

# Sodium Polystyrene Sulfonate Suspension

» Sodium Polystyrene Sulfonate Suspension is a suspension of Sodium Polystyrene Sulfonate in an aqueous vehicle that may contain suitable suspending or stabilizing agents. It exchanges not less than 110 mg and not more than 135 mg of potassium for each g of the labeled amount of sodium polystyrene sulfonate.

**Packaging and storage**—Preserve in well-closed containers, protected from freezing and from excessive heat.

**MICROBIAL ENUMERATION TESTS (61) and TESTS FOR SPECIFIED MICROORGANISMS (62)**—Its total aerobic microbial count does not exceed 100 cfu per mL, its total combined molds and yeasts count does not exceed 100 cfu per mL, and it meets the requirements of the test for absence of *Pseudomonas aeruginosa*.

**Sodium content—**

*Sodium solution and Standard graph*—Prepare as directed in the test for [Sodium content](#) under [Sodium Polystyrene Sulfonate](#).  
*Procedure*—Transfer an accurately measured quantity of Suspension, freshly mixed and free from air bubbles, equivalent to about 1 g of sodium polystyrene sulfonate, to a suitable crucible, heat at 80° until dry, and ash the residue with a slight excess of sulfuric acid. Proceed as directed for [Procedure](#) in the test for [Sodium content](#) under [Sodium Polystyrene Sulfonate](#), beginning with “Add 1 mL of nitric acid.” Calculate the percentage of sodium taken by the formula:

$$A/L$$

in which A is the quantity, in mg, of sodium found per liter, and L is the quantity, in g, of sodium polystyrene sulfonate in the portion of Suspension taken, based on the labeled amount: the sodium content is not less than 9.4% and not more than 11.5%.

**Potassium exchange capacity—**

*Potassium solution, Sodium solution, and Standard graph*—Prepare as directed in the test for [Potassium exchange capacity](#) under [Sodium Polystyrene Sulfonate](#).  
*Procedure*—Transfer an accurately measured quantity of Suspension, freshly mixed and free from air bubbles, equivalent to about 1.6 g of sodium polystyrene sulfonate, to a suitable glass-stoppered flask, add 100.0 mL of *Potassium solution*, shake by mechanical means for 15 minutes, filter, and discard the first 20 mL of the filtrate. Proceed as directed for [Procedure](#) in the test for [Potassium exchange capacity](#) under [Sodium Polystyrene Sulfonate](#), beginning with “Pipet 5 mL of the filtrate.” Calculate the quantity, in mg, of potassium adsorbed on each g of the sodium polystyrene sulfonate taken by the formula:

$$(X - 20Y)/L$$

in which X is the quantity, in mg, of potassium in 100 mL of *Potassium solution* before exchange; Y is the quantity, in mg, of potassium per L as interpolated from the *Standard graph*; and L is the labeled quantity, in g, of sodium polystyrene sulfonate in the portion of Suspension taken.

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

Topic/Question	Contact	Expert Committee
SODIUM POLYSTYRENE SULFONATE SUSPENSION	<a href="#">Documentary Standards Support</a>	SM42020 Small Molecules 4
REFERENCE STANDARD SUPPORT	RS Technical Services <a href="mailto:RSTECH@usp.org">RSTECH@usp.org</a>	SM42020 Small Molecules 4

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

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