# Certificate of Analysis

# ISO Guide 34 Reference Material

**Product Identification**

**Article Code:** DRE-C12300000
**Article Name:** Dichlofluanid
**Formula:** C9H11Cl2FN2O2S2
**Mol. Weight:** 333.22
**CAS No.:** 1085-98-9

**Lot Number:** G833030
**Expiry Date:** 11.06.2024
**Storage Temperature:** 4°C ± 4°C

Storage and handling: The RM should be stored in the original sealed bottle at the temperature given above. After use the bottle should be tightly closed and protected from moisture

| | |
|---|---|
| Purity: | 98.35% (g/g) |
| Expanded Uncertainty U= | 0.40% (g/g) |

The uncertainty of this standard is calculated in accordance with the ISO Guide 34 and EURACHEM/CITAC Guide - Quantifying Uncertainty in Analytical Measurement, Second Edition. The expanded uncertainty is U(exp) = u(RM) x k, where k is the coverage factor at the 95% confidence level (k=2). Uncertainty u(RM) is based on the combination of the uncertainties associated with each individual operation involved in the analysis of the product: $u(RM) = \sqrt{u(char)^2 + u(bb)^2 + u(lts)^2 + u(sts)^2}$ ; u(char) is the uncertainty of characterisation; u(bb) uncertainty of homogeneity test; u(lts) uncertainty of stability test long-term; u(sts) uncertainty of stability test short-term. u(lts) and u(sts) are not included in the calculation as the stability statement is based on real evidence opposed to simulation.
Minimum sample: 1 mg is recommended as the minimal sample amount. If less material is used, it is recommended to increase the certified uncertainty by a factor of two for half sample and a factor of four for a quarter of sample.
Intended use: Use this RM as calibrant for chromatography or any other analytical technique.

**Analytical Data**

Traceability of chromatography: To the International System of Units (SI).

| | | | |
|---|---|---|---|
| Instrument: | GC/FID | Injector: | 280°C |
| Detection: | FID | Initial Temp: | 60°C for 5 min |
| Column: | Optima-5MS, 0.25 µm, 0.25 mm | End Temp: | 280°C for 1 min |
| Inj.-Vol.: | 1 µl | Gradient: | 15°C/min |
| Flow: | 1.0 ml/min | | |
| Ret.Time: | 17.89 min | | |

**Comment**
Traceability: The balances used are calibrated with weights traceable to the national standards (DKD).
Calibrated class A glassware is used for volumetric measurements.
Water Content: <0.10% (g/g) by Karl-Fischer-Titration (U(exp) = 0.05% (g/g)).
Identity: EA, NMR, RT, IR, MS

