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Measurement of Diffusion Coefficients of Parabens by the Chromatographic Broadening Method

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Chromatographic broadening method was used for determination of diffusion coefficients (D) of parabens in water. D values of parabens decreased with M. W. and increased with temperature, and the activation energy for diffusion of methylparaben and n-amylparaben were 18.8 kJ/mol and 20.0 kJ/mol, respectively. The increase of D with temperature could be due mainly to decrease of viscosity of water.