Supplementary Material

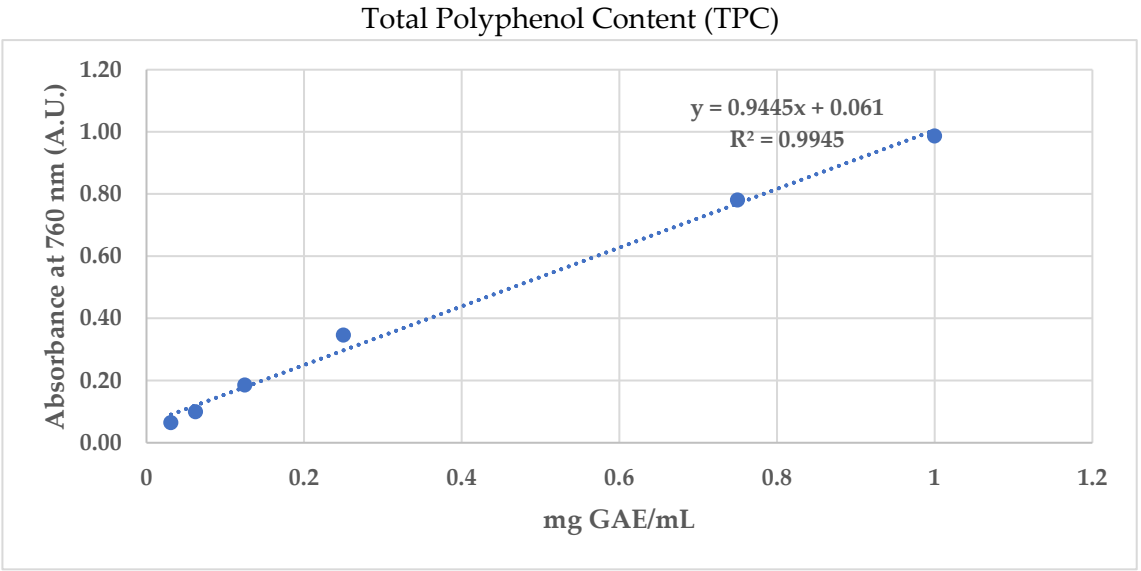
Transylvanian Grape Pomaces as Sustainable Sources of Antioxidant Phenolics and Fatty Acids - A Study of White and Red Cultivars

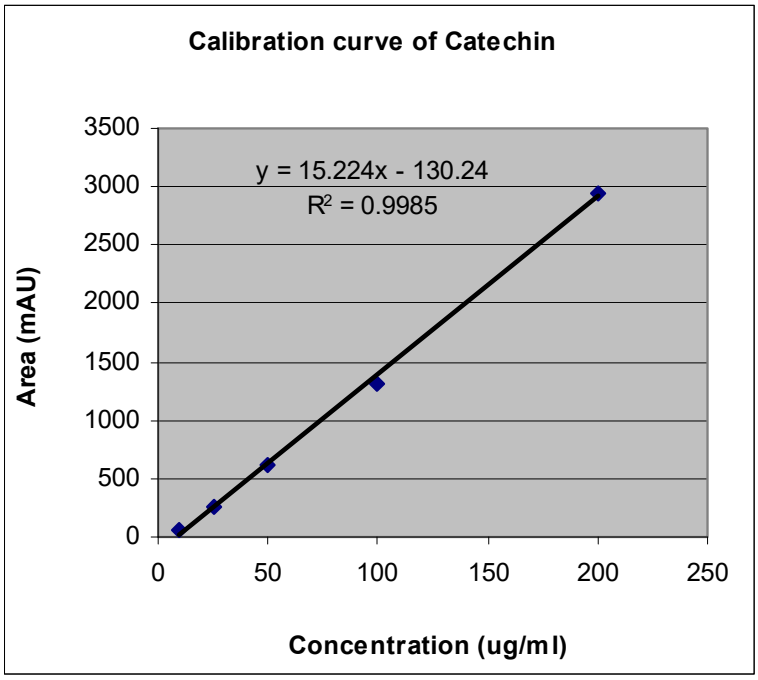
Veronica Sanda Chedea[1] *, Liliana Lucia Tomoiagă[1], Mariana Ropota[2], Gabriel Marc[3], Floricuta Ranga[4], Maria Doinița Muntean[1], Alexandra Doina Sîrbu[1], Ioana Sorina Giurca[1], Maria Comșa[1], Ioana Corina Bocsan[5], Anca Dana Buzoianu[5], Hesham Kisher[6], Raluca Maria Pop [5]*

