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Sodium Hypochlorite Solution

NaClO 74.44
Hypochlorous acid, sodium salt;
Sodium hypochlorite CAS RN®: 7681-52-9; UNII: DY38VHM5OD.

DEFINITION
Sodium Hypochlorite Solution contains NLT 4.0% and NMT 6.0%, by weight, of sodium hypochlorite (NaClO).
[CAUTION—This solution is not suitable for application to wounds.]

IDENTIFICATION

- A.**
Sample: Sodium Hypochlorite Solution
Acceptance criteria: The *Sample* at first colors red litmus blue and then bleaches it.
- B.**
Sample: Sodium Hypochlorite Solution
Acceptance criteria: The *Sample* imparts an intense yellow color to a nonluminous flame.

ASSAY

- PROCEDURE**
Sample solution: 3 g of Sodium Hypochlorite Solution
Titrimetric system
(See [Titrimetry \(541\)](#).)
Mode: Direct titration
Titrant: [0.1 N sodium thiosulfate VS](#)
Endpoint detection: Visual
Analysis: Dilute the *Sample solution* with 50 mL of [water](#), and add 2 g of [potassium iodide](#) and 10 mL of [6 N acetic acid](#). Titrate the liberated iodine with *Titrant*, adding 3 mL of [starch TS](#) as the endpoint is approached. Perform a blank determination, and make any necessary correction.
Calculate the percentage of sodium hypochlorite (NaClO) in the portion of Sodium Hypochlorite Solution taken:

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

V = sample *Titrant* volume (mL)
B = blank *Titrant* volume (mL)
N = normality of the *Titrant* (mEq/mL)
F = 37.22 mg/mEq
W = sample weight (mg)

Acceptance criteria: 4.0%–6.0%

ADDITIONAL REQUIREMENTS

- PACKAGING AND STORAGE:** Preserve in tight, light-resistant containers, at a temperature not exceeding 25°.

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

Topic/Question	Contact	Expert Committee
SODIUM HYPOCHLORITE SOLUTION	Documentary Standards Support	SM12020 Small Molecules 1
REFERENCE STANDARD SUPPORT	RS Technical Services RSTECH@usp.org	SM12020 Small Molecules 1

Chromatographic Database Information: [Chromatographic Database](#)

Most Recently Appeared In:

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