



Thallium Poisoning

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Why in News?

Recently multiple family members in Mahagaon village, Maharashtra fell victim to **thallium poisoning**, a chemical that operates in silence, evading detection.

What are the Key Facts about Thallium?

- **About:**
 - Thallium(Tl) is a chemical element with the **atomic number 81**, was discovered by **Sir William Crookes in 1861**.
 - It is a soft, heavy, inelastic metal.
 - Thallium is **tasteless and odourless** and has been used by murderers as a difficult-to-detect poison.
- **Appearance:**
 - A soft, silvery-white metal that tarnishes easily.
- **Sources:**
 - It is found in trace amounts in the **earth's crust**.
 - It is found in **several ores**. One of these is pyrites, which is used to produce sulfuric acid. Some thallium is obtained from pyrites, but it is mainly obtained as a by-product of copper, zinc and lead refining.
- **Uses:**
 - Thallium's utilization is **restricted due to its toxic nature**.
 - Thallium sulfate, once a **rodent killer**, is now banned for household use in many developed nations.
 - It finds application in the electronics industry for **photoelectric cells**.
 - Thallium oxide is used to create high-refraction glass and low-melting glass.
 - It is also used in the manufacturing of low temperature thermometers, and imitation jewels.
- **Health Hazards:**
 - Thallium can damage the nervous system causing headaches, weakness, and irritability. Repeated exposures can cause tremors, hallucinations, coma and death.
- **Antidote:**
 - **Prussian blue** is used in non-radioactive thallium poisoning.