

Certificate

CEFTIOFUR SYSTEM SUITABILITY MIXTURE

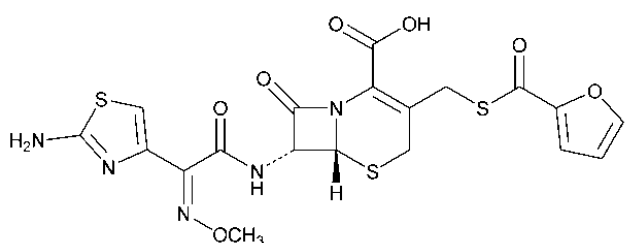
(Mixture of about 93% of ceftiofur and total of about 2% of ceftiofur delta-3 isomer and ceftiofur E-isomer)

USP Catalog No.: 1098093

USP Lot No.: F024V0

CEFTIOFUR

((6R,7R)-7-[(Z)-2-(2-Aminothiazol-4-yl)-2-(methoxyimino)acetamido]-3-[[furan-2-carbonylthio)methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid)



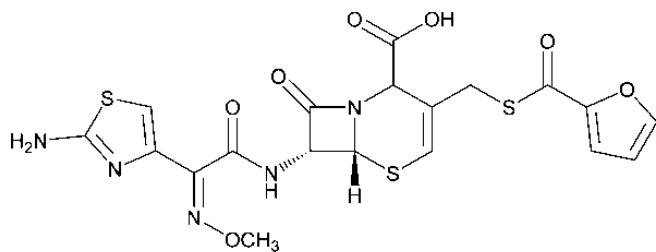
CAS No.: 80370-57-6

Molecular Formula: C₁₉H₁₇N₅O₇S₃

Molecular Weight: 523.56

CEFTIOFUR DELTA-3 ISOMER

((6R,7R)-7-[(Z)-2-(2-Aminothiazol-4-yl)-2-(methoxyimino)acetamido]-3-[(furan-2-carbonylthio)methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-3-ene-2-carboxylic acid)



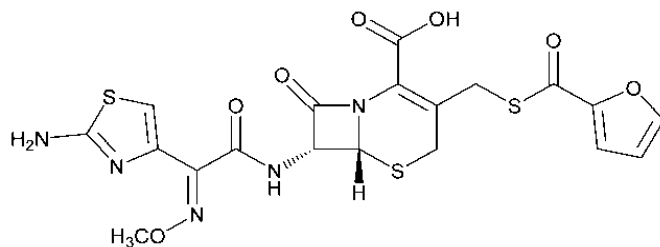
CAS No.: 120962-17-6

Molecular Formula: C₁₉H₁₇N₅O₇S₃

Molecular Weight: 523.56

CEFTIOFUR E-ISOMER

((6R,7R)-7-[(E)-2-(2-aminothiazol-4-yl)-2-(methoxyimino)acetamido]-3-[(furan-2-carbonylthio)methyl]-8-oxo-5-thia-1-azabicyclo[4.2.0]oct-2-ene-2-carboxylic acid)



CAS No.: 120882-20-4

Molecular Formula: C₁₉H₁₇N₅O₇S₃

Molecular Weight: 523.56

LABEL TEXT

For use with specified USP compendial tests.
Not for use as a drug. See SDS prior to use
at www.usp.org/sds.



Lot: F024V0

USP REFERENCE STANDARD

CEFTIOFUR SYSTEM SUITABILITY MIXTURE 50 mg

(Mixture of about 93% of ceftiofur and total of about 2% of
ceftiofur delta-3 isomer and ceftiofur E-isomer)



Danger! May cause an allergic skin reaction. May cause allergy
or asthma symptoms or breathing difficulties if inhaled.

Keep container tightly closed. Store in a freezer. Protect from light.

USP, 12601 Twinbrook Pkwy, Rockville, MD, +1-301-881-0666
Cat. No. 1098093 Material mfd. in United States

Contaminated work clothing must not be allowed out of the
workplace. Wear protective gloves. In case of inadequate
ventilation wear respiratory protection. If on skin: Wash with
plenty of water. If skin irritation or rash occurs: Get medical
advice/attention. Wash contaminated clothing before reuse.
If inhaled: If breathing is difficult, remove person to fresh air
and keep comfortable for breathing. If experiencing
respiratory symptoms: Call a poison center/doctor. Dispose
of contents/container in accordance with
local/regional/national/international regulations.

