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Sorption of hydrocarbons by leached chernozem

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Abstract

The sorption of n-octane, n-nonane, n-decane, decalin, and p-xylene on oven-dried and differently wetted leached chemozem, zeolite-bearing rock, and limestone was studied using static headspace-gas chromatography. It was found that leached chernozem exhibits a high capacity for selective sorption of hydrocarbons and has significantly heterogeneous sorption sites. Thermodynamic parameters of sorption, specific surface of sorbents, and the fractal dimension of soil surface were determined. An increase in the soil moisture content significantly inhibited the sorption of the hydrocarbons studied. Copyright © 2003 by MAIK "Nauka/Interperiodica" (Russia).