

that this substitute is genuine manaca, and that the lighter color of the root is due to a difference of soils in which the drug grows. No significance is given the structural differences which are equally as manifest as that of color. Following is a comparison of manaca with the root noted:

Manaca root (Fig. I) varies in thickness from five to thirty mm. and in length from one dm. to one meter. Externally it is dark reddish-brown. The bark is thin, usually scaly or flaky, and adheres tightly to the wood. It is distinctly bitter. The wood is tough, hard, and of a reddish-yellow color. It is only slightly bitter. The wood is porous, the pores being scarcely visible under a hand lens. The medullary rays are few in number and only visible under a hand lens.

The substitute (Fig. II) varies in thickness from seven to twenty-five mm. and in length from one to four dm. Externally it is yellowish gray. The bark is twice as thick as that of manaca, not scaly or flaky, and separates readily from the wood. It is practically tasteless. The wood is fragile, slightly softer than that of manaca, and of a pale yellow color. The wood is tasteless. It is porous, the pores being distinctly visible under a hand lens. The medullary rays are numerous, and plainly visible.

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SANTONINLESS SANTONICA.

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A specimen of santonica was recently submitted for examination and assay which, while it corresponds closely in appearance with the official santonica in most respects, showed some abnormal characteristics, and upon further examination was found to contain not more than traces of santonin.

The appearance of the drug was very favorable as to color and freshness. It was rather greener than the santonica commonly seen, and possessed an odor slightly different from the ordinary santonica odor and strongly suggestive of tansy. The microscopic examination showed it to be more tomentose than the drug usually is, and the oil glands were of a greenish color.

The drug was assayed by several methods. The method of the British Pharmacoposia of 1888, Katz's, and Thaeter's methods, all gave a small amount of a resinous residue which showed no signs of crystallizing, even after several days' standing, while several commercial specimens of the drug, one seven years old and the other much older, which were assayed simultaneously to test the accuracy of the method, showed 4.18 and 1.71 percent of crystallized santonin respectively.

Thinking that perhaps the drug had been partially exhausted of its santonin, the ether extract in the several samples was determined, and in the sample yielding no santonin it was found to be 18.6 percent, a figure intermediate between both of the other samples examined, and therefore to be regarded as normal and as a proof of the impossibility of its having been tampered with in any way, as by being exhausted.

It was found possible to apply one of the color tests of santonin directly to the drug with very satisfactory results as indicating the comparative santonin content and the consequent activity of the drug. This test is based on that of Pain (Pharm. J., 1901, 67,131), and is as follows:

Place 0.5 gm. of santonica (whole or ground) in a test tube, add 5 cc. of spirit of nitrous ether and boil gently. No color should be developed or not more than a slight greenish yellow color due to the solvent action of the alcohol on the resins of the drug. Now add 10 drops of alcoholic potassium hydroxide solution and again boil. In an active drug a rose red color is developed in direct proportion to the amount of santonin present. In the sample under question, scarcely any color was noticeable at all, while the other samples gave results agreeing proportionately with the amount of santonin found by assaying.

The foregoing condition of a practically worthless drug with a fine physical appearance is not new, for it has long been known that physical appearance is not always a criterion of value. It is new, however, as regards santonica, which is usually judged on physical appearance only, and it is suggested that in the future purchasers of santonica apply the color test as being much simpler than the long and tedious process of assaying by any of the available methods. They would thus be enabled to reject a worthless drug in a few minutes. The assay can be applied later to such samples as show positive results by the color test. In this connection I would commend Thaeter's method (Archiv. der Pharmacie, Vol. 237, p. 626, and Vol. 238, p. 383), as the most satisfactory.

LIQUOR FERRI IODIDI.

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The use of the Solution of Iron Iodide for the extemporaneous preparation of the syrup is undoubtedly increasing. The dispensing doctors and the druggists who are either "too busy" or "too lazy" to make syrup of iron iodide by the official process have willingly relegated to the manufacturer the preparation of the concentrated solution of ferrous iodide, and have thus curtailed their own practice of the art of pharmacy to the simple admixture of such a concentrated solution with syrup.

As long ago as 1888 this custom was sufficiently in vogue to be recognized by the National Formulary, and, in the first issue of that work in that year, a formula for Liquor Ferri Iodidi was included. The note accompanying that formula stated: "On mixing 1 volume of this solution of iodide of iron with 5 volumes of syrup, the product will contain about 60 grains of iodide of iron (ferrous) in each fluidounce, and will be practically, measure for measure, but not weight for weight, identical with the official syrup of iodide of iron."

It will be thus seen that the extemporaneous preparation of syrup of ferrous iodide in this way had, even at that time, the endorsement of a quasi legal authority.

In the third edition of the N. F., published in 1908, the formula has been retained. In the earlier copies of this edition the foot-note stated, "This solution