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Determination of Structure-Toxicity Relationship of Amphiprotic Compounds by Means of the Inhibition of the Dehydrogenase Activity of Pseudomonas Putida

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Abstract: Aliphatic and aromatic alcohols are amphiprotic compounds which have both polar and nonpolar parts in their structure. These compounds were studied with respect to the nonreactive toxic effects on the microorganism {\it Pseudomonas putida}. The toxicity of these chemicals to aerobic bacterium {\it P. putida} was measured in terms of inhibition of dehydrogenase activity. The test results, expressed as concentration of chemicals 50% effective in inhibition (IC_{50}), were correlated with their physicochemical properties such as aqueous solubility (S) and octanol-water partition coefficient (P).

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