

Bleed test of septa using HPLC Fixed Syringes

Experimental goal

Bleed test of septa by using HPLC Fixed Syringes.

EXPERIMENTAL	
Instrument	Brand A 1200 LC
Wavelength	235 nm
Mobile phase	ACN:H ₂ O=40:60
Column	Kinetex 5 μ C18 100A
Flow	1.5 mL/min
Injection size	20.0 uL
Solvent	ACN:H ₂ O=1:1

Experimental results

Brand A

Injection time:1



Injection time:6



Injection time:9



Injection time:18



Brand A	RetTime	Width	Area	Height	Area
Time	[min]	[min]	mAU *s	[mAU]	%
1	1.048	0.053	494.77475	147.26967	87.8952
6	1.005	0.0526	532.24854	160.06943	89.592
9	0.969	0.0466	448.59891	153.05998	91.6056
18	0.815	0.0429	559.09827	199.73051	70.496
average			508.68012	165.0324	
SD			47.960301	23.716684	
RSD			9.4283813	14.370926	

Finetech

Injection time:1



Injection time:6



Injection time:9

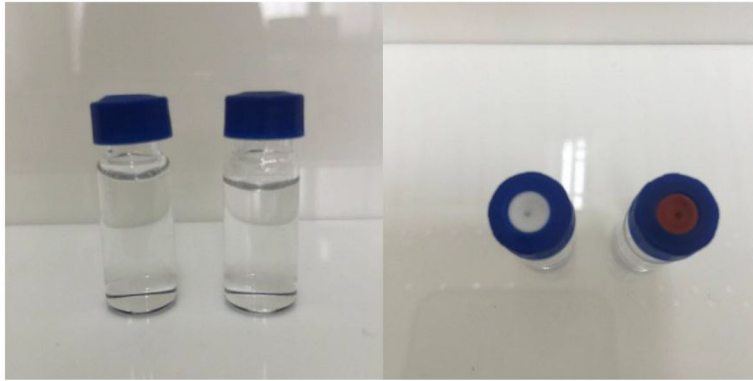


Injection time:18

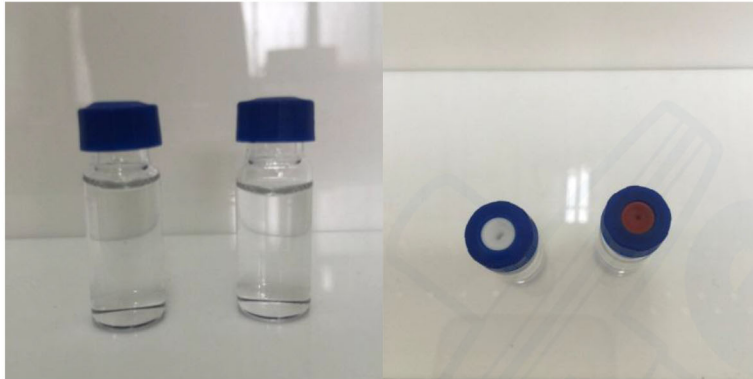


Finetech	RetTime	Width	Area	Height	Area
Time	[min]	[min]	mAU *s	[mAU]	%
1	0.93	0.0471	540.1166	177.5122	84.3756
6	0.89	0.0458	608.9737	207.9491	86.9021
9	0.851	0.0427	535.9742	192.27	79.6218
18	0.779	0.0406	560.4333	214.8926	79.2285
average			561.3744	198.156	
SD			33.48454	16.70161	
RSD			5.964743	8.428517	

