APPLICATION LIST #516

Related substances of cefazolin sodium

Separation of impurities with close structure is always challenging in pharmaceutical industry due to the strict requirements to acceptance criteria of chromatographic method and low limits for impurities quantification. This application shows the method for determination of related substances of cefazolin sodium by the Ph. Eur. Monograph. ARION® Polar C18 column allows to separate all impurities according to the method.



Reference solution (b) on ARION[®] column



Spiked test solution on ARION[®] column

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Column	ARION® Polar C18, 3 µm			
Dimensions	125 mm × 4.0 mm			
Part number	ARI-5721-IJ40			
Mobile phase	A: solution containing 14.54 g/L of disodium hydrogen phosphate dodecahydrate R and 3.53 g/L of potassium dihydrogen phosphate R B: acetonitrile R			
Gradient elution	Time 0-2 2-4 4-10 10-11.5 11.5-12 12-15 15-21	A (%) 98 98 → 85 85 → 60 60 → 35 35 35 → 98 98		B (%) 2 $2 \rightarrow 15$ $15 \rightarrow 40$ $40 \rightarrow 65$ 65 $65 \rightarrow 2$ 2
Flow rate	1.2 mL/min			
Temperature	45 °C			
Detection	UV at 254 nm			
Injection volume	5 µL			
Analytes	 Impurity Impurity Impurity Impurity Impurity Impurity Impurity Impurity Impurity 	y F y H y C y G y D y A	8. In 9. In 10. I 11. ((12. I 13. I	npurity K npurity I1 mpurity I2 Cefazolin sodium, CAS number 27164-46-1 mpurity L mpurity B



Cefazolin sodium

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