

Certificate of Analysis

Sulfuric Acid, 50% (v/v)

Lot Number: 4311N51

Product Number: 8180

Manufacture Date: NOV 28, 2023

Expiration Date: NOV 2026

Name	CAS#	Grade
Sulfuric Acid	7664-93-9	ACS, Reagent
Water	7732-18-5	ACS, Reagent

Test	Specification	Result	NIST SRM#
Appearance	Colorless liquid	Passed	
Assay (vs. Sodium Hydroxide/Phenolphthalein)	49.5-50.5 % (v/v)	49.5 % (v/v)	84

Specification	Reference
Sulfuric Acid (1+1)	ASTM (D 2972 A)
Sulfuric Acid (1+1)	ASTM (D 2972 B)
Sulfuric Acid, 1+1	APHA (4500-SO32- B)
Sulfuric Acid Solution, 1 + 1	APHA (4500-S2- D)
Sulfuric Acid, 1 + 1	APHA (4500-CN- G)
Sulfuric Acid, 1 + 1	APHA (4500-CN- I)
Sulfuric acid, 1:1	TAPPI (T 618 cm-84)
Sulfuric acid, 1:1	TAPPI (T 632 cm-84)
Sulfuric Acid (1+1)	ASTM (D 3869 D)
Sulfuric Acid, 1+1	APHA (4500-Si C)
Sulfuric Acid, 1 + 1	APHA (4500-CN- C)
Sulfuric Acid Solution, 1 + 1	APHA (4500-CN- L)
Sulfuric Acid, 1+1	APHA (4500-CI- D)
Sulfuric Acid, 1+1	APHA (3500-Ca B)
Sulfuric Acid 1+1	EPA (377.1)
Sulfuric Acid/Water (1:1, v/v)	EPA (SW-846) (3665A)
Sulfuric Acid (1:1 v/v)	EPA (SW-846) (3650B)
Sulfuric Acid Solution, 1 + 1	EPA (376.2)
Sulfuric Acid Solution (1:1 v/v)	EPA (SW-846) (3535)
Sulfuric Acid Solution (1:1 v/v)	EPA (SW-846) (3510C)
Sulfuric Acid Solution (1:1 v/v)	EPA (SW-846) (3520C)
Sulfuric Acid (9 Molar)	EPA (SW-846) (3542)
Sampler Wash Solution	EPA (410.4)
Sulfuric acid, 1+1	TAPPI (T 665 om-93)
Sulfuric Acid (1+1)	ASTM (D 874)
Sulfuric Acid (1+1)	ASTM (D 3697)
Sulfuric Acid (1+1)	ASTM (D 2460)
Sulfuric Acid (1+1)	ASTM (D 2036 A)
Sulfuric Acid (1+1)	ASTM (D 2036 B)
Sulfuric Acid (1+1)	ASTM (D 2036 C)
Sulfuric Acid (1+1)	ASTM (D 2036 D)

Volumetric glassware complies with Class A tolerance requirements of ASTM E 288 and NIST Circular 434; it is calibrated before first use and recalibrated regularly in accordance with ASTM E 542 and NIST Procedure NBSIR 74-461. Balances are calibrated regularly with weights certified traceable to the NIST national mass standard. Thermometers and temperature probes are calibrated before first use and recalibrated regularly with a thermometer traceable to NIST standards. All products are prepared according to master documents that assure manufacture according to validated methods. Batch records document raw material traceability and production and testing history for each lot manufactured.

Part Number	Size / Package Type	Shelf Life (Unopened Container)
8180-1	4 L natural poly	36 months

Recommended Storage: 15°C - 30°C (59°F - 86°F)



Paul Brandon (11/28/2023)

Production Manager

This document is designed to comply with ISO Guide 31 "Reference Materials -- Contents of Certificates and Labels."

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