Name: _____ **Date:** _____

Chemistry *~ Ms. Hart* **Class:** Anions or Cations

8.5 Saturation – Using Table G - NOTES

SPARK:

BLAST FROM THE PAST!

Which type of bond results when one or more valence electrons are transferred from one atom to another?

(1) a hydrogen bond
(2) an ionic bond
(3) a nonpolar covalent bond
(4) a polar covalent bond

Which formula represents a nonpolar molecule?

(1) CH_4 (3) H_2O
(2) HCl (4) NH_3

Which kelvin temperature is equivalent to –24°C?

(1) 226 K (3) 273 K
(2) 249 K (4) 297 K

Compared to an atom of phosphorus-31, an atom of sulfur-32 contains

(1) one less neutron (3) one more neutron
(2) one less proton (4) one more proton

Objective:

_____

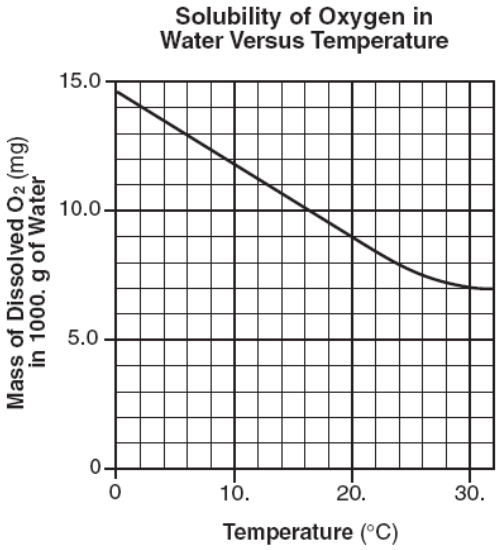
_____

Important Vocabulary:

Word	Definition
Saturated	
Supersaturated	
Unsaturated	

Using Table G:

- Table G tells us the _____ of solute that can be dissolve in H_2O at various _____.



Point on Graph	Saturation
On the line	
Below the line	
Over the line	

Practice:
Use Table G to label the following as unsaturated (U), saturated (S), or supersaturated (SS)

a) 60 grams of KCl at 80°C: _____	i) 60 grams of HCl at 45°C _____
b) 70 grams of KNO_3 at 50°C: ___	j) 110 grams at $NaNO_3$ at 45°C _____
c) 40 grams of NaCl at 90°C: _____	k) 1 gram of SO_2 at 10°C _____
d) 140 grams of KI at 20°C _____	l) 140 grams of KI at 10°C _____
e) 90 grams of NH_4Cl at 100°C___	m) At how many grams of NH_3 at 100°C would the solution be supersaturated? _____
f) 70 grams of NH_3 at 10°C _____	n) At how many grams of KNO_3 at 40°C would the solution be unsaturated? _____
g) 10 grams of NH_3 at 80°C _____	o) At how many grams of KCl at 60°C would the solution be saturated? _____
h) 20 grams of $KClO_3$ at 30°C ___	p) At how many grams of NaCl at 90°C would the solution be saturated? _____

What if the volume is NOT 100 g H_2O?
Practice:

1. How much $NaNO_3$ is needed to saturate 200 grams of water at 30°C?

Step 1. *Write the given (include units!).* Given= _____
Step 2. *What are we looking for (include units!)* Want to know: _____
Step 3. *What is the amount of solute-per-100 g water ratio between the given and what we are looking for?*

Step 4: *List the given first and then multiply it by the ratio we found in step 3 so that the unit for what we want to know is the only factor left over.*