EXPERIMENT E5

Precipitation and Water Purity

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Section 5

Group 4

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**Objectives**

* Know about the logic and experiment tests used to determine precipitate identity
* Investigate links between precipitation and iron characters
* Compare the impact of water and solvents other than water on water purity and precipitation
* Design experiments to identify unknown ions in a sample of water

**Introduction & Background**

Waterborne chemicals threaten the safety and purity of water supplies. Soluble forms of many of the heavy metals are toxic. Soluble forms of the alkaline earth metals cause water hardness, which is the insoluble scum formed in the presence of soap. Soluble calcium ions in the water and stearate ions in soap can react to form insoluble calcium stearate. The solid formed when the dissolved ions come together is the "precipitate". The dumping of liquids other than water may cause additional insoluble scum to form.

We will do experiments to answer questions about water purity and precipitation. We will also design our experiments to identify or remove undesirable contaminants from water by precipitation.