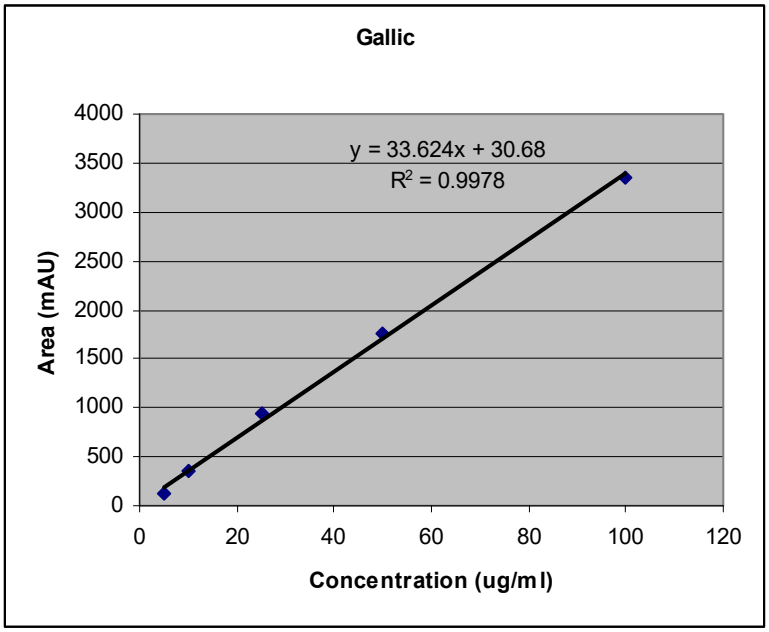
[1]Research Station for Viticulture and Enology Blaj (SCDVV Blaj), Gheorhe Barițiu Street, No 2, Blaj, Romania; chedeaveronica@yahoo.com (V.S.C), tomoiagaliliana@yahoo.com (L.L.T), maria.doinita@gmail.com (M.D.M), sirbu.alexandra@ymail.com (A.D.S), tirnovean.ioana@gmail.com (I.S.G), comsa_m@yahoo.com (M.C),
[2]Laboratory of Chemistry and Nutrition Physiology, National Research Development Institute for Animal Biology and Nutrition (IBNA Balotesti), Balotesti, Ilfov, Romania; m.ropota@yahoo.com (M.R)
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[5]Pharmacology, Toxicology and Clinical Pharmacology, Department of Morphofunctional Sciences, "Iuliu Hațieganu" University of Medicine and Pharmacy, Victor Babeș, No 8, 400012, Cluj-Napoca, Romania, raluca_parlog@yahoo.com (R.M..P), bocsan.corina@umfcluj.ro (I.C.B), abuzoianu@**umfcluj**.ro (A.D.B)
[6]School of Applied Sciences, University of the West of England, Bristol BS16 1QY, UK; hesham.kisher@uwe.ac.uk (H.C)
*Correspondence: chedeaveronica@yahoo.com (V.S.C); raluca_parlog@yahoo.com (R.M.P)

