellow resinous substance. Objects stained with mercurochrome change to a light yellow color when treated with an acid.