Certificate Revision 1 - 11.06.2018 - N. Müller

Certified on: 11.06.2018
Certified by: N. Müller
RM Release

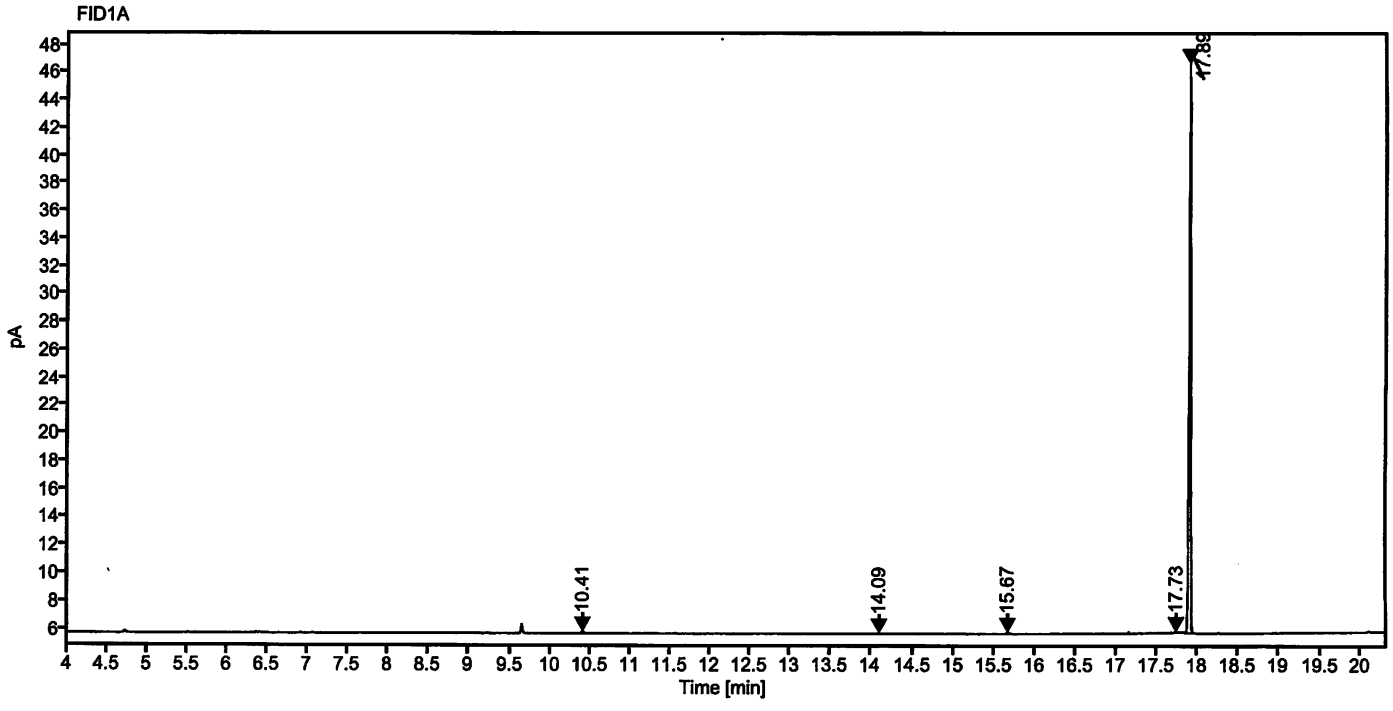
**The LGC Labor GmbH, accreditated by DAkkS as indicated by the accreditation number D-RM-19883-01 & D-PL-19883-01, has shown competence based on ISO Guide 34:2009 with relevant parts of DIN EN ISO/IEC 17025:2005 for production of certified reference materials in form of organic pure substances and in form of single and multi-component solutions of organic pure substances.**

**LGC Labor GmbH - Bgm.-Schlosser-Straße 6A - 86199 Augsburg - Germany**
**Phone +49 821 906080 - Fax +49 821 9060888 - augsburg.inquiry@lgcgroup.com**
**The warranty for this product is limited to the purchasing price of this product.**

05.06.2018 MP

| | | | |
|---|---|---|---|
| **Data file:** | 12300000-14.dx | **Instrument:** | FID 3 |
| **Sample name:** | 80514CY G833030 | **Sequence Name:** | 2018KW20-0515-a |
| **Inj. volume [µl]:** | 1.0 | **Injection date:** | 5/15/2018 11:19:19 PM |
| **Acq. method:** | pesk.amx | **Location:** | 37 |

**Sample Description** Dichlofluanid




**Signal:** FID1A

| Nr. | RT [min] | Area [pA*s] | Height [pA] | Area% | Width [min] |
|---|---|---|---|---|---|
| 1 | 10.41 | 0.30571 | 0.20 | 0.53 | 0.021 |
| 2 | 14.09 | 0.12089 | 0.11 | 0.21 | 0.015 |
| 3 | 15.67 | 0.20436 | 0.16 | 0.35 | 0.021 |
| 4 | 17.73 | 0.15876 | 0.11 | 0.27 | 0.024 |
| 5 | 17.89 | 57.06346 | 40.99 | 98.63 | 0.021 |
| | Sum | 57.85 | | | |