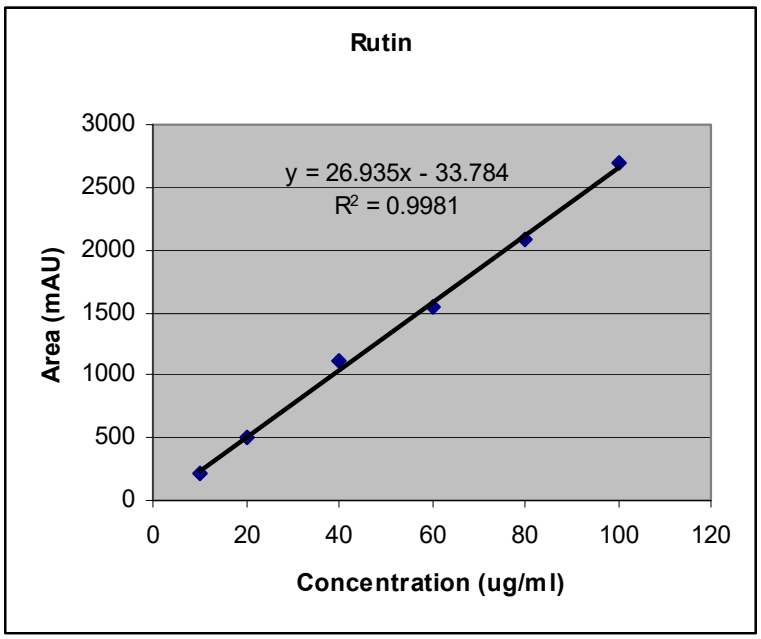
The GPs studied in this work come from Târnave vineyard. The vineyard's name derives from the location of the vineyards along the slopes bordering the valleys of the Târnave Mare and Târnava Mică rivers [28,30,31]. Renowned for producing high-quality wines with distinctive aromatic profiles and a well-balanced sugar-to-acidity ratio [28,29,31], the Târnave region offers favorable environmental conditions and a suitable growing season for grapevine cultivation.

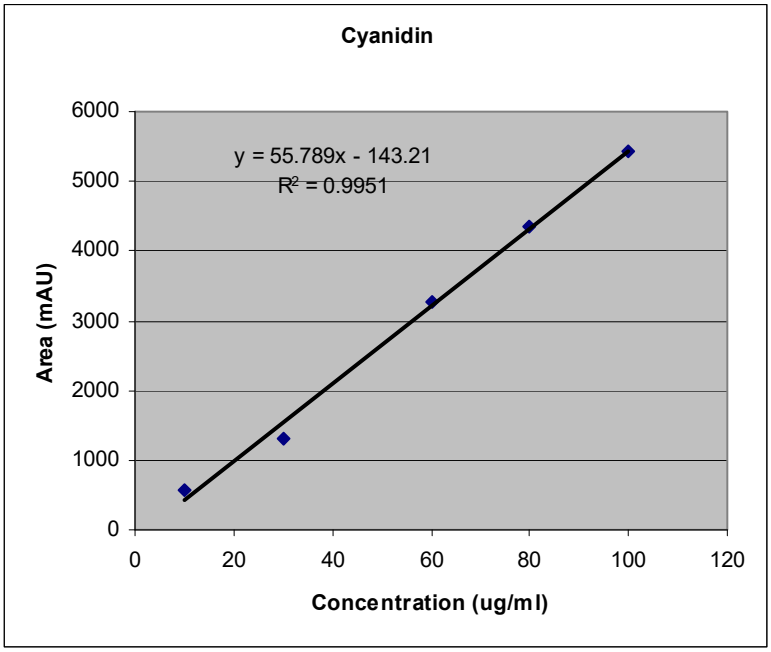
Viticulture in Transylvania has deep historical roots, dating back to antiquity and evolving through successive cultural and agricultural developments, particularly during the feudal period [28,30]. The enduring interest of local communities in grape cultivation and winemaking reflects the cultural and economic significance of this region [28].

