

# Product Specification

CERTIFIED REFERENCE MATERIAL

**Verispec® Certified Reference Material/Standard, KCl Conductivity Standard, 50 µS/cm at 25°C**

**Manufactured and Tested in an ISO 17025/ISO 17034 Accredited Facility**

**Lot Number: SAMPLE**

**Product Number: RV588650**

**Manufacture Date: N/A**

**Expiration Date: N/A**

The certified value for this product is confirmed in independent testing by a second qualified chemist.

| Name               | CAS#      | Grade           |
|--------------------|-----------|-----------------|
| Water              | 7732-18-5 | ACS/ASTM/USP/EP |
| Potassium Chloride | 7447-40-7 | ACS             |

| Test       | Specification    | Result                                   |
|------------|------------------|--|
| Appearance | Colorless liquid | Colorless liquid *Not a certified value. |

| Test  | Certified Value | Uncertainty | NIST SRM# |
|---|-----------------|-------------|-----------|
| Conductivity at 25°C (Method: SQCP031, SQCP033) | 49.9-50.1 µS/cm | 0.39 µS/cm  | 999       |

**Concept of certification and traceability statement:**

Conductivity measurement and certification were performed in our Arlington, TX, Pocomoke City, MD, or Batesville, IN laboratory under ISO/IEC 17025 accreditation (ANAB Certificate L2387) and ISO 17034 accreditation (ANAB Certificate AR-3140) and are certified traceable to National Institute of Standards and Technology (NIST) Standard Reference Material as indicated above via an unbroken chain of comparisons. The reported expanded uncertainty of measurement is stated as the standard uncertainty of measurement multiplied by the coverage factor  $k = 2$ , which for a normal distribution corresponds to a coverage probability of approximately 95%. The standard uncertainty of measurement has been determined in accordance with the Guide to the Expression of Uncertainty in Measurement (GUM) using the uncertainty budget template available from NIST at [https://www.nist.gov/system/files/documents/2017/04/28/uncertainty\\_budget\\_table\\_template\\_16jan2013.xlsx](https://www.nist.gov/system/files/documents/2017/04/28/uncertainty_budget_table_template_16jan2013.xlsx). 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.

**Level of homogeneity:**

The solution was mixed according to an in-house procedure and is guaranteed to be homogeneous. To ensure sufficient homogeneity, mix thoroughly by inversion prior to each use.

**Intended use:**

For Laboratory Use Only  
This CRM is intended for:

This statement is not intended to restrict the use for other purposes.

**Instructions for the correct use of this reference material:**

This certified reference material should be used directly, with no dilution. Do not pipet from container or return unused liquid to the container. Keep container tightly closed when not in use. Store at room temperature, away from fumes of acids, bases, or other substances that could produce ions in contact with water. The conductivity of this certified reference material is strongly dependent on temperature. All calibrations with this certified reference material should be conducted at 25°C.

**Hazardous situation:**

The normal laboratory safety precautions should be observed when working with this certified reference material. Refer to the Safety Data Sheet for detailed information on hazards associated with this material.

| Part Number | Size / Package Type | Shelf Life (Unopened Container) |
|-------------|---------------------|---------------------------------|
|-------------|---------------------|---------------------------------|

RV588650-500A

500 mL natural poly

12 months

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

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



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