Jeri L. Joth

Quality Assurance

Calculation Value

If a value is not provided on the label or accompanying documentation and the Reference Standard has a quantitative USP compendial application, a value of 100.0% is used. The purity value is not applicable for qualitative uses. Please refer to the specific Reference Standard label for further information.

Expiration

Current lots are identified in the current USP Catalog. In some cases, the previous lot may still be considered valid for use. If so, it is identified in the column marked "Previous Lot/Valid Use Date."

It is the responsibility of each user to determine that this lot is current or valid when used. For the most up-to-date information, please refer to the USP Store at www.usp.org.

Instructions for Use

Follow the instructions on the label of the USP Reference Standard and in the appropriate USP documentary standard(s).

Non-Monograph Use

The suitability of this Reference Standard for use in non-compendial applications is solely the responsibility of the user.

LEGAL NOTICE

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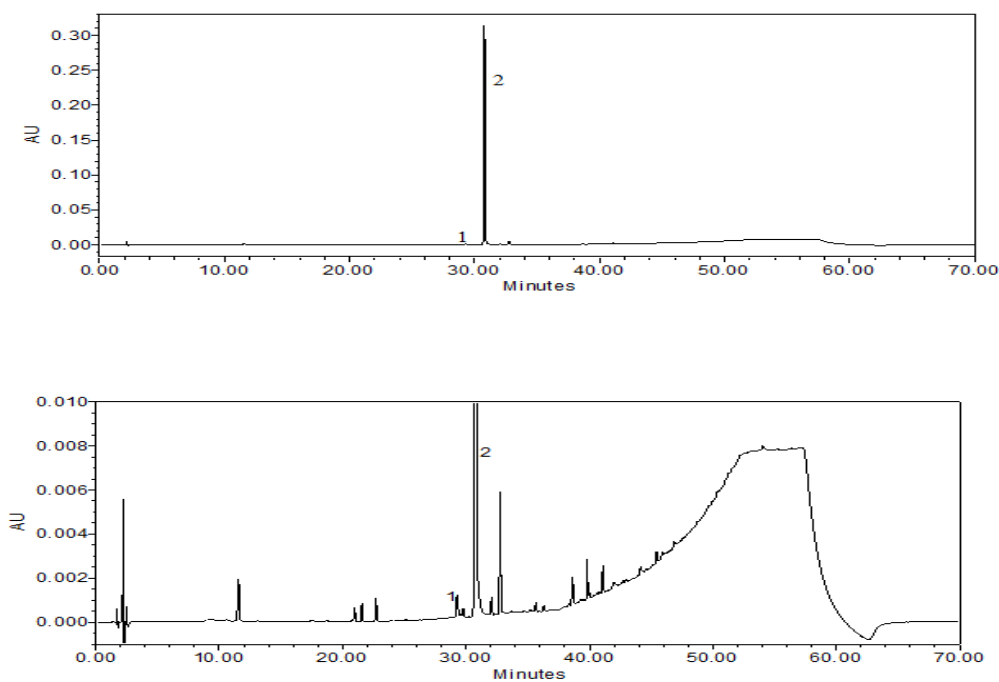
USP Reference Standards are not intended for use as drugs, dietary supplements, or as medical devices.

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Typical Chromatogram

USP Ceftiofur System Suitability RS

Catalog Number: 1098093
Lot: F024V0
Monograph: Ceftiofur Hydrochloride
Publication: PF40(4) / USP40 1S (from August 1 st , 2017)
Test: IMPURITIES; Low Molecular-Weight Impurities
Sample: 0.10*mg/mL of USP Ceftiofur System Suitability Mixture RS