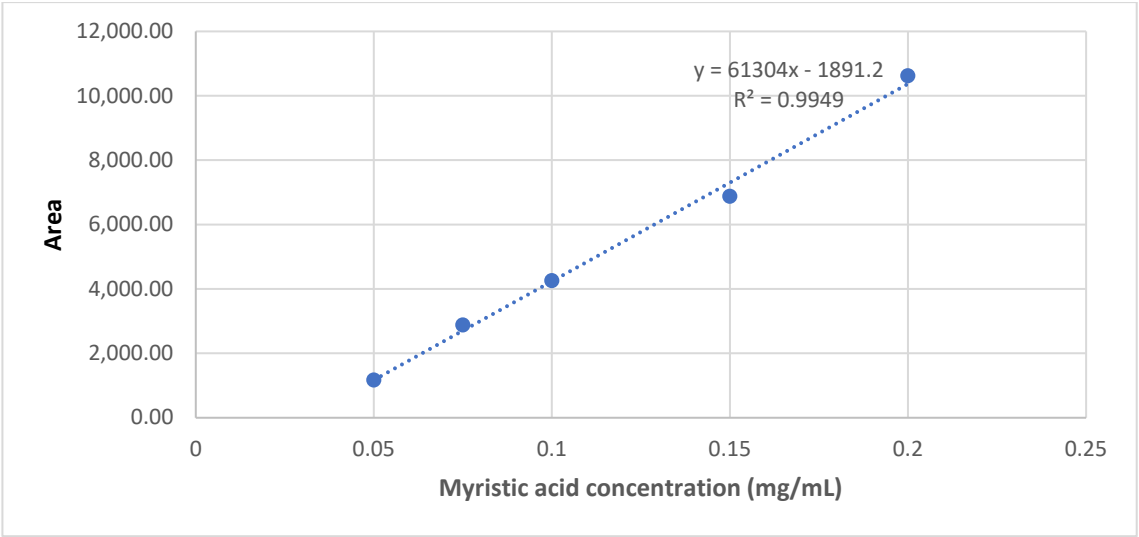


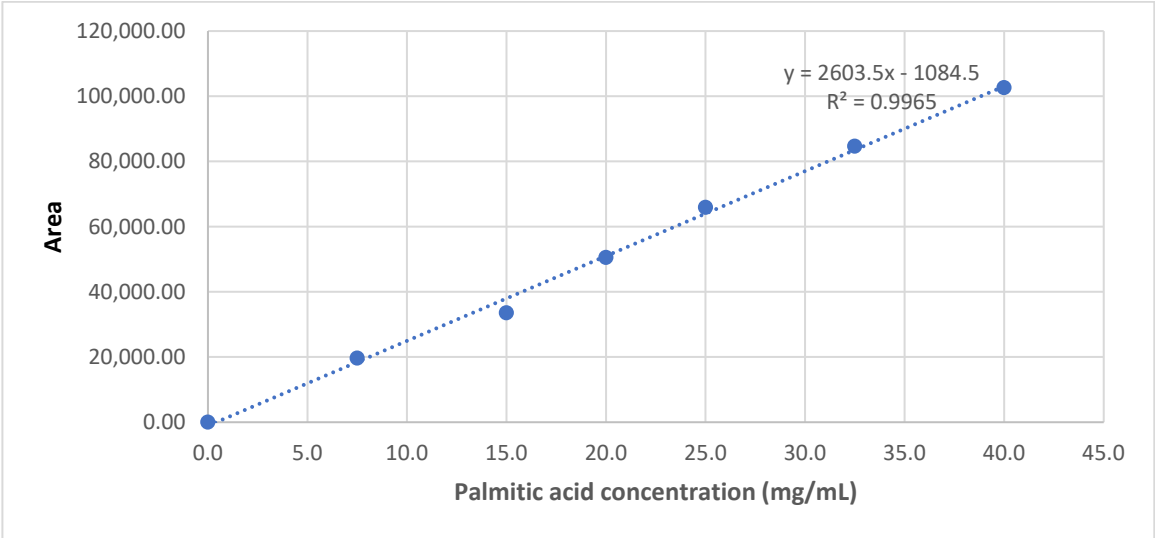

Calibration curve of Catechin
y = 15.224x - 130.24
R2 = 0.9985
Area (mAU)
Concentration (ug/ml)
0
500
1000
1500
2000
2500
3000
3500
0
50
100
150
200
250

