

Table 5.5. Borderlines Between Solubility Classes

Compound	Solu- bility class	Compound	Solu- bility class
Acids			
Chloroacetic	S _A	Ethyl benzoate	N ₂
<i>n</i> -Butyric	S _A	Methyl carbonate (C ₃)	S ₁ -N ₁
α-Chloropropionic	S _A	Ethyl oxalate	S ₁ -N ₁
Crotonic	S _A	Methyl malonate	S ₁ -N ₁
Isovaleric (C ₅)	S _A -A ₁	Ethyl carbonate (C ₅)	S ₁ -N ₁
Valeric (C ₅)	A ₁	Ethyl succinate	N ₁
Alcohols			
<i>n</i> -Butyl	S ₁	Ethyl phthalate	N ₁
<i>t</i> -Pentyl	S ₁	Ethyl malonate	N ₂
Isopropyl-		<i>n</i> -Butyl carbonate	N ₁ -N ₂
methylcarbinol	S ₁ -N ₁	<i>n</i> -Butyl oxalate	N ₂
Isopentyl	S ₁ -N ₁	Ethers	
Benzyl	N ₁	Ethyl methyl	S ₁
Cyclopentyl	N ₁	Ethyl	S ₁ -N ₁
Aldehydes			
Isobutyraldehyde	S ₁	Ethyl isopropyl	S ₁ -N ₁
<i>n</i> -Butyraldehyde	S ₁ -N ₁	Isopropyl	N ₁
Isovaleraldehyde (C ₅)	N ₁	<i>n</i> -Butyl	N ₂
Amides			
Formamide	S ₁ -S ₂	Hydrocarbons (aromatic)	
Acetamide	S ₁ -S ₂	Mesitylene	N ₂
Propionamide	S ₁ -S ₂	Isodurene	N ₂
Isobutyramide	S ₁ -S ₂	Cymene	I
<i>n</i> -Butyramide	S ₁ -M	<i>p</i> -Xylene	N ₂ -I
Formanilide	S ₁ -M	Diphenylmethane	N ₂ -I
Acetanilide	M	<i>m</i> -Xylene	N ₂ -I
Amines			
Diethyl	S _B	<i>o</i> -Xylene	N ₂ -I
Isopentyl	S _B	Naphthalene	I
<i>n</i> -Pentyl	S _B	Ketones	
Benzyl	S _B	Ethyl methyl	S _x
Piperidine	S _B	Isopropyl methyl	S ₁
Cyclohexyl	S _B	Methyl <i>n</i> -propyl	S _x -N ₁
Di- <i>n</i> -propyl	S _B -B	Pinacolone	S _x -N ₁
Di- <i>n</i> -butyl	B	Diethyl	S _x -N ₁
Aniline	B	Cyclopentanone	S _x
Tri- <i>n</i> -propyl	B	Cyclohexanone	S _x
Esters			
Ethyl acetate	S ₁ -N ₁	Acetophenone	N _x
Methyl propionate	S ₁	Di- <i>n</i> -butyl	N _x -N ₂
<i>n</i> -Propyl formate	S ₁	Benzil	N ₂
Isopropyl acetate	S ₁	Benzophenone	N ₂
<i>n</i> -Propyl acetate	S ₁ -N ₁	Nitriles	
Methyl isobutyrate	S ₁ -N ₁	Propionitrile	S ₁
<i>n</i> -Butyl formate	S ₁ -N ₁	Isobutyronitrile	S ₁ -MN
Methyl isovalerate		Succinonitrile	S ₁ -S ₂ -MN
(C ₆)	N ₁	Glutaronitrile ^a	S ₂ -MN
<i>sec</i> -Butyl acetate	N ₁	<i>n</i> -Butyronitrile	MN
<i>n</i> -Butyl acetate	N ₁	Nitro compounds	
Benzyl acetate	N ₁	Nitromethane	S ₁ -A ₂
Ethyl caprylate (C ₁₀)	N ₂	Nitroethane	A ₂
		Nitrobenzene	MN
		Phenols	
		Hydroquinone	S _A
		Chlorohydroquinone	S _A -A ₂
		Phloroglucinol	S ₂ -A ₂
		Phenol	S _A -A ₂

^a Trimethylene cyanide.