1	Ceftiofur delta 3-isomer
2	Ceftiofur

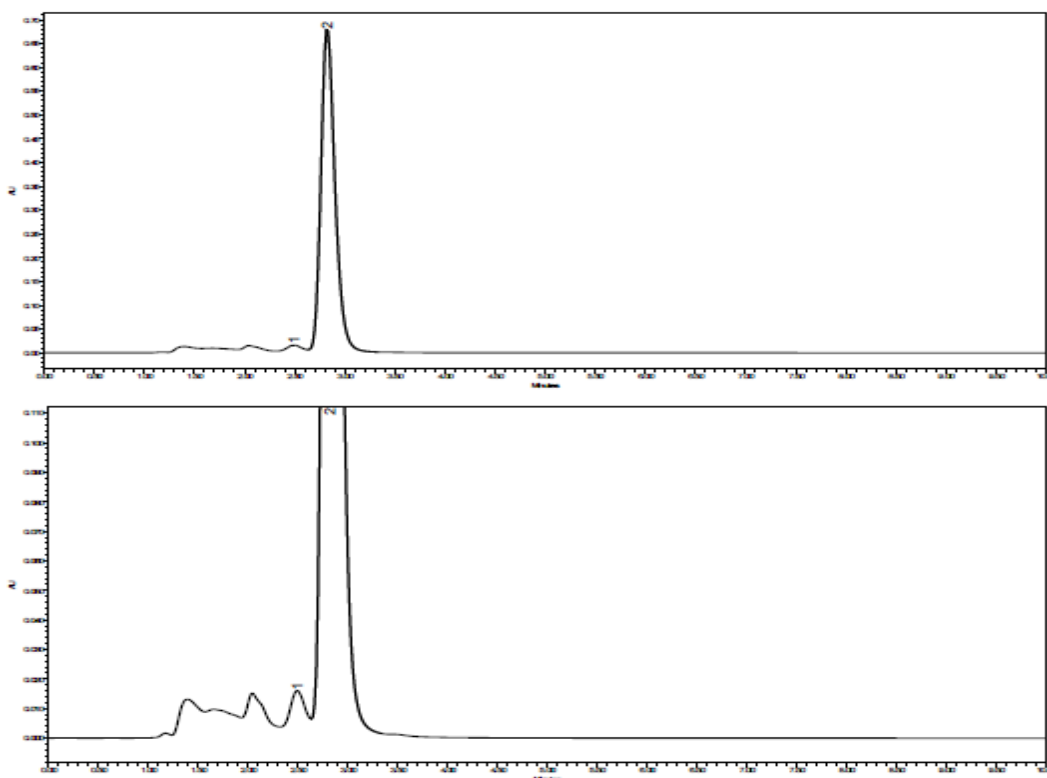
*Ceftiofur Hydrochloride PF40(4) will be revised in USP40 S1 publication to use a concentration of 0.1mg/mL in the System Suitability solution instead of 0.3mg/mL

This chromatogram is supplied for information only, unless otherwise specified in an applicable monograph or general chapter.

Typical Chromatogram

USP Ceftiofur System Suitability RS

Catalog Number: 1098093
Lot: F024V0
Monograph: Ceftiofur Hydrochloride
Publication: PF40(4)
Test: IMPURITIES; High Molecular-Weight Impurities
Sample: 0.15mg/mL of USP Ceftiofur System Suitability Mixture RS



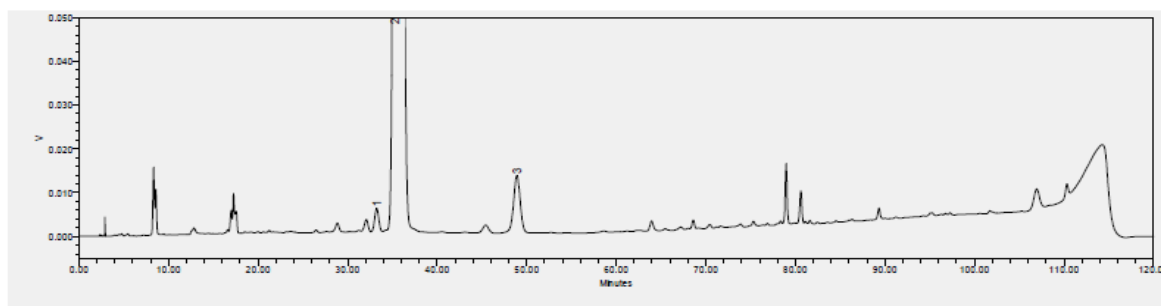
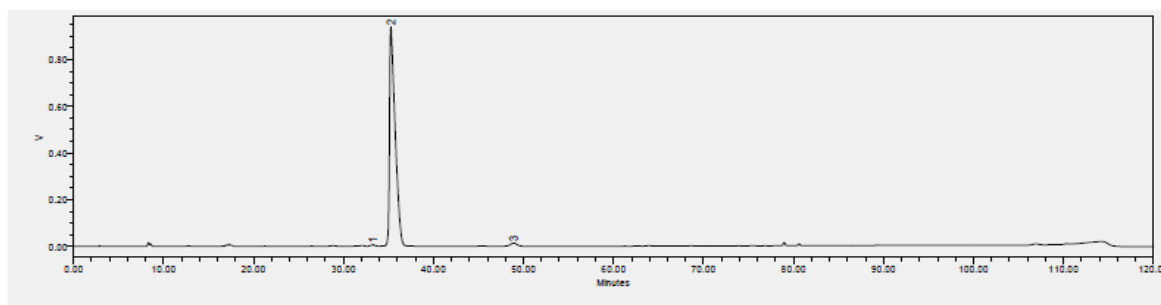
1	Ceftiofur E-isomer
2	Ceftiofur

