

Prussian Blue

A versatile system for a sustainable recovery of Critical Raw Materials from water

A. Main topics

- Recovery of Critical Raw Materials (CRM) from aqueous solutions

B. targeted audience

- 14-18 years old students

C. Key concepts

- The recovery of CRM is fundamental, due to the reduction of Earth's natural capital.
- It is crucial to focus on new sustainable solutions that reduce our need for mining raw materials.
- Prussian Blue is a synthetic pigment able to interact and capture many metal ions.

D. Experimental activity

- Synthesis of Prussian Blue.
- CRM's capture by eluting a water solution through a Prussian Blue filtering bed.
- Evidence of the successful removal by simply using a filter paper.

E. Toolkit material

- Materials and reagents for Prussian Blue synthesis.
- Metal containing water solutions, pipette, cotton, Prussian blue.
- Filter paper.

F. RM Tutors

Laura Polito laura.polito@istm.cnr.it