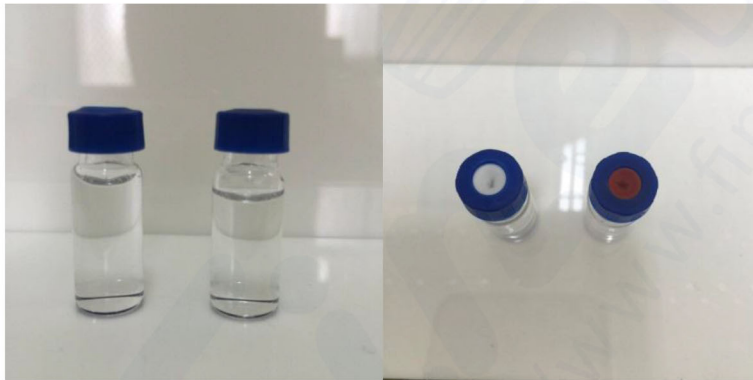
Injection time:1(left: Finetech , right: Brand A)



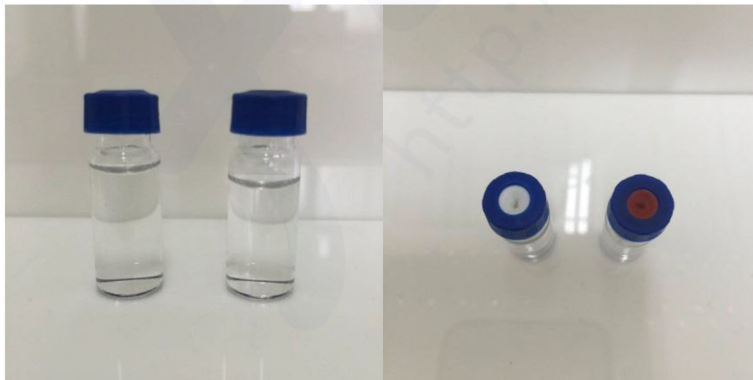
Injection time:6(left: Finetech , right: Brand A)



Injection time:9(left: Finetech , right: Brand A)

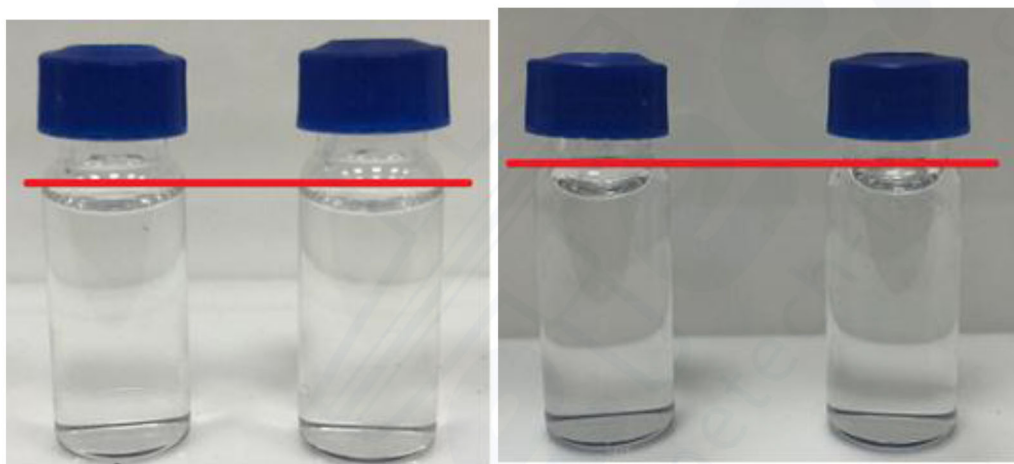


Injection time:18(left: Finetech , right: Brand A)



Summary

No bits and small pieces were observed after repeatedly used for 18 times. The peak area values for salicylic acid throughout the test showed normal variation (RSD 6-8% for Finetech, RSD 9-14% for Brand A) and did not illustrate a significant loss which would indicate septum failure. After 24 hours, no obvious differences of liquid level in the sample vials by using septa of Finetech and Brand A brand were found, indicating good gas sealed degree for both septa.



(ps. left: Finetech , right: Brand A , After septa inject 18 time in 24 hr)