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## Determination of Water Content in Organic Solvents by Naphthalimide Derivative Fluorescent Probe

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A new fluorescence dye, *N*-amino-4-(2-hydroxyethylamino)-1,8-naphthalimide (AHN), based on 4-bromo-1,8-naphthalic anhydride was synthesized as a fluorescence probe for determining water content in organic solvents. Changing from a non-polar to a polar solvent increases the solvent interaction with excitation spectrum and emission spectrum shifts to longer wavelengths. The fluorescence intensity of the probe decreased with the increasing concentration of water. In the range of 0.00 – 4.00% (v/v), the AHN fluorescence intensity changed as a linear function of water content. The detection limits were 0.019, 0.038, and 0.060% for dioxane, acetonitrile and ethanol, respectively.

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