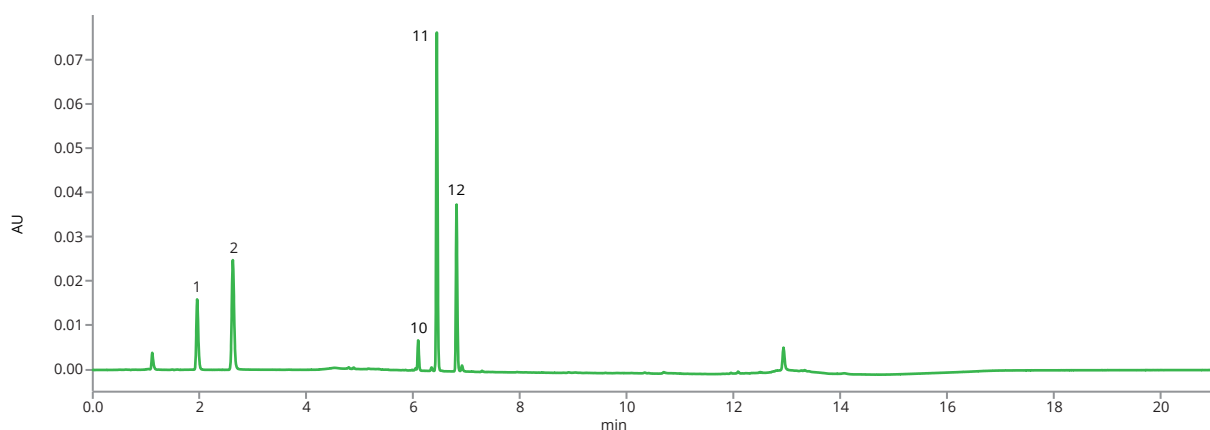
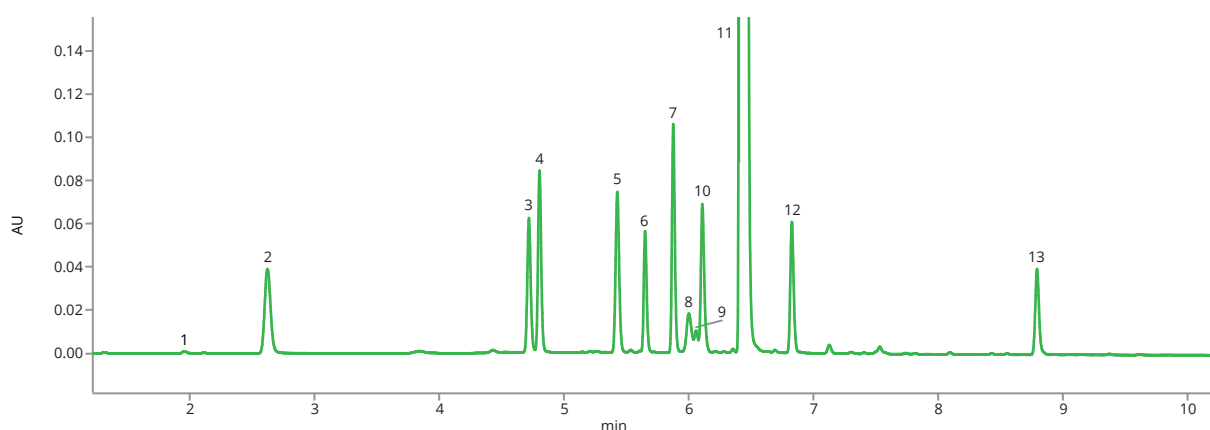


Related substances of cefazolin sodium

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.



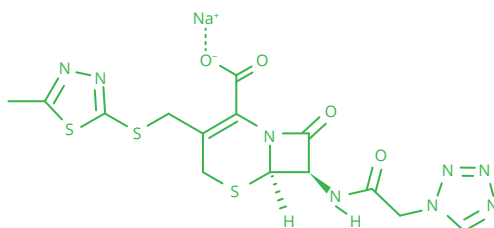
Reference solution (b) on ARION® column



Spiked test solution on ARION® column

Related substances of cefazolin sodium

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	A (%)	B (%)
	0–2	98	2
	2–4	98 → 85	2 → 15
	4–10	85 → 60	15 → 40
	10–11.5	60 → 35	40 → 65
	11.5–12	35	65
	12–15	35 → 98	65 → 2
	15–21	98	2
Flow rate	1.2 mL/min		
Temperature	45 °C		
Detection	UV at 254 nm		
Injection volume	5 µL		
Analytes	1. Impurity J 2. Impurity E 3. Impurity H 4. Impurity C 5. Impurity G 6. Impurity D 7. Impurity A 8. Impurity K 9. Impurity I1 10. Impurity I2 11. Cefazolin sodium, CAS number 27164-46-1 12. Impurity L 13. Impurity B		



Cefazolin sodium