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# Sodium Sulfide Topical Gel

**DEFINITION**  
Sodium Sulfide Topical Gel contains NLT 90.0% and NMT 120.0% of the labeled amount of sodium sulfide ( $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$ ) in a suitable gel base.

**IDENTIFICATION**

- A.**  
Conduct this test in a fume hood.  
**Sample:** 100 mg  
**Analysis:** Add 10 mL of 3 N hydrochloric acid to the *Sample*, and cover the top of the container with filter paper saturated with 0.2 M lead acetate solution.  
**Acceptance criteria:** A brownish or silvery-black color forms on the paper.

**ASSAY**

- PROCEDURE**  
**Solution A:** 67.0 g/L of edetate disodium and 36.0 g/L of ascorbic acid in 2.0 M sodium hydroxide solution  
**Sample solution:** Transfer a portion of the Topical Gel, equivalent to 30 mg of sodium sulfide, to a 100-mL volumetric flask. Add 50 mL of *Solution A*, and shake by mechanical means until the Topical Gel is dispersed. Dilute with *Solution A* to volume.  
**Titrimetric system**  
**Mode:** Direct titration  
**Titrant:** 0.01 M lead perchlorate VS  
**Endpoint detection:** Potentiometric  
**Analysis:** Transfer 30.0 mL of the *Sample solution* to a suitable beaker, and titrate with *Titrant*, determining the endpoint potentiometrically. Perform a blank determination, and make any necessary correction. Each mL of 0.01 M lead perchlorate is equivalent to 2.4018 mg of sodium sulfide ( $\text{Na}_2\text{S} \cdot 9\text{H}_2\text{O}$ ).  
**Acceptance criteria:** 90.0%–120.0%

**SPECIFIC TESTS**

- pH (791):** 11.5–13.5

**ADDITIONAL REQUIREMENTS**

- PACKAGING AND STORAGE:** Preserve in tight containers at controlled room temperature or in a cool place.

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

Topic/Question	Contact	Expert Committee
SODIUM SULFIDE TOPICAL GEL	<a href="#">Documentary Standards Support</a>	SM12020 Small Molecules 1
REFERENCE STANDARD SUPPORT	RS Technical Services <a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a>	SM12020 Small Molecules 1

**Chromatographic Database Information:** [Chromatographic Database](#)

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