Experiment 13: Analysis of Alum

Procedure A: Percentage of Water in Alum Hydrate (steps 1-4)

As the alum is heated, the water (hydrate) will condense on the watch glass, and along the upper inside of the beaker; continue heating until all signs of moisture are gone.

Alum is KAl(SO₄)₂ · 12H₂O so, the moisture you’ve seen comes from the 12H₂O being removed from the KAl(SO₄)₂.

That loss will be reflected in a change in mass.

Procedure B: Percentage of Water in an Unknown Hydrate (steps 1-2)

Procedure C: Water of Crystallization in an Unknown Hydrate