This chromatogram is supplied for information only, unless otherwise specified in an applicable monograph or general chapter.

Typical Chromatogram

USP Ceftiofur System Suitability RS

Catalog Number: 1098093
Lot: F024V0
Monograph: Ceftiofur Sodium
Publication: PF40(4)
Test: IMPURITIES; Low Molecular-Weight Impurities
Sample: 1 mg/mL of USP Ceftiofur System Suitability Mixture RS



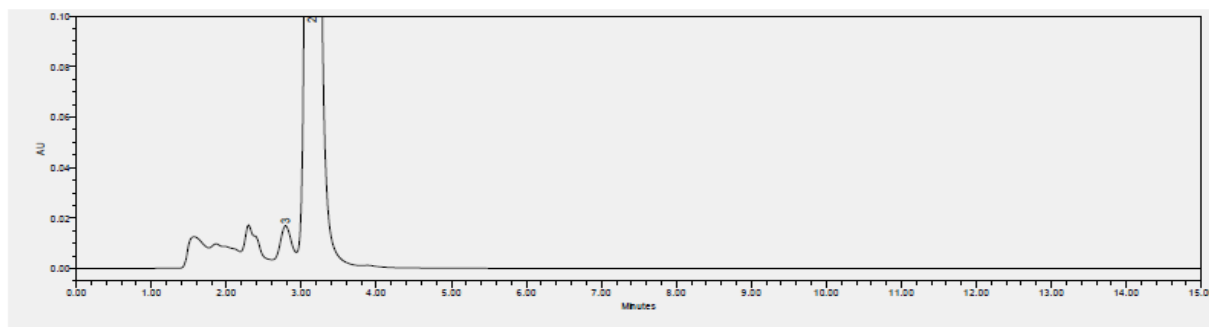
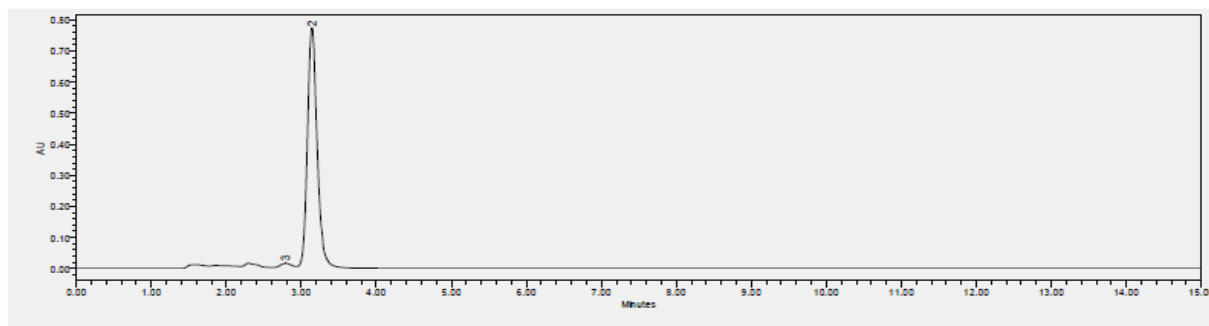
1	ceftiofur delta-3 isomer
2	ceftiofur
3	ceftiofur E-isomer

This chromatogram is supplied for information only, unless otherwise specified in an applicable monograph or general chapter.

Typical Chromatogram

USP Ceftiofur System Suitability RS

Catalog Number: 1098093
Lot: F024V0
Monograph: Ceftiofur Sodium
Publication: PF40(4)
Test: IMPURITIES; High Molecular-Weight Impurities
Sample: 0.15 mg/mL of USP Ceftiofur System Suitability Mixture RS



2	ceftiofur
3	ceftiofur E-isomer

This chromatogram is supplied for information only, unless otherwise specified in an applicable monograph or general chapter.