

**Table 5.1. Organic Compounds Comprising the Solubility Classes of Fig. 5.1\***

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S <sub>2</sub>	Salts of organic acids (RCO <sub>2</sub> Na, RSO <sub>3</sub> Na), amine hydrochlorides (RNH <sub>3</sub> Cl); amino acids $\left( \begin{array}{c} \text{NH}_3^+ \\   \\ \text{R}-\text{CH}-\text{CO}_2^- \end{array} \right)$ ; polyfunctional compounds (functional groups are hydrophilic), i.e., carbohydrates (sugars), polyhydroxy compounds, polybasic acids, etc.
S <sub>A</sub>	Monofunctional carboxylic acids with five carbons or fewer; arenesulfonic acids.
S <sub>B</sub>	Monofunctional amines with six carbons or fewer.
S <sub>1</sub>	Monofunctional alcohols, aldehydes, ketones, esters, nitriles, and amides with five carbons or fewer.
A <sub>1</sub>	Strong organic acids: carboxylic acids with more than six carbons; phenols with electron-withdrawing groups in the ortho and para positions, β-diketones.
A <sub>2</sub>	Weak organic acids: phenols, enols, oximes, imides, sulfonamides, thiophenols, all with more than five carbons. β-diketones, nitro compounds with α-hydrogens, sulfonamides.
B	Aliphatic amines with eight or more carbons, anilines (only one phenyl group attached to nitrogen), some oxy ethers.
MN	Miscellaneous neutral compounds containing nitrogen or sulfur and having more than five carbon atoms.
N <sub>1</sub>	Alcohols, aldehydes, methyl ketones, cyclic ketones, and esters with one functional group and more than five but fewer than nine carbons; ethers with fewer than eight carbon atoms, epoxides.
N <sub>2</sub>	Alkenes, alkynes, ethers, some aromatic compounds (especially those with activating groups), ketones (other than those cited in class N <sub>1</sub> ).
I	Saturated hydrocarbons, haloalkanes, aryl halides, diaryl ethers, deactivated aromatic compounds.

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\* Carboxylic acid halides and anhydrides have not been classified because of their high reactivity.