

referred to above, which are based on King's furnace spectra :

	Kayser- Ritschl	Harrison	Moore
4379·24	10R	200R	150r
84·73	120R	125R	125r
89·99	100	80R	100
95·24	10	60R	80
4400·59	60	60	60
06·65	80	40	80
07·66	70	15h	70
08·21	70R	30	70
08·52	50R	30h	90
16·48	20	15w	20
21·59	20	30h	20
26·01	15	25h	20
29·80	15	30	15

This needs no comment, but a word may be added on the desirability—particularly in Harrison, where the lines occur at such small intervals—of making an attempt to give lines of different elements intensity numbers roughly proportionate to their relative prominence in their own spectra. The present numbers are utterly meaningless in this respect. For example, Harrison records two

lines of Fe I, at 3243·109 and 3190·651, as having an intensity 50. These lines are so weak that they do not appear on Buisson and Fabry's well-known map of the iron arc spectrum obtained from almost pure iron and intended as a record of the whole spectrum. On the other hand, the *raie ultime* of W, at 4008·753—in a region where plate characteristics should give it relative prominence—has an intensity 45. It is much to be hoped that a satisfactory intensity scale will take precedence of the inclusion of wave-numbers in the future improved tables which Harrison promises.

In spite of all defects, however, these volumes represent an enormous advance over anything of the same character that has preceded them, and they are indeed indispensable in any laboratory in which spectroscopy is applied to practical problems. Spectroscopists everywhere will acknowledge a deep debt of gratitude to the compilers for the care and patience with which they have carried out a very great task.

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THE EXTRA PHARMACOPŒIA

The Extra Pharmacopœia

By Martindale. Twenty-second edition. In two vols. Vol. 1. Pp. xxxviii+1289. (London: The Pharmaceutical Press, 1941.) 27s. 6d.

THE first volume of the twenty-second edition of the Extra Pharmacopœia—Martindale—has appeared at about the time that it might have been expected if there had been no war. It looks like its immediate predecessors and, like them, will be almost indispensable to the physician and the pharmacist, who are expected to know all that is new in the way of medicines, whether they be respectable and approved or merely advertised. A great part of the material for this edition had fortunately been collected before the War had cut international communications and slowed up the output of scientific work. More than two thousand new medical and pharmaceutical papers are abstracted and the revision committee has had to put much more of the book into small print to make room for the new matter without making revolutionary changes in the format.

The arrangement of the information still leaves something to be desired, and it is fortunate that there is a good index. Drugs with closely allied actions are generally classified together, but choline, because of its relation to acetylcholine, is discussed in the article on acidum aceticum, which is absurd. Sympathomimetic amines are arbitrarily divided up so that some of them are included with adrenaline and others with ephedrine.

Data from the first three addenda to the British

Pharmacopœia, the second supplement to the British Pharmaceutical Codex, the new French and Japanese Pharmacopœias and the new supplements to the United States and Dutch Pharmacopœias are included. Some of the information about proprietary names has been eliminated because the drugs are no longer available in Great Britain. This is unfortunate because it makes the book less complete as a work of reference, without any compensating advantages except a small saving of space. There is no guarantee that the drugs which are mentioned are available; many of them are not.

The amount of information in this book is prodigious, and it is difficult to select examples of the changes that have been made without making out a long list. Sulphanilamide and its derivatives occupy no less than 37 crowded pages. Many new hormones and vitamins have been dealt with and there is much information about such new interests as blood transfusion, heparin, penicillin, chlorophenolic and higher phenolic antiseptics. The section on vaccines, sera, toxins and antitoxins now covers 74 pages. An entirely new therapeutic index has been compiled in which diseases are arranged alphabetically, with a list of the treatments recommended and the pages of the book on which references to these treatments will be found. This index will be very useful to medical men.

The book as a whole gives an interesting picture of the unprecedented advances in therapeutics which have occurred in recent years.