Solubility and Activity

- In computing the solubility of an ionic compound, more than one iteration is necessary only if the dissolving compound makes a statistically significant contribution to the total ionic strength of the solution (e.g. BaF_2 in pure water:)

Iteration #1	Iteration #2	Iteration #3
$\mu = 0$ M	$\mu = 0.022_5$ M	$\mu = 0.030$ M

- Iterations can stop when two calculations of the solubility agree to within the precision of the experimental data give (e.g. BaF_2 in pure water:)

Iteration #1	Iteration #2	Iteration #3
$S = 0.0075$ M	$S = 0.010_0$ M	$S = 0.010_4$ M

- Solubility will usually converge before ionic strength (if $|z|>1$)
- Solubility and ionic strength will converge!