

676827 **Lot: 804404**
Cefalonium hydrate1. General Information

Formula	C ₂₀ H ₁₈ N ₄ O ₅ S ₂ ·xH ₂ O	Expiry Date	01 Aug 2025
Mol. Weight	458.51 g/mol	Store at	4°C (in the dark)
CAS-No.	5575-21-3		

2. Batch Analysis

Identity	confirmed by LC-MS		
Overall Purity	91.46 % (g/g)	Expanded Uncertainty	0.54 % (g/g)
Assay Purity (HPLC)	98.56 % (g/g)	Uncertainty	0.25 % (g/g)
Water	7.20 % (g/g)		

Certified on 03 Aug 2021

by Stefanie Selbmann

The overall purity is calculated by: $\text{Purity(\%)} = \frac{\text{Assay purity} \times (100 - \text{water content} - \text{impurities})}{100}$

The reported uncertainty U is an expanded uncertainty according to EURACHEM / CITAC guide CG4 – Quantifying Uncertainty in Analytical Measurement. The Uncertainty is based on the combined uncertainties, including uncertainties of characterization and stability testing. The expiry date is based on the current knowledge and holds only for proper storage conditions in the originally closed flask. If the substance is proven to be unstable under the given storage conditions, you will be contacted immediately. The warranty of this product is limited to the purchasing price of this product and to the first point of use.

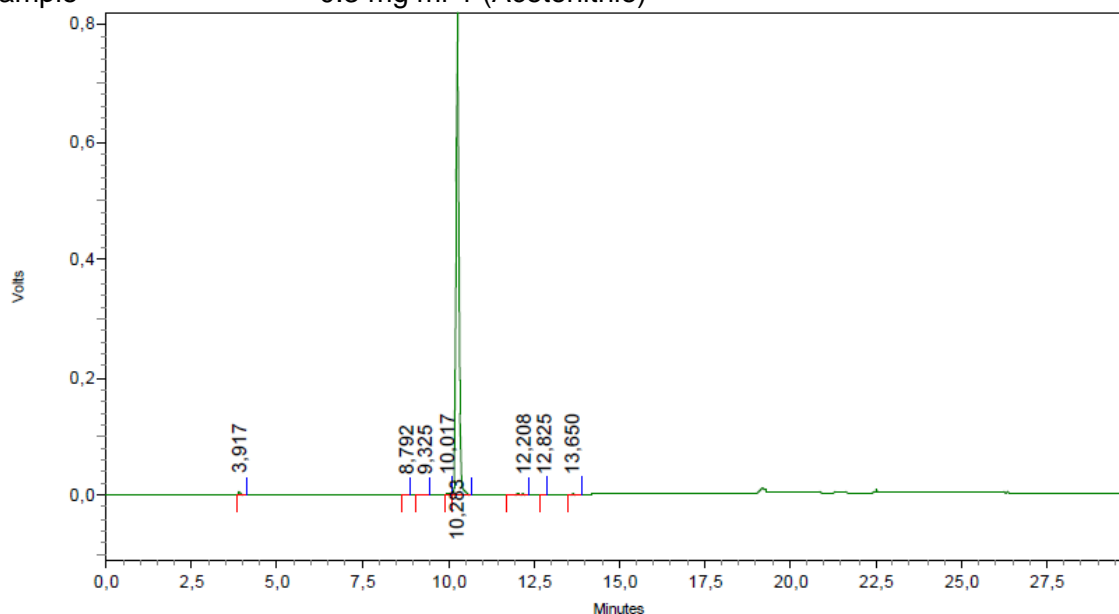
Our standards are for laboratory use only and can be used as reference material for calibration of chromatographic systems or related analytical techniques. For handling instructions see the MSDS. A minimum sample of 2 mg is recommended. Deploying less material will increase the uncertainty by a factor 2 for half of sample and 4 for a quarter of sample. The material in the vial can be used multiple times, but it is strongly recommended that all external negative influences to the material are considered and ruled out (e.g. high temperatures, UV-radiation, moisture, oxygen). It is strongly recommended to open the vial at room temperature only and handle the material under inert gas if necessary. The integrity of the purity cannot be guaranteed if the substance is handled under unfavorable conditions.

The balances used are calibrated with weights traceable to the national standards (DKD).

The HPC Standards GmbH, accredited by DAkkS as indicated by the accreditation number D-RM-20844-01-00, has shown competence based on ISO 17034:2017 for production of certified reference materials.

HPLC-Method

Article 676827
Lot-No. 804404
Column L=250mm, ID=4.6mm; Luna-Omega C18, 100A, 5µm
Eluent A Acetonitrile
Eluent B 0.1 % Phosphoric acid (Water)
Gradient
time %A %B
0min 0 100
22.5min 90 10
25min 90 10
Flow 1.0 ml min⁻¹
Detector UV-220nm
Injection-Volume 5 µl
Sample 0.3 mg ml⁻¹ (Acetonitrile)



Detector A - 1 (220nm)

Retention Time	Height	Area	Area Percent
3,917	5162	21078	0,49
8,792	275	1344	0,03
9,325	236	2640	0,06
10,017	1472	7039	0,16
10,283	823045	4257595	98,68
12,208	1540	19138	0,44
12,825	202	1034	0,02
13,650	703	4806	0,11

Totals	832635	4314674	100,00
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Exemplary chromatogram of given method.

Version	Article	Lot	Reason for Change	Date
3.0	676827	804404	Format update	03 Aug 2021
4	676827	804404	update water	30 Nov 2022