

Precisely Deactivated Adsorbents Applied to the Separation of Chlorinated Hydrocarbons

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ABSTRACT: The method described in the report is applicable to adsorbents usually deactivated with water (Silica gel, magnesia, alumina and Florisil) and involves the equilibration of the activated adsorbent with a solution of a strongly adsorbed material in an appropriate solvent. The degree of deactivation can be specified by the composition of the deactivating solution. Elution must be performed only with solvents incapable of removing the strongly adsorbed species from the adsorbent bed. (Author)

DESCRIPTORS: (*Adsorption, *Chlorine organic compounds), (*Pesticides, Adsorption), Adsorbents, Silicon dioxide, Aluminum oxides, Deactivation, Magnesium oxides, DDT

IDENTIFIERS: Biphenyl/chloro

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Sampling of Glacial Snow for Pesticide Analysis

Massachusetts Univ., Amherst. Dept. of Chemistry. (400 721)

Water pollution control research series

AUTHOR: Stengle, T. R., Lichtenberg, J. J., Houston, C. S.
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ABSTRACT: Snow samples were taken from the plateau glacier of Mt. Logan, Y. T., Canada during an investigation intent on demonstrating the feasibility of taking such samples from high altitude snowfields for pesticide analysis and developing sampling techniques devoid of contamination. Samples were also taken at a depth of 15 m to determine whether DDT concentration varied with the age of the snow. Pesticide analyses were performed using vapor phase chromatographic techniques. DDT was not detected within the limit of detectability (5 ng/l). Over half the samples were contaminated with PCB's which raised the detectability limit to 10-50 ng/l. The PCB contamination is believed to have come from the sampling auger, as an analysis of rinsings from it seemed to confirm. A sample taken from a depth of 1.5-2.5 m was acidified with distilled nitric acid, when thawed, and analyzed for 19 elements simultaneously using a direct reading emission spectrometer. Four elements were detected: boron at 4 ng/ml, cadmium at 9 ng/ml, chromium at 2 ng/ml, and iron at 47 ng/ml. The high levels of cadmium and especially iron suggest contamination from the alloy steels of the auger.

DESCRIPTORS: (*Pesticides, *Glaciers), Chlorine aromatic compounds, DDT, Snow, Sampling, Chemical analysis, Contamination, Alloy steels, Boron, Cadmium, Chromium, Iron, Water pollution, Sources

IDENTIFIERS: Biphenyl/chloro

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