

**Properties of some common solvents.**

<i>solvent</i>	<i>formula</i>	<i>bp (°C)</i>	<i>density (g/mL)</i>	<i>hazards</i>
acetone	$(\text{CH}_3)_2\text{C}=\text{O}$	56	0.8	flammable
chloroform	$\text{CHCl}_3$	61	1.5	toxic
diethyl ether	$(\text{CH}_3\text{CH}_2)_2\text{O}$	35	0.7	highly flammable
ethanol (95%)	$\text{CH}_3\text{CH}_2\text{OH}$	78	0.8	flammable
ethyl acetate	$\text{CH}_3\text{CO}_2\text{CH}_2\text{CH}_3$	77	0.9	flammable
hexanes	$\text{C}_6\text{H}_{14}$	67–69	0.7	flammable
isopropanol	$\text{CH}_3\text{CHOHCH}_3$	82	0.8	flammable
methanol	$\text{CH}_3\text{OH}$	65	0.8	flammable, toxic
methylene chloride	$\text{CH}_2\text{Cl}_2$	41	1.3	toxic
toluene	$\text{C}_6\text{H}_5\text{CH}_3$	111	0.9	flammable
water	$\text{H}_2\text{O}$	100	1.0	–

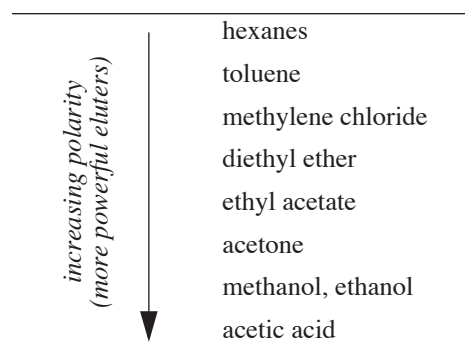
**Properties of some common acids and bases.**

<i>compound</i>	<i>formula</i>	<i>MW of pure compound</i>	<i>normality</i>	<i>density (g/mL)</i>
acetic acid, conc., 99.8%	$\text{CH}_3\text{CO}_2\text{H}$	60.05	17.4	1.05
sulfuric acid, conc., 96%	$\text{H}_2\text{SO}_4$	98.08	36	1.84
phosphoric acid, conc., 85%	$\text{H}_3\text{PO}_4$	98.00	14.7	1.69
nitric acid, conc., 70%	$\text{HNO}_3$	63.02	17	1.42
hydrochloric acid, conc., 37%	$\text{HCl}$	36.47	12	1.19
ammonium hydroxide, conc., 29%	$\text{NH}_4\text{OH}$	35.05	14.8	0.90

**Some properties of salts/salt solutions used in organic chemistry.**

<i>name</i>	<i>formula</i>	<i>MW</i>	<i>solubility</i>	<i>miscellaneous</i>
sodium bicarbonate	$\text{NaHCO}_3$	84.00	1 part in 10 parts water at 25°	pH of 0.1 M aq. solution = 8.3; density is about 1
sodium carbonate	$\text{Na}_2\text{CO}_3$	106.00	1 part in 3.5 parts water at 25°	Density is about 1
sodium chloride	$\text{NaCl}$	58.45	1 gram dissolves in 2.8 mL of water at 25°	Density of saturated solution = 1.202

### Chromatography solvents eluting order.



### Usual eluting order of organic compounds.

