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This book serves as a practical guide for professionals involved with health risk assessment of exposure to industrial chemicals. It discusses nearly 137 chemicals and chemical classifications and serves as a major resource for interpreting biological measurements in workers exposed to these agents. This third edition is more comprehensive than the first edition of 1983; it includes 14 additional chemicals plus a section on the metabolic fate of chemicals. Its comprehensiveness can be attributed both to the rapidly growing field of biological monitoring and to the authors’ diligence in keeping abreast of the field. Threshold adverse effect concentrations for the chemicals and the various methods used for biomonitoring have also been updated.

This book comprises …

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Biological monitoring can be divided into (a) monitoring of exposure, and (b) monitoring of effect, for which indicators of internal dose and of effect are used respectively. The purpose of biological monitoring of exposure is to assess health risk through the evaluation of internal dose, achieving an estimate of the biologically active body burden of the chemical in question. Its rationale is to ensure that worker exposure does not reach levels capable of eliciting adverse effects. Depending on the chemical and the analysed biological parameter, the term internal dose may have different meanings (Bernard and Lauwerys 1987). First, it may mean the amount of a chemical recently absorbed, for example, during a single workshift. 2. Lauwerys R, Hoet P. Industrial Chemical Exposure: Guidelines for Biological Monitoring. 2nd ed. Boca Raton, FL: Lewis Publishers, 1993;318. 3. Zielhuis R. Biological Monitoring: Guest lecture given at the 26th Nordic Symposium on Industrial Hygiene. Scand J Work Environ Health 4(1):1-18 (1978). 4. Zielhuis R. General aspects of biological monitoring.