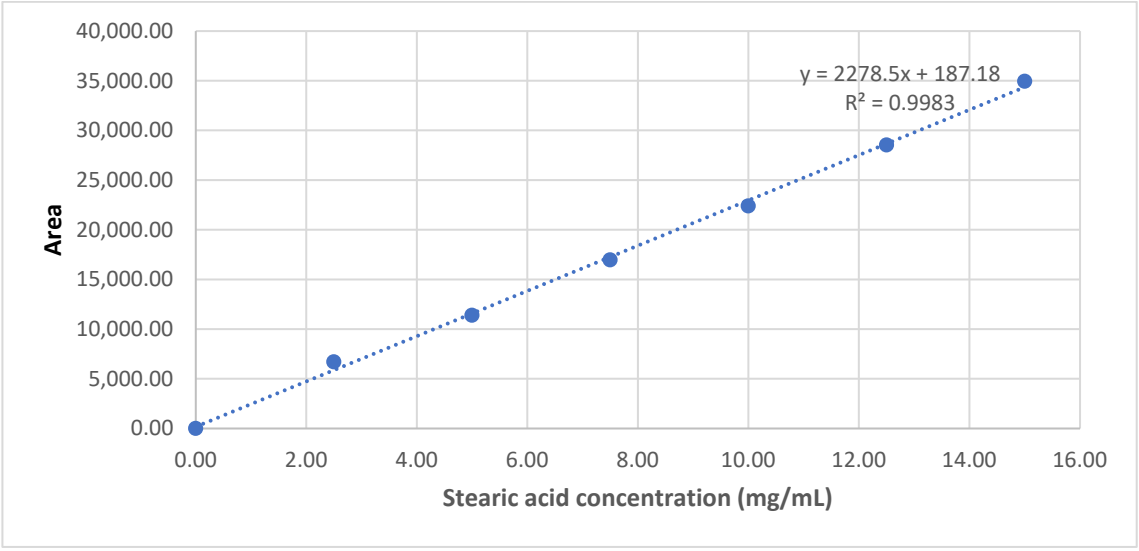

Gallic
y = 33.624x + 30.68
R2 = 0.9978
Area (mAU)
Concentration (ug/ml)
0
500
1000
1500
2000
2500
3000
3500
4000
0
20
40
60
80
100
120

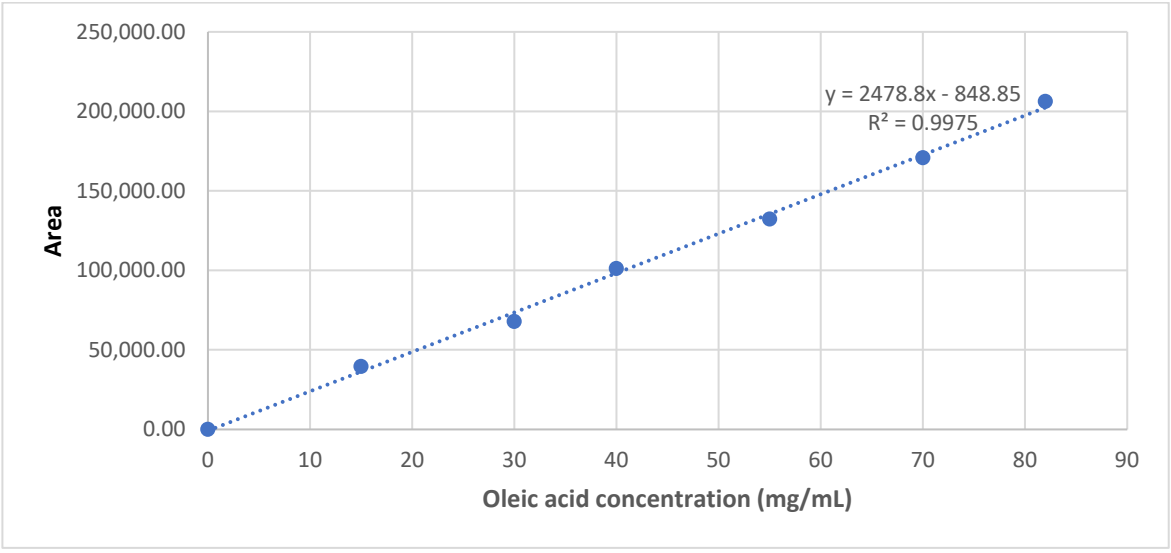

Rutin
y = 26.935x - 33.784
R2 = 0.9981
Area (mAU)
Concentration (ug/ml)
0
500
1000
1500
2000
2500
3000
0
20
40
60
80
100
120

