

"LIKE DISSOLVES LIKE"

1) Water (H_2O) & carbon tetrachloride (CCl_4) are common solvents. Refer to the Top Six Chart on the reverse side of this handout to find out which of these solvents will dissolve the substances listed (a, b, c...) on the left side of the table below. Write a \checkmark for soluble or an \times for insoluble under H_2O or CCl_4 .

	H_2O	CCl_4
a) ammonia (NH_3)	_____	_____
b) gasoline (C_8H_{18} , C_7H_{16})	_____	_____
c) sucrose ($\text{C}_{12}\text{H}_{22}\text{O}_{11}$)	_____	_____
d) grease ($\text{C}_{20}\text{H}_{42}$)	_____	_____

2) Why is ammonia so soluble in water? What is the name of the intermolecular attractions that exist between the solvent and solute molecules in a $\text{NH}_3(\text{aq})$? (HINT: They are the strongest of the IMA's.)

3) Refer to Table F (Solubility Guidelines) to find out if the following salts are soluble \checkmark or insoluble \times in water.

AlCl_3 _____

PbI_2 _____

MgCrO_4 _____

$\text{Ca}(\text{OH})_2$ _____

K_2CO_3 _____

PbSO_4 _____