

THE CHEMICAL AND BIOLOGICAL STANDARDIZATION OF OLEORESIN OF ASPIDIUM¹

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Until the appearance of the current revision of the U. S. Pharmacopoeia (Tenth Revision) there was no official requirement as to the percentage of crude filicin present in the Oleoresin of Aspidium. Market samples varied widely. The need for a carefully standardized product was generally recognized because of the important anthelmintic use of the drug in medicine. It had been demonstrated that a pharmacologically inactive drug could meet the microscopic requirements given in the Ninth Revision of the U. S. P. The Tenth Revision requires not less than 24% of crude filicin in the oleoresin, and presents a chemical method for determining the filicin. The various chemical methods which have been employed thus far have been criticised, and many have been of the opinion that a biological method might be devised which would give more trustworthy pictures of the therapeutic possibility of the agent.

The authors studied the following methods: (a) *chemical*—U. S. P., X, British Pharmacopoeia, Swiss Pharmacopoeia, Fluck's Modification of the Swiss Method, Lyons' Modification of the Swiss Method; (b) *biological*—Sollmann's Earthwork Method, Zoltan's Method, the Wasicky and Becker Method, and Schamelhout's Method. Two samples of powdered Aspidium and six samples of Oleoresin of Aspidium, purchased on the open market, were used. During the course of the study the authors devised a modification of the U. S. P. X method, and their results justified its proposal and its acceptance as a more reliable and more accurate chemical method than any of those which have appeared in the literature thus far. It was shown that powdered Aspidium and Oleoresin of Aspidium which fail to meet the U. S. P. requirements are sold on the open market; that Oleoresin of Aspidium prepared from powdered Aspidium which meets the U. S. P. requirements do not always assay chemically 24% of crude filicin; that ascarides cannot be used for the biological assay of this drug; and that the percentage of crude filicin is a definite indication of the anthelmintic powers of Oleoresin of Aspidium. The modified method devised by the authors has been accepted for the Eleventh Revision of the U. S. Pharmacopoeia.

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