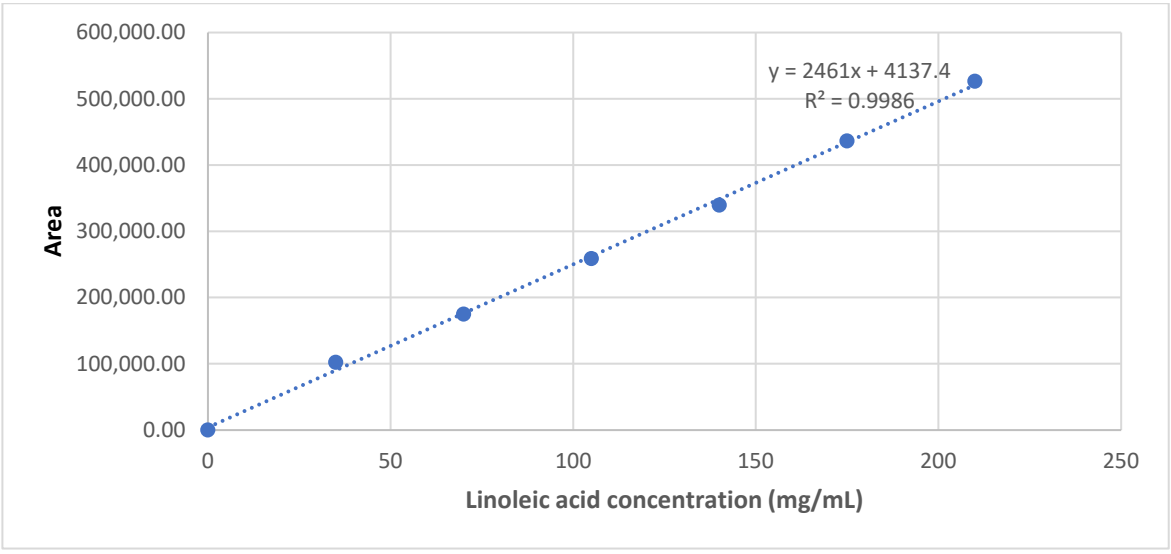

Cyanidin
y = 55.789x - 143.21
R² = 0.9951
Area (mAU)
Concentration (ug/ml)
0
1000
2000
3000
4000
5000
6000
0
20
40
60
80
100
120

