

Worksheet 2.6

Solubility rules!

Ours is a water world. Much important chemistry takes place in water. Solubility is a key factor in this. The table below gives information about the solubilities of a number of salts.

	Sodium	Potassium	Lead	Barium	Calcium
Chloride	soluble	soluble	insoluble	soluble	soluble
Sulfate	soluble	soluble	insoluble	insoluble	slightly soluble
Nitrate	soluble	soluble	soluble	soluble	soluble
Carbonate	soluble	soluble	insoluble	insoluble	insoluble

1 What can you say about the solubility of sodium and potassium salts?

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2 What can you say about the solubility of nitrates?

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3 What can you say about the solubility of lead salts?

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4 Predict the products of the following reactions, underlining any precipitates:

a sodium carbonate solution with lead nitrate solution

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b calcium chloride solution with potassium nitrate solution – give the balanced chemical equation for this reaction

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c barium chloride solution with sodium sulfate solution – give the ionic equation for this reaction (including state symbols)

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5 Barium salts are poisonous, yet some X-ray patients have to drink barium sulfate before examination. Explain why they can do this without harming themselves.

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