



>>Entry Name: Aluminium sodium sulfate ($\text{AlNa}(\text{SO}_4)_2$)

ENTRY UNDER REVIEW

Synonym(s): Sulfuric acid, aluminium sodium salt (2:1:1), 8Cl

CAS Registry Number: 10102-71-3

$\text{NaAl}(\text{SO}_4)_2$

Molecular Formula: AlNaO_8S_2

Molecular Weight: 242.098

Accurate Mass: 241.874766

Percentage Composition: Al 11.14%; Na 9.50%; O 52.87%; S 26.49%

Source/Synthesis: Synth. by pptn. from aq. solns. of Na and Al sulphates with conc. sulfuric acid

Physical Description: Orthorhombic cryst.

Solubility: V. sol. H_2O (40.9 g per 100 cm^3 at 20°)

>>Derivative: Dodecahydrate

Synonym(s): Sodium alum. γ -Alum. Hexaaquaaluminium hexaaquasodium sulfate (1:1:2). Sodium aluminium sulfate ($\text{NaAl}(\text{SO}_4)_2$)

CAS Registry Number: 7784-28-3

Molecular Formula: $\text{AlH}_{24}\text{NaO}_{20}\text{S}_2$

Molecular Weight: 458.281

Accurate Mass: 458.001546

Percentage Composition: Al 5.89%; H 5.28%; Na 5.02%; O 69.82%; S 13.99%

Source/Synthesis: Obt. by evap. or pptn. from aq. solns. containing Na and Al sulfates. Occurs as *Mendozite*

Use/Importance: Food additive (baking powder); flame retardant

Physical Description: Cubic white cryst.

Melting Point: $\text{Mp } 61^\circ$

Other Data: $\Delta H_f -2353 \text{ kJ mol}^{-1}$. Formulated as $[\text{Na}(\text{OH}_2)_6][\text{Al}(\text{OH}_2)_6](\text{SO}_4)_2$

References:

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