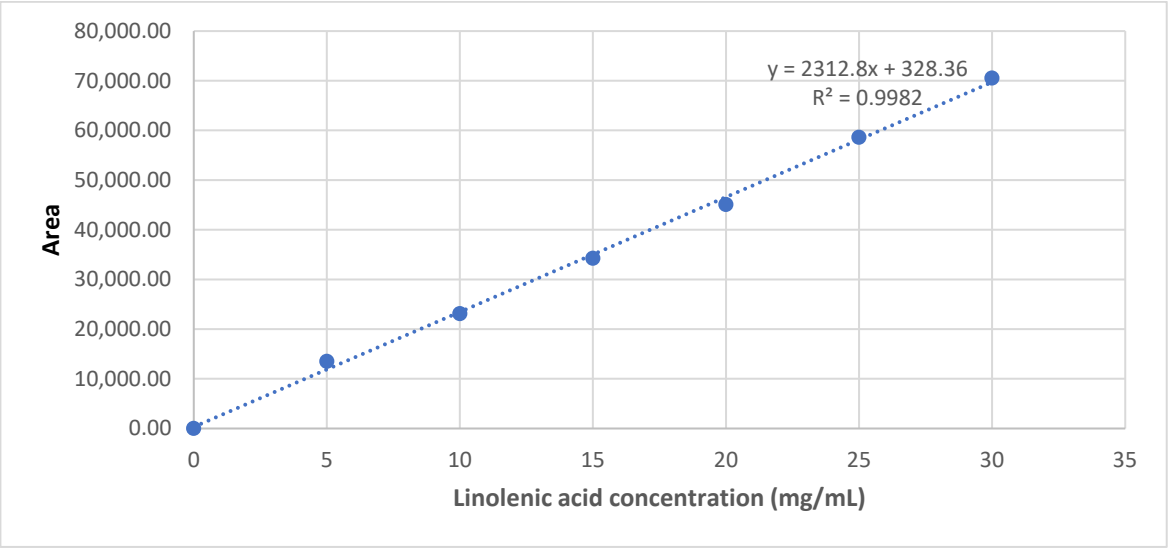

y = 61304x - 1891.2
R² = 0.9949
Area
Myristic acid concentration (mg/mL)
0.00
2,000.00
4,000.00
6,000.00
8,000.00
10,000.00
12,000.00
0
0.05
0.1
0.15
0.2
0.25


y = 2603.5x - 1084.5
R² = 0.9965
Area
Palmitic acid concentration (mg/mL)
0.00
20,000.00
40,000.00
60,000.00
80,000.00
100,000.00
120,000.00
0.0
5.0
10.0
15.0
20.0
25.0
30.0
35.0
40.0
45.0

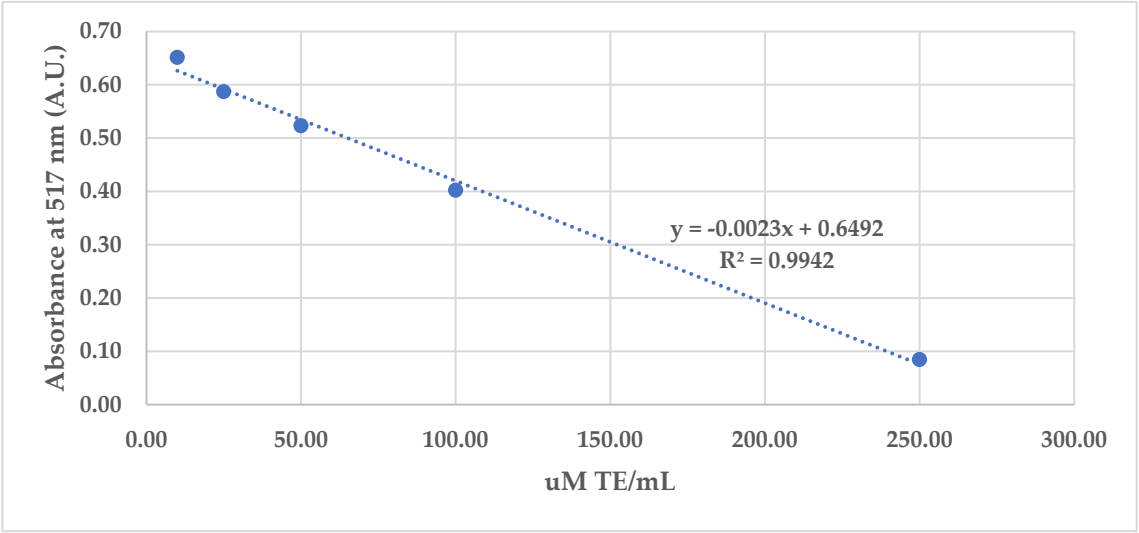

y = 2278.5x + 187.18
R² = 0.9983
Area
Stearic acid concentration (mg/mL)
40,000.00
35,000.00
30,000.00
25,000.00
20,000.00
15,000.00
10,000.00
5,000.00
0.00
0.00
2.00
4.00
6.00
8.00
10.00
12.00
14.00
16.00


y = 2478.8x - 848.85
R² = 0.9975
Area
Oleic acid concentration (mg/mL)
250,000.00
200,000.00
150,000.00
100,000.00
50,000.00
0.00
0
10
20
30
40
50
60
70
80
90

