

CERTIFICATE OF ANALYSIS

for
Certified Reference Material

Product Description:

Product: Conductivity Standard 50,000 μ -mhos

Lot #: 240703E

Item Number: C1065-50000

Expires: (1 yr) 07/2025

Appearance: Clear Liquid

Intended Use: For calibration of analytical instruments and/or validation of analytical methods.

Property Value and Associated Uncertainty:

Actual (μ S/cm) at 25°C: 50,000

Uncertainty is presented as the expanded uncertainty with a coverage factor of 2 ($k=2$) and represents the combined uncertainty of characterization, homogeneity, and storage.

Uncertainty (U_{CRM}): $\pm 0.81\%$

Supplemental:

Conductivity values change according to temperature as follows*:

°C	20	21	22	23	24	25	26	27	28	29	30
(μ S/cm)	45,250	46,200	47,150	48,100	49,050	50,000	50,950	51,900	52,850	53,800	54,750

*These values are not certified.

Homogeneity: Solutions are mixed according to in-house procedures. Each batch is individually evaluated for homogeneity before release.

Storage and Handling: Store in an ambient environment (15°C - 30°C). Keep product capped to avoid evaporation, which could alter the certified value.

Metrological Traceability and Measurement Procedure for Defined Measurands:

Exaxol's Conductivity Certified Reference Materials (CRMs) are metrologically traceable to the International System of Units (SI). Conductivity CRMs are traceable to NIST SRM 999c Potassium Chloride Primary Standard. Gravimetric measurements are traceable to NIST through balances that are calibrated through an ISO/IEC 17025:2017 accredited company that meets requirements of ANSI/NCSL Z540.1-1994 & ANSI/NCSL Z540.3-2006 subclause 5.3. Balances are periodically verified using weights that are metrologically traceable to NIST through the State of Florida Metrology Laboratory which is accredited by NVLAP Lab Code 200560. Exaxol uses Type 1, Class A, Borosilicate Glass for volumetric glassware and pipettes which are calibrated according to ASTM E542-01. Environmental conditions (temperature and humidity) are monitored with a NIST traceable thermometer and hygrometer.

Exaxol solutions and standards are made in accordance with Exaxol's documented ISO 17034:2016 Quality Management System. All calibration records are maintained on-site. Production records and test reports are maintained and secured in the laboratory's Manufacturing Log, according to lot number.

Approving Officer:



Joseph E Papa, Sr. Chemist



Exaxol is an ISO 17034:2016 Reference Material Producer (RMP) accredited by ANSI National Accreditation Board (ANAB) certificate #: AR-2933).