

SPOT TESTS

Qualitative Analysis by Spot Tests, Inorganic and Organic Applications

By Dr. Fritz Feigl. Third completely revised English edition, translated by Prof. Ralph E. Oesper. Pp. xvi + 574. (New York and Amsterdam: Elsevier Publishing Co., Inc.; London: Cleaver-Hume Press, Ltd., 1947.) 43s. net.

ONE of the most striking features of recent developments in qualitative and quantitative analysis has been the increasing use made of micro or semimicro-methods. This is not, indeed, a modern branch of analysis; some of the old masters worked with very small quantities of materials. Wollaston's laboratory, we are told, consisted at one time of a tray containing watch-glasses, a blowpipe, and similar unimpressive objects, and when he had occasion to need a little calcium phosphate for a blowpipe test, he supplied it by scrapings of an ivory paper-knife. Berzelius created nearly all the chemistry of vanadium with a few grams of material. The so-called spot test, with which the present treatise deals, is also an old friend to most chemists; the use of test-papers and of an external indicator in titrations are examples of its early use.

There comes a time in the history of most branches of science, however, when some enthusiast sees the possibility of large extensions of a method, and by devoted and single-purposed work enlarges the field of some modest plot of knowledge until it becomes an imposing park, stocked with the most bewildering variety of forms. This task has been well performed for the spot test by Prof. Feigl, formerly of the University of Vienna and now in the Ministry of Agriculture Laboratory, Rio de Janeiro, who is well known to all chemists as the leading authority in this branch of analysis.

The book is a complete monograph. It deals with apparatus and technique, with methods, reagents, the exact details of procedure, and the results which may be expected. The field of application embraces metals, acid radicals, free elements, mixtures, organic compounds, and technical materials and minerals. In all cases, the most careful attention to detail is given, so that no user of the book who wishes to carry out any test described in it can have any doubt as to what he must do. Very full references to the literature are given (very few after 1939, and these mostly to the author's own papers), and there is a tabular summary and full indexes.

The reviewer looked up several examples of what might be expected to be found in the book, and was disappointed only once (salicylic acid). In his opinion, the book will find a welcome in all chemical laboratories. The use of spot tests in teaching is a matter on which divergent views will be held, and the reviewer does not think the present book is suitable for general use by students. A separate book, "Laboratory Manual of Spot Tests" (New York, 1943), has been written by Prof. Feigl for this purpose. A feature which struck the reviewer is the extending use which can be made of spot tests in organic analysis; according to the author, this branch of the subject dates only from 1928, and the extensive use of organic reagents in inorganic chemical analysis is also a newer development. Although the remark is not relevant to the present book, the reviewer would like to suggest that more attention should be given in teaching to the reduction in the quantities

of materials used in organic preparations by students. There is little point in the teacher in the inorganic laboratory training a student to work with very small amounts of material and with small apparatus when the student, on entering on his training in organic chemistry, is encouraged to work with hundreds of grams and with large bolt-head flasks, as is too often the case because the laboratory manuals specify these quantities. Not only is unnecessary expense incurred, but also the student grows up with an increasing inability to work with the small amounts of material he will normally have available in research work. It has been the reviewer's experience that much of what the student has been taught in the course of quantitative inorganic analysis is undone in subsequent work in the organic chemistry laboratory, where the dirty bench and abundance of material are too often the rule. A short course of work on the lines of Prof. Feigl's manual would do much to restore a sense of proportion.

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'HILLBILLY' FOLK-LORE

Ozark Superstitions

By Vance Randolph. Pp. ix + 367. (New York: Columbia University Press; London: Oxford University Press, 1947.) 21s. net.

THE Ozark country, or Ozarkland as it is sometimes called, covers some fifty or sixty thousand square miles and extends over the southern half of Missouri, the north-west of Arkansas and a few counties in Oklahoma. Although it is often considered to be a mountainous country, the hills are scarcely more than about two thousand feet, and the country consists of wooded land, gorges and ravines.

The name was first applied to this region by French-Canadian trappers, and the origin of the word is still in dispute, some maintaining that it is derived from *Aux Arcs* (*bois aux arcs*, wood for bows) and others thinking that it is connected with Azoic Arc. However that may be, the highland country was first settled early in the nineteenth century, and since then, largely owing to the bad soil and poor communications, the region has been to a certain extent isolated, and so has preserved many of the old folk beliefs and customs.

In the present volume Mr. Vance Randolph, who has already written a study of the Ozarks in which he deals with what he calls an "American survival of primitive society", has collected a number of the popular beliefs and practices which are still to be found by the field worker in this region. He attributes the survival of many of these beliefs to the fact that the people made little contact with the outside world since the pioneers came west from the Southern Appalachians. Although many Americans regard these 'hillbilly' people almost as foreigners, the fact is that many of them are of British stock and have been in America since colonial days.

In his discussion of Ozark folk-lore, Mr. Randolph has divided his material into subjects, and the book is really a collection of articles in which the beliefs and superstitious practices of the people are merely assembled without any analysis. In effect, the volume is little more than a catalogue in narrative form, and as such is certainly a useful compilation in