

T-2 TOXIN

1. General information

This document is designed and the certified value(s) and uncertainty(ies) are determined in accordance with ISO Guide 31 [1] and Eurachem / CITAC Guides [2,3].

2. Description of the Reference Material (RM)

Name:	T-2 Toxin
CAS number:	21259-20-1
Catalog number:	DRE-C13989000-5MG
Lot #:	S17052T
Certificate version:	1
Expiry date:	31.01.2022
Physical description of RM:	White crystals of T-2 Toxin
Packaging and amount of RM:	Amber glass ampoules fitted with teflon faced butyl septa and PP screw caps, quantities of 5 mg of RM
Name and address of the manufacturer:	Romer Labs Diagnostic GmbH Technopark 5, 3430 Tulln, Austria www.romerlabs.com
Name and address of the supplier:	LGC Standards GmbH Mercatorstraße 51, 46485 Wesel, Germany Tel +49(0)2 81 98 87 0, Fax +49(0)2 81/98 87 199 www.lgcstandards.com

2.1 Intended use of the RM

- for laboratory use only
- calibration of analytical instruments

2.2 Instruction for the correct use of the RM

The ampoules should be stored at 2-8°C in a dark place. Before usage of the RM, the ampoules should be allowed to warm to room temperature. The recommended minimum sub-sample amount for all kinds of application is 1 mg. The expiry date of this RM is based on the current knowledge and holds only for proper storage conditions in the originally closed flasks/packages. Solutions prepared for calibration purposes should be protected from exposure to light. Discard solutions after use in accordance with appropriate safety regulations for chemical substances.

2.3 Hazardous situation

The normal laboratory safety precautions should be observed when working with this RM. Further details for the handling of this RM are available as safety data sheet (SDS).

REFERENCE MATERIAL CERTIFICATE

3. Certified values and their uncertainties

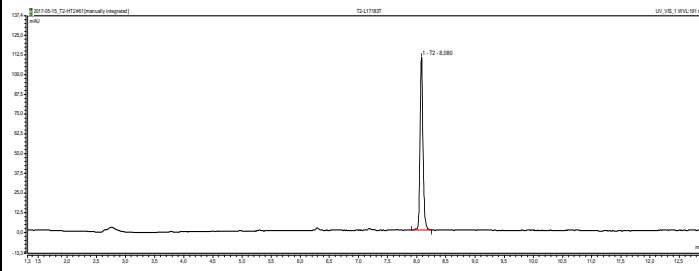
T-2 TOXIN		
Compound	Purity	
	Certified value ^a	Uncertainty ^b
T-2 Toxin	99.0 %	± 1.0 %
^a The certified value is based upon the results from several analytical techniques ^b Expanded uncertainty U (k = 2) of the value u _c according to GUM [4]		

4. Traceability of the certified value

The purity was confirmed HPLC-UV. All weighting and dilution steps for preparation were done using calibrated equipment (microbalances, pipettes). The gravimetric preparation furthermore was performed in a standardized and certified class A flask with stated uncertainty as well as using traceable thermometers for temperature controlled preparation. The whole preparation process is therefore traceable to SI units and metrological traceability is given.

5. Purity assessment of T-2 Toxin

The concentration value of T-2 Toxin of the gravimetric prepared solution was confirmed by HPLC-UV against an independently prepared reference batch.

column	Phenomenex Luna C18(2), 75 x 4.60 mm, 3µ			
Sample dilution	1:20 with acetonitrile / water (20 / 80)			
injection volume	100 µL sample			
solvent A	acetonitrile / water (10 / 90)			
solvent B	acetonitrile			
flow rate	1 mL / min			
gradient	time in minutes (min)	% solvent B		
	0 – 0.5	11		
	0.5 – 6.5	11 - 50		
	6.5 – 9.5	50		
	9.5 – 9.6	50 - 11		
	9.6 – 13	11		
DAD settings	191 nm		T-2 Toxin sample	
	time [min]	area	height	
	T-2 Toxin	8.080	6.522	109.60
^a Mean of 6 replicate measurements against reference batch, confidence interval with P = 95 %				

6. Further information

The purchaser must determine the suitability of this product for its particular use. LGC Standards GmbH makes no warranty of any kind, express or implied, other than its products meet all quality control standards set by LGC Standards GmbH. We do not guarantee that the product can be used for a special application.

approved for release by: *Laurence Treccani-Chinelli, Global Supply Chain Manager - LGC Standards*

date: 28.08.2017

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References:

- [1] ISO Guide 31:2015 - 1-18, "Reference materials – contents of certificates, labels and accompanying documentation"
- [2] Eurachem / CITAC Guide, 1-37, (2003), "Traceability in Chemical Measurement"
- [3] Eurachem / CITAC Guide CG4, 1-133, (QUAM:2012.P1), "Quantifying Uncertainty in Analytical Measurement", 3rd Ed.
- [4] International Organization for Standardization (ISO), (1995), "Guide to the Expression of Uncertainty in Measurement", 1st Ed. Geneva, Switzerland