

"usually involves nothing more than making simple qualitative tests for adulterants," by bringing together in one small book the best and simplest qualitative methods of detecting all the common sophistications of foodstuffs.

As a collection of recipes the work is good; in other respects it commands but qualified admiration. For the glorified cookery-book in chemical literature we have no great liking, and this compendium of "tests" is little more. The numerous pitfalls which beset the unwary are rarely indicated in the directions given; and the reasons for the various operations are left for the operator to discover for himself. Now this is well enough if the person using the book is already a master of his craft, knowing the pitfalls and how to avoid them, cognisant of the why and wherefore of his procedure, and only employing the work as a convenient collection of notes wherewith to refresh his memory when applying the various processes. But in the hands of the unpractised person, whether student or "inspector," it is quite another matter. Differences of conditions, apparently slight, may lead him wholly astray. It would be well enough for the enthusiastic student or teacher to test his breakfast bacon for borax, or his morning milk for added water, provided he does it merely for his private information; only in that case it would not benefit the pure-food movement much. But if he is going to lodge a serious complaint on the strength of his discoveries, it would be well, also, first to have those discoveries confirmed by a practised analyst. Otherwise there may arise unpleasant references to the law of libel.

The experiments are well selected and tersely described. As a compendium of some of the best qualitative tests for ordinary food-adulterants the book will be useful, especially to the man who already knows how to apply the processes. C. S.

*Altitude Tables.* Computed for Intervals of Four Minutes between the Parallels of Latitude  $0^{\circ}$  and  $30^{\circ}$ , and Parallels of Declination  $0^{\circ}$  and  $24^{\circ}$ . Designed for the Determination of the Position Line at all Hour Angles without Logarithmic Computation. By Frederick Ball. Pp. xxxiii+245. (London: J. D. Potter, 1907.) Price 15s. net.

SINCE the notice of the first part of this work appeared in NATURE of February 20, the companion volume for latitudes  $0^{\circ}$  to  $30^{\circ}$  has been published, making these tables complete between the parallels of  $60^{\circ}$  N. and  $60^{\circ}$  S. By their means the navigator can with facility and rapidity determine his position by the observation of any heavenly body the declination of which does not exceed  $24^{\circ}$ , and, as the latitude and declination are interchangeable in the tables, they are consequently available for all stars up to  $60^{\circ}$  in declination between  $24^{\circ}$  N. and  $24^{\circ}$  S.

This valuable contribution to scientific navigation will be appreciated by all navigators who employ the "New Navigation"—Captain Marcq St. Hilaire's method—as a practical and direct help in saving the tedious computation of the altitude required in the problem. The tables will undoubtedly tend to popularise that excellent method, which has hitherto been neglected by so many navigators, mainly on account of the lengthy calculations entailed, and more especially when it is realised that their practical utility equals their mathematical exactness.

The introduction to each volume fully explains the various uses of the tables, so that no difficulty need be experienced when employing them. The book is of a handy size and well bound, with clear type well arranged and spaced, so that the navigator with but little light and limited time will find a pleasure in using it. MIREMONT.

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*Logarithmic and Other Tables for Schools.* By Frank Castle. Pp. 36. (London: Macmillan and Co., Ltd., 1908.) Price 6d.

THE introduction of more practical methods in the teaching of mathematics in schools has led to an increasing demand for inexpensive tables of logarithms, values of trigonometric functions, and other data which pupils are now encouraged to use at quite an early stage of their mathematical work. Mr. Castle has compiled a series of four-figure tables which will meet every need of mathematical classes in schools, and be of great service in school laboratories. The tables include logarithms and antilogarithms, natural and logarithmic sines, cosines and tangents, degrees to radians and radians to circular functions, hyperbolic logarithms, powers, roots and reciprocals, and exponential and hyperbolic functions. The type is clear and the style attractive, and these qualities, combined with the wide scope and low price, should ensure a wide popularity for the tables.

*Praise of a Simple Life.* Edited by E. A. Baker. Pp. x+258. (London: George Routledge and Sons, Ltd., n.d.) Price 2s. 6d. net.

MR. BAKER has compiled a collection of extracts on the theme of a life according to nature from classical writers to the end of the eighteenth century. These utterances are arranged in four sections, which the editor calls respectively the antique world, the dawn of a new age, the age of expansion, and the age of reason. More than four-score authors are drawn upon, so that the reader is provided with a diversity of points of view. The volume is dainty, will go into the pocket, and should be a favourite with readers of poetic temperament.

#### LETTERS TO THE EDITOR.

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#### On the Radio-activity of Potassium and other Alkali Metals.

IN the course of some experiments made by them on the radio-activity of a series of salts which had hitherto been considered inactive, Messrs. Campbell and Wood (Proc. Camb. Phil. Soc., vol. xiv., part i., p. 15, 1907) found that potassium salts exhibited a radio-activity greater than that of any other substance previously examined which did not contain any of the so-called radio-active elements.

In seeking for the source of this activity, these experimenters found it impossible to separate out any active impurity from the salts examined, and they were led by the results of their investigation, which included measurements on the activities of a limited number of the compounds of potassium, to conclude that the activity originated with the potassium itself, and was an atomic property of that metal.

In a later paper (Proc. Camb. Phil. Soc., vol. xiv., part ii., 1907) Campbell described some additional experiments dealing with the character of the radiation emitted by the potassium salts, and in concluding expressed the opinion that the radiation consisted of  $\beta$  rays possessing an average velocity less than that of the  $\beta$  rays of uranium.

During the last few months the writer, in collaboration with Mr. W. T. Kennedy, has made, in the Physical Laboratory at Toronto, a close examination of the radio-activity of a large number of potassium and other salts, and while the results of this examination confirm the discovery of Campbell and Wood that potassium salts generally possess an exceptionally high activity and emit a radiation possessing considerable penetrating power, they