

Struvite from urine

A. Main topics

- Understanding the value of indispensable elements like phosphorous and nitrogen;
- Recovery of nutrients and energy from urine;
- Understanding the phosphate and nitrogen cycle;

B. targeted audience

- 14-19 years old students

C. Key concepts

- Synthesis;
- Chemical calculations;
- Quantitative analysis;
- Elements of bio-technology and bio-circular economy.

D. Experimental activity

- The aim of this toolkit is to help students that waste can be a source of valuable and useful raw materials. On top of this, it should challenge students and create enthusiasm for science, technology and environment. Activity consists of:
 - preparation a struvite sample from urine (synthetic form);
 - colorimetric phosphate determination.

E. Toolkit material

- Description synthesis of struvite from urine.
- Description of colorimetric determination method, which uses the light-absorbing capacity of a coloured solution, in this case phosphate.

F. RM Tutors

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