REFERENCE MATERIAL CERTIFICATE ISO 17034

## Certified Reference Material

This certificate is designed in accordance with ISO 17034 and ISO Guide 31. This certified reference material (CRM) was designed, produced and verified in accordance with ISO/IEC 17025, ISO 17034 and a registered quality management system ISO 9001.

### Product Name

1-Tetradecyl-4-picolinium chloride 100 µg/mL in Acetonitrile

**Product Code**
DRE-A17397750AL-100

**Lot Number**
2-H441066AL

**CAS No.**
2748-88-1

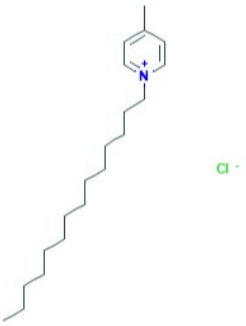
**Format**
Solution

**Mol. Weight**
325.96

**Expiry**
2 May 2026

**Mol. Formula**
C20H36ClN

**Storage**
≤ -10 ºC




| CERTIFIED | CERTIFIED |
|---|---|
| Concentration | Expanded Uncertainty (U) |
| 101.5 ug/mL | 6.8 ug/mL |

**Uncertainty**
The certified value(s) and uncertainty(ies) are determined in accordance with ISO 17034 with an 95% confidence level (k=2). Uncertainty is based on the Total Combined Uncertainty, including uncertainties of preparation, purity of neat materials, homogeneity, long-term stability testing, and transportation stability.

The producer certifies that this reference material meets the specification stated in this certificate until the expiry date, provided it is stored unopened at the recommended temperature herein. Product warranties for this reference material are set out in the terms and conditions of purchase.

| CERTIFIED BY | CERTIFIED ON | | |
|---|---|---|---|
| Susan Mathews | 20 May 2021 | Susan Mathews | RM Release |

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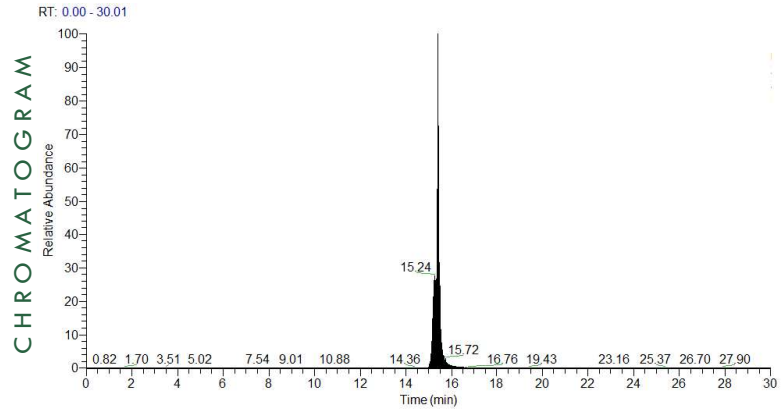


Instrument
LC/HRMS - Positive Mode

Column/Flow
Vanquish C18+ 100mm x 2.1mm ID 1.5um Particle / 0.2 mL/min

Method Details
Mobile Phase A: Water w/0.1% Formic Acid
Mobile Phase B: Acetonitrile w/ 0.1% Formic Acid

| Time | %A | %B |
|---|---|---|
| 0.0 | 95 | 5 |
| 1.0 | 95 | 5 |
| 22 | 5 | 95 |
| 22.25 | 5 | 95 |
| 28.5 | 95 | 5 |

### Method of Preparation
The certified value is based on gravimetric and volumetric preparation of this CRM. This CRM has been confirmed by the appropriate analytical techniques.

### Batch Information
Solvent: Acetonitrile, Lot no. 207144, 100 mL

### Gravimetric Data

| Compound Name | Lot No. | Weight (mg) | Chemical Purity |
|---|---|---|---|
| 1-tetradecyl-4-picolinium Chloride | 11474.286.1P | 10.30 | 98.57 |

**Intended Use**
This CRM is intended for use in a laboratory as a calibration and quality control standard or in method development for analytical techniques.

**Safety**
Proper precautions should be observed while handling. See Safety Data Sheet.

**Traceability**
The balances used for gravimetric measurements are calibrated with weights traceable to the national standards (NIST). The calibration of the balances is verified daily internally and annually by an external accredited calibration service. Chromatographic methods are traceable to the International System of Units (SI).

**Homogeneity**
Random replicate samples of the final packaged CRM have been analysed to prove homogeneity compliant with ISO 17034.

**Storage**
The CRM should be stored in the original sealed container at the indicated temperature.

**Instructions for use**
The CRM should be used shortly after opening to avoid concentration changes due to evaporation. It is recommended to use 1 µL as the minimum sample size. If storage after opening is necessary, it should be transferred to an amber vial with minimum head space and a Teflon-lined silicon septum. If handled as recommended, use period after opening is a maximum of 180 days for an estimated 5% drift in concentration as a result of analyte and/or solvent transpiration. Visit the support section of our website lgcstandards.com for a series of Dr. Ehrenstorfer Tech Tip videos and frequently asked questions.

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The producer of this reference material is registered to ISO 9001:2015 under 56 100 19560019 by TUV USA and accredited to ISO 17025:2017 and ISO 17034:2016 by A2LA with the accreditation numbers 3031.01 and 3031.02.

ISO 17034 Accredited
Reference Material Producer
Cert. No. 3031.02