

1. Contact and technical support details

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Seelze, 24.05.2018 / COAH_00371939/ GE61/18/11134

Date of Analysis: 24.May.2018

Production Date: 16.May.2018

Expiry Date: 16.May.2021

2. Expiry date

3. Product number, name and batch

Article/Product: R1201

Batch: I136X

Ceftiofur hydrochloride, reference material

Reference Material (RM)

1. General Information

Formula: C₁₉H₁₇N₅O₇S₃ · HCl

CAS-No.: [103980-44-5]

Usage : Antibiotic

Molar mass: 560.02 g/mol

Recomm. storage temp.: room temp.

4. General product information

2. Batch Analysis

identity (NMR)

assay (hplc)

measurement uncertainty

water (Karl Fischer)

complying

97.6 %

± 1 %

3.2 %

5. Lot specific analytical results

3. Advice and Remarks

- The expiry date is based on the current knowledge and holds only for proper storage conditions in the originally closed flasks/ packages.
- Whenever the container is opened for removal of aliquot portions of the substance, the person handling the substance must assure, that the integrity of the substance is maintained and proper records of all its handlings are kept. Special care has to be taken to avoid any contamination or adulteration of the substance.
- We herewith confirm that the delivery is effected according to the technical delivery conditions agreed.
- Particular properties of the products or the suitability for a particular area of application are not assured.
- We guarantee a proper quality within our General Conditions of Sales.

Honeywell
Quality Management

6. Purity test by HPLC, GC, LC-MS, GC-MS and Titration

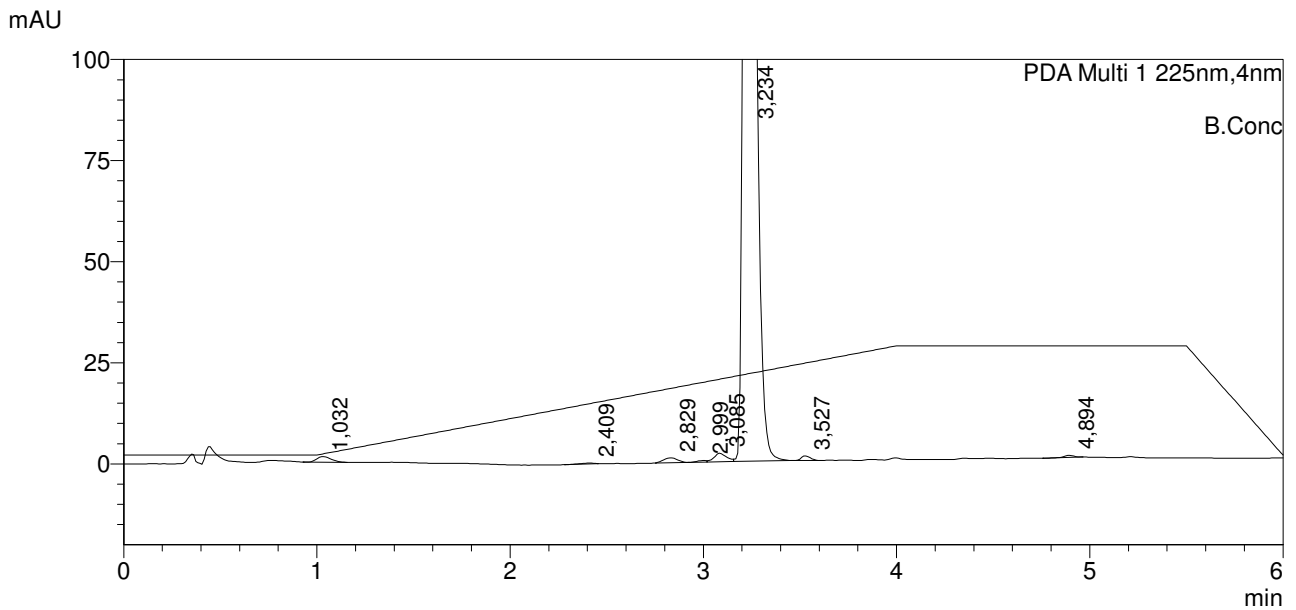
Honeywell Specialty Chemicals
-----Analytical Department-----

<Sample Information>

Article-No: R1201
Article: Cefitofur hydrochloride, reference material
Batch: I136X

Column: Poroshell 120 EC C18 2,7µm 3,0*50mm
Eluent A: Acetonitrile
Eluent B: Water + 0,1% Phosphoric acid
Gradient:
time %A %B
1 min 20 80
4 min 40 60
6 min Stop

Flow: 0,8 mL/min
Detection: UV - 225nm
Injection-Vol: 10 µL
Sample-Preparation: 10 mg / 100mL ACN-H2O 40-60
Linearity: checked
Evaluation: Normalisation (uncorrected)
Operator: Schowe



<Peak Table>

Peak#	Ret. Time	Area	Height	Area%
1	1,032	7073	1371	0,546
2	2,409	1197	234	0,092
3	2,829	6027	1204	0,465
4	2,999	1379	387	0,106
5	3,085	9701	2118	0,748
6	3,234	1265660	336642	97,617
7	3,527	3793	1151	0,293
8	4,894	1725	492	0,133
Total		1296554	343598	100,000

7. Identity test by NMR, FT-IR or Mass Spectrometry

Ceftiofur hydrochloride
reference material
#R1201
Lot: I136X

Sample Name:
18_11134
Data Collected on:
Seelze-NMR-vnmrs400
Archive directory:
/home/vnmr1/vnmrsys/data
Sample directory:
18_11134_20180523
FidFile: 18_11134_PROTON_01

Pulse Sequence: PROTON (s2pul)
Solvent: cd3od
Data collected on: May 23 2018

Temp. 26.0 C / 299.1 K
Sample #8, Operator: vnmr1

Relax. delay 5.000 sec
Pulse 45.0 degrees
Acq. time 2.281 sec
Width 7183.9 Hz
64 repetitions
OBSERVE H1, 399.8828030 MHz
DATA PROCESSING
FT size 32768
Total time 7 min 46 sec

