

Appendix 1. System suitability (n=6)

		t_R (min)	S (pA*s)	A_s	R_s	N
Standard	1	12.795	604.500	1.263	-	254239
	2	12.796	611.300	1.264	-	257622
	3	12.796	600.200	1.260	-	255370
	4	12.795	597.800	1.256	-	258337
	5	12.796	598.300	1.265	-	251527
	6	12.796	597.400	1.287	-	255344
	Mean	12.796	601.583	1.266	-	255406.500
	RSD (%)	0.004	0.903	0.859	-	0.958
Sample	1	12.795	533.800	1.168	10.150	245290
	2	12.795	533.600	1.178	10.150	250303
	3	12.796	542.600	1.165	10.180	247592
	4	12.796	539.300	1.180	10.160	248568
	5	12.795	530.000	1.177	10.160	245282
	6	12.796	531.700	1.178	10.170	246403
	Mean	12.796	535.167	1.174	10.162	247239.667
	RSD (%)	0.004	0.898	0.530	0.115	0.801

Where t_R: retention time; S: peak area; A_s: asymmetry factor; R_s: resolution; N: number of theoretical plates

Appendix 2. The results of the correlation analysis between concentration and peak area

Concentration (µg/mL)	98.5	197.0	295.5	394.0	492.5	591.0	985.0
Peak area (pA*s)	135.0	275.1	433.1	604.9	748.5	924.5	1582.7

Appendix 3. Statistical analysis results

	Limonene
R Square	0.9995
Regression coefficient B	1.6424
t-value of coefficient B	97.54
Intercept B ₀	-44.449
t-value of intercept B ₀	-5.131
F-value	9513.87
F _{0.05} (critical F-value at $\alpha = 0.05$)	6.61
t _{0.05} (critical t-value at $\alpha = 0.05$)	2.57
Regression equation	$\hat{y} = 1.642x - 44.449$
Linearity range ($\mu\text{g/mL}$)	98.5 - 985

Appendix 4. Results of the linearity range assessment for limonene

SUMMARY OUTPUT

<i>Regression Statistics</i>	
Multiple R	0.999737
R Square	0.999475
Adjusted R Square	0.99937
Standard Error	12.15544
Observations	7

ANOVA

	<i>df</i>	<i>SS</i>	<i>MS</i>	<i>F</i>	<i>Significance F</i>
Regression	1	1405718.4	1405718.441	9513.870138	2.14744E-09
Residual	5	738.77319	147.7546383		

Total 6 1406457.2

	<i>Coefficients</i>	<i>Standard Error</i>	<i>t Stat</i>	<i>P-value</i>	<i>Lower 95%</i>	<i>Upper 95%</i>	<i>Lower 95,0%</i>	<i>Upper 95,0%</i>
Intercept	-44.44894	8.6634989	-5.13059872	0.003674232	-66.719169	22.17870336	-66.71916898	-22.17870336
Concentration	1.642359	0.016838	97.5390698	2.14744E-09	1.599075436	1.685642136	1.599075436	1.685642136

Appendix 5. Results of the repeatability evaluation

No.	Peak area (pA*s)	Limonene content (%)
1	568.700	84.879
2	574.500	84.634
3	566.900	84.651
4	566.900	84.639
5	569.000	84.910
6	570.400	84.613
Mean	569.400	84.721
RSD (%)	0.498	0.16

Appendix 6. Results of the accuracy evaluation

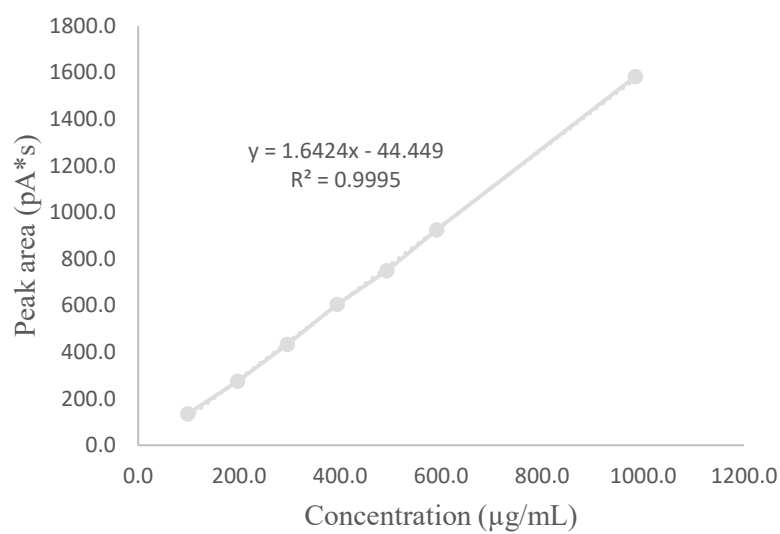
Spiked level (%)	Standard added		Amount found based on peak area			Mean recovery (%)	RSD (%)
	C (µg/mL)	S (pA*s)	Replicate 1 (pA*s)	Replicate 2 (pA*s)	Replicate 3 (pA*s)		
80%	320	441.292	453.000	449.700	454.100	102.487	0.531
100%	400	599.651	608.700	611.500	612.400	101.870	
120%	480	744.030	774.900	765.300	764.100	103.235	

Where C: concentration; S: peak area

Appendix 7. Quality evaluation results of Pomelo peel essential oil

No.	Density	Refractive Index	Specific optical rotation	Residue after evaporation	Limonene content	
					CG	CM
1	0.854	1.475	93.360	1.624	84.613	97.951
2	0.854	1.476	93.360	1.620	83.288	97.974
3	0.853	1.475	93.360	1.625	84.634	97.954
Mean	0.854	1.475	93.360	1.623	84.178	97.960
SD	0.001	0.001	0	0.003	0.771	0.013

Where CG-Citrus grandis, CM-Citrus maxima



Appendix 8. Graph showing the correlation between concentration and peak area

