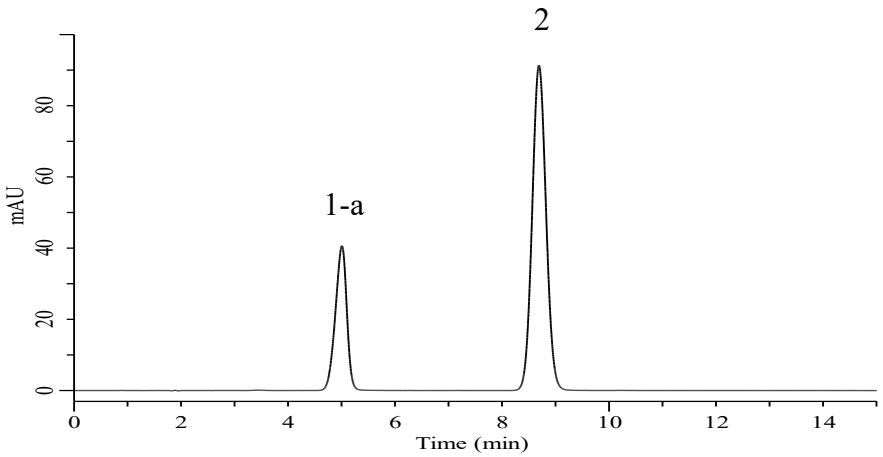
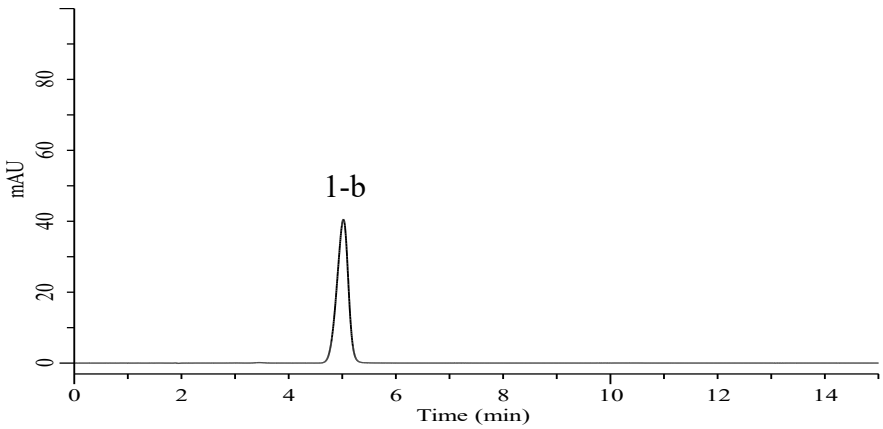
Analysis of Ampicillin

(Under the Condition of USP NF2023 Issue2, Ampicillin for Injection, Assay)



System Suitability solution



Standard solution

Conditions

System	:	Chromaster PLUS (HITACHI)
Guard Column	:	InertSustain C18 (GL Sciences Inc.) (10 µm, 50 x 4.0 mm I.D.)
Column Cat. No.	:	5020-90631
Column	:	InertSustain C18 (GL Sciences Inc.) (10 µm, 300 x 4.0 mm I.D.)
Column Cat. No.	:	5020-90558
Eluent	:	Solution*
Flow Rate	:	2.0 mL/min
Col. Temp.	:	40 ℃
Detection	:	UV 254 nm (Chromaster 5420 UV-VIS)
Injection Vol.	:	20 µL
Sample	:	Standard in Diluent**

*: CH_3CN/H_2O/1 M KH_2PO_4 /1 N CH_3COOH= 80/909/10/1, v/v/v/v
**: H_2O/1 M KH_2PO_4 /1 N CH_3COOH= 989/10/1, v/v/v

Analyte:

1-a,1-b. Ampicillin	1 mg/mL
2. Caffeine	0.12 mg/mL

Resolution (1-a, 2)	: 8.46 (≧ 2.0)
Tailing factor (1-b)	: 0.88 (≦ 1.4)
Capacity factor (1-b)	: 1.65 (≦ 2.5)
RSD of the peak area (1-b)(%)(n=6)	: 0.07 (≦ 2.0)

Relative Retention Times

Ampicillin	: 0.57
Caffeine	: 1.0