

Solubility Curves:

1) 30g of KI are dissolved in 300g of H_2O @ $10^\circ C$.
How much additional KI is needed to saturate the solution?

2) 100g of water is saturated w/ $KClO_3$ @ $70^\circ C$.
To what temp. must the solution cool for 10g of crystal to crystallize out of solution?
(solid) (precipitate)

3) 321g KNO_3 are used to saturate a solution of KNO_3 .
How much water was used to make the solution?
@ $60^\circ C$

4) At $20^\circ C$, a saturated solution of KNO_3 was made using 100g H_2O . When the solution is cooled to $10^\circ C$, what mass of solid crystallizes out of solution?

Rate of solution

The rate of solution is characteristic of a *process* or *procedure* by which a given solvent/solute pair is mixed into solution. Rate of solution expresses how fast a solute dissolves in a solvent.

2. For most solutes to be dissolved in liquid solvents:

a. How do temperature changes affect the rate of solution? _____

b. How does extent of surface area of solute affect the rate of solution? _____

c. Why does stirring increase the rate of solution? _____

3. For most gas phase solutes to be dissolved in liquid solvents:

a. How do temperature changes affect the rate of solution? _____

b. Why does stirring decrease the rate of solution? _____
