WHITE PINE BARK ADULTERATED WITH ELM BARK.

BY C. O. EWING.

White pine (*Pinus alba* L.) bark is a drug concerning which we have found no previous record of adulteration. Its appearance is so characteristic that even a novice is not apt to mistake other barks for it. Furthermore, it is generally so cheap that it is not a likely subject for wilful adulteration. However, during the war an unusually strong demand arose which enhanced its market value. This may have occasioned the case of obviously intentional adulteration which we have recently observed.

A shipment received from North Carolina but collected in Michigan contained a 160-pound bale the outer part of which to the depth of about one foot consisted of genuine white pine, the interior, however, consisted almost entirely of rossed outer elm bark (*Ulmus fulva* L.). The official N. F. "Ulmus" consists of inner bark from which the outer layer has been removed, since the latter is practically devoid of mucilage cells to which the inner portion owes its virtues. The bark in question consisted mostly of cut pieces about 2 to 10 cm. wide and about 5 to 50 cm. long. The outer corky layer had been removed; where the rossing had been superficial the outer surface had a somewhat reticulated appearance. In other respects the adulterant somewhat resembled the official elm bark except that it was sometimes thicker and slightly quilled. The fracture was short except in instances where a very thin layer of inner bark was stilled attached. It had the fenugreek-like odor characteristic of elm bark.

While the appearance of the adulterant, except as regards color, was only remotely suggestive of white pine and should normally be detected, it is conceivable that other bales similarly adulterated may have found access to the market in a ground or powdered state, and we have, therefore, deemed it advisable to call our observation to the attention of the trade. Fortunately, the monoclinic prisms of calcium oxalate characteristic of elm bark are so striking that its presence can readily be detected by microscopic examination.

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ANALYSIS OF SOLUTION OF MAGNESIUM CITRATE.*

BY JOSEPH L. MAYER.

This paper presents methods of assay for solution of magnesium citrate, devised with a view of modifying the U. S. P. method without sacrificing accuracy, which are more expeditious and provide for the use of less elaborate apparatus than is commonly thought necessary for making gravimetric determinations.

(*a*) A bottle of Solution of Magnesium Citrate, obtained in the open market, was analyzed for its magnesium content by the following method, which is that of the U. S. P.

"Transfer 10 mils of solution of magnesium citrate, accurately measured, to a platinum or porcelain dish, evaporate to dryness, and ignite until most of the carbonaceous matter has

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* Read before Scientific Section A. Ph. A. New York Meeting, 1919.