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Aluminum Sesquichlorohydrate

$Al(OH)_3 \cdot Cl_z \cdot nH_2O$
Aluminum chlorohydroxide.
Aluminum hydroxychloride

CAS RN®: 11097-68-0.
» Aluminum Sesquichlorohydrate consists of complex basic aluminum chloride that is polymeric and loosely hydrated and encompasses a range of aluminum-to-chloride atomic ratios between 1.26:1 and 1.90:1. It contains not less than 90.0 percent and not more than 110.0 percent of the labeled amount of anhydrous aluminum sesquichlorohydrate.

Packaging and storage—Preserve in well-closed containers.
Labeling—The label states the content of anhydrous aluminum sesquichlorohydrate.
Identification—A solution (1 in 10) responds to the tests for [Aluminum \(191\)](#), and for [Chloride \(191\)](#).
pH (791): between 3.0 and 5.0, in a solution [15 in 100 (w/w)].

Change to read:
▲ [ARSENIC \(211\)](#), [Procedures, Procedure 1](#) ▲ (CN 1-Jun-2023): 2 µg per g.

Limit of iron—Using Aluminum Sesquichlorohydrate instead of Aluminum Chlorohydrate, proceed as directed in the test for [Limit of iron](#) under [Aluminum Chlorohydrate](#). The limit is 150 µg per g.
Content of aluminum—Using Aluminum Sesquichlorohydrate instead of Aluminum Chlorohydrate, proceed as directed in the test for *Content of aluminum* under [Aluminum Chlorohydrate](#). Use the result obtained to calculate the *Aluminum/chloride atomic ratio*.
Content of chloride—Using Aluminum Sesquichlorohydrate instead of Aluminum Chlorohydrate, proceed as directed in the test for *Content of chloride* under [Aluminum Chlorohydrate](#). Use the result obtained to calculate the *Aluminum/chloride atomic ratio*.
Aluminum/chloride atomic ratio—Divide the percentage of aluminum found in the test for *Content of aluminum* by the percentage of chloride found in the test for *Content of chloride*, and multiply by 35.453/26.98, in which 35.453 and 26.98 are the atomic weights of chlorine and aluminum, respectively; the ratio is between 1.26:1 and 1.90:1.
Assay—Calculate the percentage of anhydrous aluminum sesquichlorohydrate in the Aluminum Sesquichlorohydrate by the formula:

$$Al / \{ (26.98x + [17.01(3x - 1)] + 35.453) / 26.98x \}$$

in which *Al* is the percentage of aluminum found in the test for *Content of aluminum*, *x* is the aluminum/chloride atomic ratio found in the test for *Aluminum/chloride atomic ratio*, 26.98 is the atomic weight of aluminum, 17.01 is the molecular weight of the hydroxide anion (OH), and 35.453 is the atomic weight of chlorine (Cl).

Auxiliary Information - Please [check for your question in the FAQs](#) before contacting USP.

Topic/Question	Contact	Expert Committee
ALUMINUM SESQUICHLOROHYDRATE	Documentary Standards Support	SM32020 Small Molecules 3
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM32020 Small Molecules 3

Chromatographic Database Information: [Chromatographic Database](#)

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