Temperature test of septa by GC-FID

Experimental goal

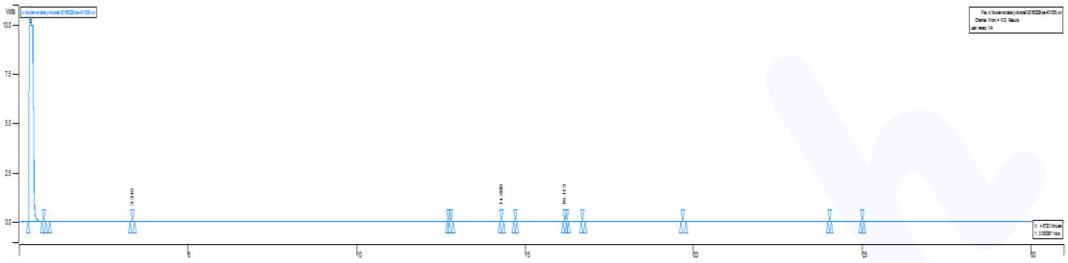
Use GC-FID to determinate the substrates are dissolved from septa at different temperature.

Experimental Condition	
Column	BR-5ms FS 15 m x 0.25 mm ID x 0.25 um
Detection	FID
H_2 flow	30 ml/min
Air flow	400 ml/min
Makeup flow	29 ml/min (He)
Injection size	1.0 uL
Injection temperature	250°C
Column oven	50°C hold for 3 minutes, 50-100°C@ 25°C/min, 100-300°C@ 10°C/min, , 300-350°C@ 25°C/min (hold for minutes)
Pressure	25 psi for 27 minutes, 50 psi from 27-31 minutes

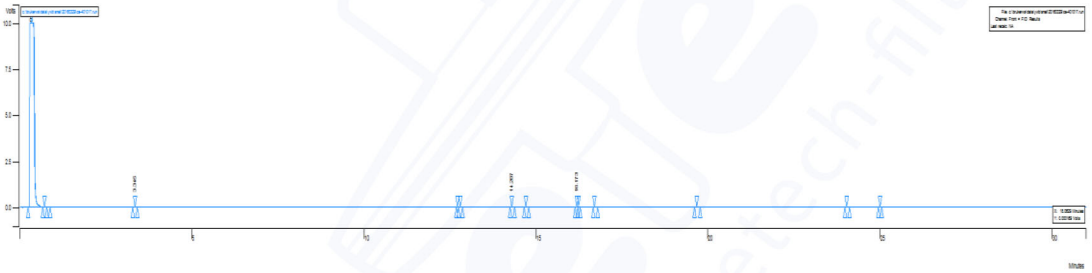
Experimental result

-4°C

Brand A



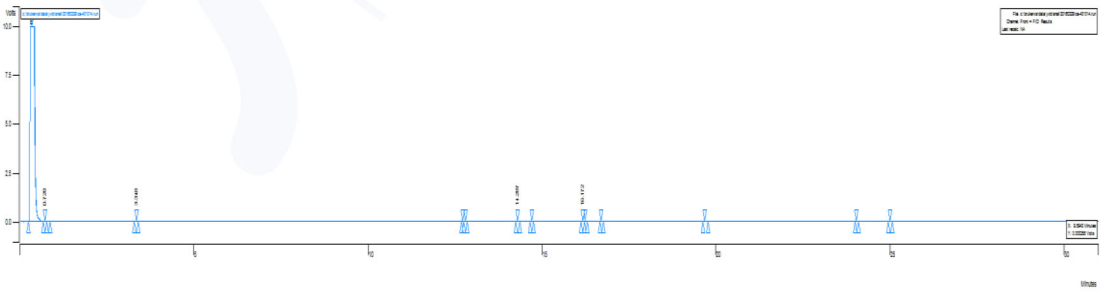
Finetech



25°C

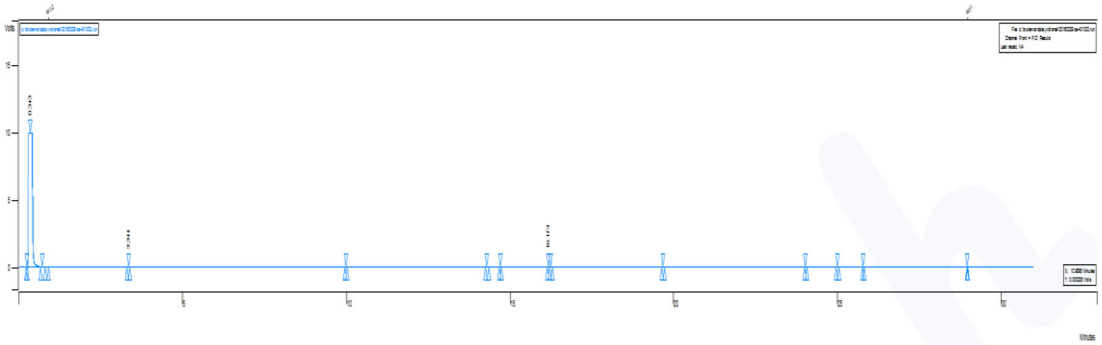
Brand A

Finetech

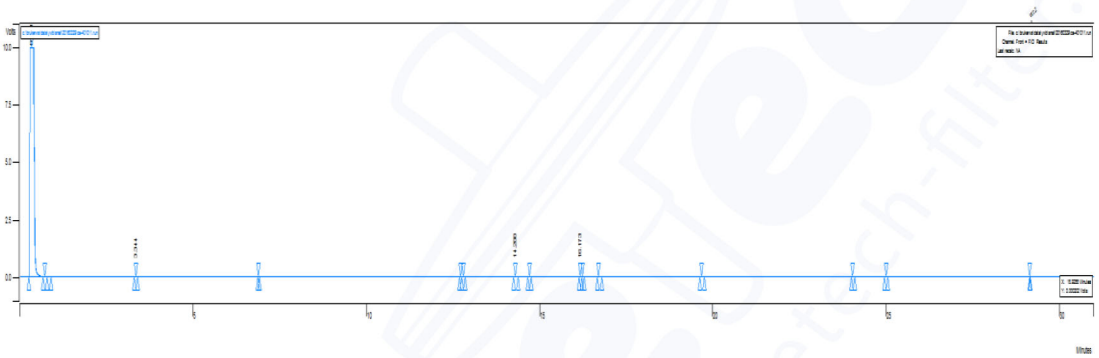


60°C

Brand A



Finetech



Summary

From the results, there is no substrates dissolved from the septa of Finetech and Brand A at different temperature. Table shows that the difference of peak intensities for both septa are under acceptable range.

temperature	60˚C		25˚C		-4˚C	
brand	Brand A	Finetech	Brand A	Finetech	Brand A	Finetech
1	3371	4778	5268	5188	3898	3720
2	3458	4451	5596	5768	3634	3760
3	3597	4669	5334	5412	3757	3836
RSD(%)	3.2800	3.5940	3.2131	5.3609	3.5105	1.5621
average	3475	4632	5399	5456	3763	3772