

## Potassium aluminium sulfate



Potassium aluminium sulfate, also called potassium alum, is a metal sulfate composed of potassium, aluminium and sulfate ions in the ration 1:1:2. It has a role as a flame retardant, a mordant and an astringent. It is a metal sulfate, an aluminium salt and a potassium salt. It contains an aluminium (+III).

Potassium alum is considered as a generally recognized as safe substance. It is an inorganic salt with a formula of  $KAl(SO_4)_2$  or  $AlK(SO_4)_2$  that is predominantly produced in the hydrate form  $AlK(SO_4)_2 \cdot 12H_2O$ .

Potassium alum is formed by large, transparent crystals that are used in different products like food and drugs as a buffer, neutralizing or forming agent.

Potassium aluminium sulfate can be obtained according to the reaction equation:



### Equipment:

- Beakers: 100-150 cm<sup>3</sup>,
- Graduated cylinders,
- Glass Buchner funnel or funnel with a sintered glass G3,
- Filtration set,
- Stirring rod.

### Reagents:

- Aluminium (foil) – 0.5 g,
- Potassium base (2.5 M KOH) – 30 cm<sup>3</sup>,
- Sulfuric acid (4M H<sub>2</sub>SO<sub>4</sub>) – 20 cm<sup>3</sup>,
- Acetone.

