## Certificate of Analysis



Issue Date: 30 06 2021

STD-No.: A01269-2 Volume ≥ 1,2 ml **Product name** Caffeine Lot-No.: 28286-001 Concentration: 10 µg/ml Expiry date: 12/20221 Water 20°C and dark Solvent: Storage:

only for information purposes

Component	Conc. µg/ml	Purity	CAS	Formula	M [g/Mol]
1 Caffeine	10 ±3,5 %²	99,9 %³	58-08-2	C8H10N4O2	194,19

This Reference Material was processed under ISO 9001:2015 registered quality system.

This Reference Material is intended as working reference sample for identification of the contained compounds and their quantification in methods of analysis in residue or environmental analysis.

Traceability to the International System of Units (SI) has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on convenient physical or chemical measurements, including gravimetric or volumetric dilution. The balances used for these measurements are calibrated by an accredited calibration service.

The homogenity is determined according to an in-house procedure. There is no minimum sub-sample required.

Sample aliquots for analysis should be withdrawn at roomtemperature and should be processed without delay for the certified values to persist.

The production was coordinated by:

Dipl.-Ing. A. Werner (Technical Manager)

This document was produced electronically and is valid without a signature.



<sup>&</sup>lt;sup>1</sup> The certification of this reference material is valid within the stated uncertainty until the above specified expiration date assumed the reference material is stored in the originally closed flask in accordance with the instructions given in this certificate. No warranty is given until the expiry date for the certificated values after opening. The long term stability may be monitored over the lifetime of the certification according to an in-house procedure. If substantive changes are determined that effect the certification before the expiration of this certificate, the company will notify the purchaser

<sup>&</sup>lt;sup>2</sup> Expanded Uncertainty according to EURACHEM / CITAC "Quantifying Uncertainty in Analytical Measurement" with coverage factor k=2 for a conifdence level of 95 %.

<sup>&</sup>lt;sup>3</sup> Stated purity of the neat material is considered in the production of the solution.

## Certificate of Analysis



Issue Date: 30.06.2021

STD-No.:A01269-4Volume≥ 1,2 mlProduct nameCaffeineLot-No.:28286-003Concentration:60 μg/mlExpiry date:12/2022¹Solvent:WaterStorage:20°C and dark

only for information purposes

Component	Conc. µg/ml	Purity	CAS	Formula	M [g/Mol]	
1 Caffeine	60 ±3,5 %²	99,9 %³	58-08-2	C8H10N4O2	194,19	

This Reference Material was processed under ISO 9001:2015 registered quality system.

This Reference Material is intended as working reference sample for identification of the contained compounds and their quantification in methods of analysis in residue or environmental analysis.

Traceability to the International System of Units (SI) has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on convenient physical or chemical measurements, including gravimetric or volumetric dilution. The balances used for these measurements are calibrated by an accredited calibration service.

The homogenity is determined according to an in-house procedure. There is no minimum sub-sample required.

Sample aliquots for analysis should be withdrawn at roomtemperature and should be processed without delay for the certified values to persist.

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<sup>&</sup>lt;sup>2</sup> Expanded Uncertainty according to EURACHEM / CITAC "Quantifying Uncertainty in Analytical Measurement" with coverage factor k=2 for a conifdence level of 95 %.

<sup>&</sup>lt;sup>3</sup> Stated purity of the neat material is considered in the production of the solution.

## Certificate of Analysis



Issue Date: 30.06.2021

STD-No.: A01269-9 Volume ≥ 1,2 ml Product name Caffeine Lot-No.: 28286-002 Concentration: 2000 µg/ml Expiry date: 12/20221 Solvent : Water Storage: 20°C and dark

only for information purposes

Component	Conc. µg/ml	Purity	CAS Fo	ormula	M [g/Mol]
1 Caffeine	2000 ±3,5 %²	99,9 %³	58-08-2 C8	BH10N4O2	194,19

This Reference Material was processed under ISO 9001:2015 registered quality system.

This Reference Material is intended as working reference sample for identification of the contained compounds and their quantification in methods of analysis in residue or environmental analysis.

Traceability to the International System of Units (SI) has been established through an unbroken chain of comparisons, each having stated uncertainties. Comparisons are based on convenient physical or chemical measurements, including gravimetric or volumetric dilution. The balances used for these measurements are calibrated by an accredited calibration service.

The homogenity is determined according to an in-house procedure. There is no minimum sub-sample required.

Sample aliquots for analysis should be withdrawn at roomtemperature and should be processed without delay for the certified values to persist.

The production was coordinated by:

Dipl.-Ing. A. Werner (Technical Manager)

This document was produced electronically and is valid without a signature.



<sup>&</sup>lt;sup>1</sup> The certification of this reference material is valid within the stated uncertainty until the above specified expiration date assumed the reference material is stored in the originally closed flask in accordance with the instructions given in this certificate. No warranty is given until the expiry date for the certificated values after opening. The long term stability may be monitored over the lifetime of the certification according to an in-house procedure. If substantive changes are determined that effect the certification before the expiration of this certificate, the company will notify the purchaser

<sup>&</sup>lt;sup>2</sup> Expanded Uncertainty according to EURACHEM / CITAC "Quantifying Uncertainty in Analytical Measurement" with coverage factor k=2 for a conifdence level of 95 %.

<sup>&</sup>lt;sup>3</sup> Stated purity of the neat material is considered in the production of the solution.