

BOOK REVIEW

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A Review of Thin-Layer Chromatographic R_f Values of Toxicologically Relevant Substances on Standardized Systems

REFERENCE: Moffat, A. C., Franke, J. P., Stead, A. H., Gill, R., Finkle, B. S., Moeller, M. R., Muller, R. K., Wunsch, F., and de Zeeuw, R. A., *Thin-Layer Chromatographic R_f Values of Toxicologically Relevant Substances on Standardized Systems* (Report VII of the DFG Commission for Clinical-Toxicological Analysis. Special Issue of the TIAFT Bulletin), VCH Publishers, 220 E. 23rd St., Suite 909, New York, NY 10010-4606, 223 pp.

This book presents R_f values on approximately 1100 toxicologically relevant substances in 10 standardized thin-layer systems. The authors' hope is that the compilation will serve a useful purpose for toxicology analysis. In the introduction to the book the authors review the means by which the data were collected, the use of reference substances, and the use of the tabulated data included in the book.

By far the greatest portion of the book (pp. 20-216) is taken up with tables. The first table lists compounds in alphabetical order and their hR_f (or relative R_f) values in up to ten systems. Not all compounds have been run in each system. Four systems were chosen for acidic and neutral drugs and six systems for basic drugs. One system (ethyl-acetate-methanol-concentrated ammonia) was used for both groups. This may prove to be the most useful section of the book for those laboratories interested in resolving a limited number of compounds.

This is followed by a series in which compounds are listed in ascending hR_f values in a particular system together with their R_f values in other systems. These will prove most useful to those laboratories performing screening by thin-layer chromatography (TLC) and assist in the identification of unknowns. The book also includes a suggested error window for each system.

The authors must be complimented on the quantity and quality of data included in the book. One of the aims of the STA-Committee of TIAFT is to provide compilations of reliable analytical data, and this book together with their other publications are commendable efforts toward achieving this goal.

If I was to have any criticism of the book it is that I found the tables of ascending hR_f values a little difficult to distinguish from each other and to define which system (plate, solvent, and so forth) belonged to each table. This, I am sure, will become easier with use.

To the practicing laboratory toxicologist performing TLC analysis, this is an essential addition to his/her library and one that proves most useful. I look forward to the continuing efforts of the STA-Committee to expand and update these data bases.

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