

## BOOK REVIEW

*Treatment of water by granular activated carbon* (based on a symposium sponsored by the Division of Environmental Chemistry of the American Chemical Society), edited by M.J. McGUIRE and I.H. SUFFET, published in Chemistry Series 202 by the American Chemical Society, 1155 Sixteenth Street, N.W. Washington D.C. 20036, pp. 600.

The presence of organic chemicals in drinking water and their associated health hazards have long been a concern to the scientific community, but recently this concern is being shared also by the public. EPA's efforts in the area of drinking water are focussed on trihalomethane regulations, rulemaking for volatile organic chemical levels, and National Revised Primary Drinking Water Regulations. This publication attempts to answer, or begins to answer, some of the most important questions concerning the future availability of clean water.

Activated carbon is an important factor as far as planning of clean water supplies is concerned, but much should be known about its long-term use characteristics. The first section of this book covers theoretical approaches, including studies on estimating multi-component and organic homologue adsorption, the theory of correspondence, and physico-chemical aspects and surface characteristics of carbon.

The second section, on modelling and competitive adsorption aspects, includes research on carbon tetrachloride removal, multicomponent adsorption calculations, mechanisms in carbon columns, dynamic minicolumn adsorption technique, and adsorption equilibria.

Biological and adsorptive interactions are treated in the third section. It describes total organic carbon removal, trihalomethane precursor removal, adsorption bioactivity interactions, microbiological aspects of carbon, and presents mathematics of microbial activity.

The last section gives details on pilot- and large-scale studies and discusses experimental error estimates, distribution profiles, chlorine dioxide use, and different types of carbons. It includes also the comparison of granular activated carbon and carbonaceous resin, presents dynamic behaviour of organics, and the experience in operating a full-scale system.

This state-of-the-art volume will bring water pollution scientists up to date on current and future research activities and provide a good summary of research activities in this area for other interested researchers.

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