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Sodium Dehydroacetate

$C_8H_7NaO_4$ 190.13

2*H*-Pyran-2,4(3*H*)-dione, 3-acetyl-6-methyl-, monosodium salt CAS RN[®]: 4418-26-2.

DEFINITION

Sodium Dehydroacetate contains NLT 98.0% and NMT 100.5% of sodium dehydroacetate ($C_8H_7NaO_4$), calculated on the anhydrous basis.

IDENTIFICATION

• **A. [MELTING RANGE OR TEMPERATURE \(741\)](#).**

Sample solution: 150 mg/mL

Analysis: To 10 mL of the *Sample solution* add 5 mL of 3 N hydrochloric acid, collect the crystals by filtration with suction, wash with 10 mL of water, and dry at 80° for 4 h. Determine the melting point as directed in the chapter.

Acceptance criteria: 109°–111°

• **B. [IDENTIFICATION TESTS—GENERAL, Sodium\(191\)](#).**

Sample solution: 1 in 20

Acceptance criteria: Meets the requirements

ASSAY

• **PROCEDURE**

Sample: 500 mg

Blank: 25 mL of glacial acetic acid containing *p*-naphtholbenzein TS, which has been previously neutralized to a blue color

Titrimetric system

(See [Titrimetry \(541\)](#).)

Mode: Direct titration

Titrant: 0.1 N perchloric acid VS

Endpoint detection: Visual

Analysis: Transfer the *Sample* to a 125-mL conical flask, and dissolve it in 25 mL of glacial acetic acid containing *p*-naphtholbenzein TS, which has been previously neutralized to a blue color. Titrate with 0.1 N perchloric acid VS to the original blue color. Perform a blank determination.

Calculate the percentage of dehydroacetate ($C_8H_7NaO_4$) in the *Sample* taken:

$$\text{Result} = \{[(V_s - V_b) \times N \times F]/W\} \times 100$$

V_s = volume of the *Titrant* consumed by the *Sample* (mL)

V_b = volume of the *Titrant* consumed by the *Blank* (mL)

N = actual normality of the *Titrant* (mEq/mL)

F = equivalency factor, 190.1 mg/mEq

W = weight of the *Sample* (mg)

Acceptance criteria: 98.0%–100.5% on the anhydrous basis

SPECIFIC TESTS

• **[WATER DETERMINATION, Method I\(921\)](#):** 8.5%–10.0%

- **PACKAGING AND STORAGE:** Preserve in well-closed containers.

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

Topic/Question	Contact	Expert Committee
SODIUM DEHYDROACETATE	Documentary Standards Support	SE2020 Simple Excipients
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SE2020 Simple Excipients

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:
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