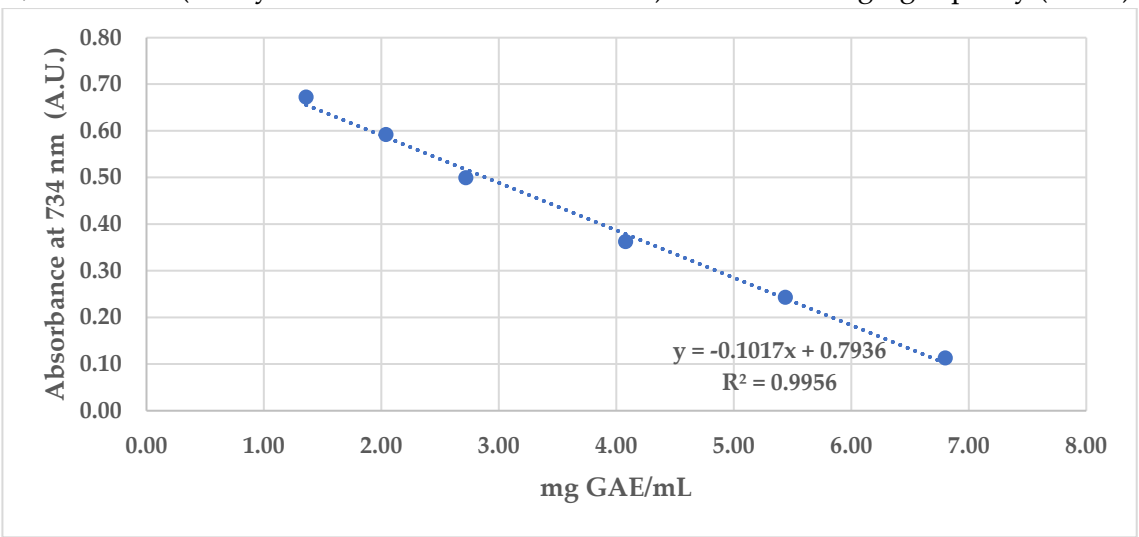

y = 2461x + 4137.4
R² = 0.9986
Area
Linoleic acid concentration (mg/mL)
600,000.00
500,000.00
400,000.00
300,000.00
200,000.00
100,000.00
0.00
0
50
100
150
200
250



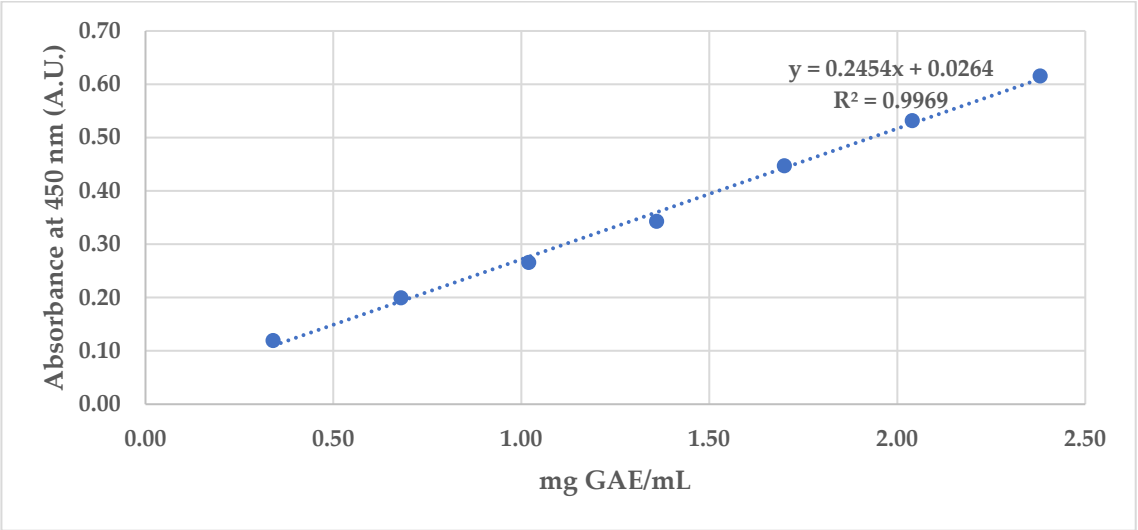
2,2-diphenyl-1-picrylhydrazyl radical-scavenging capacity (DPPH)



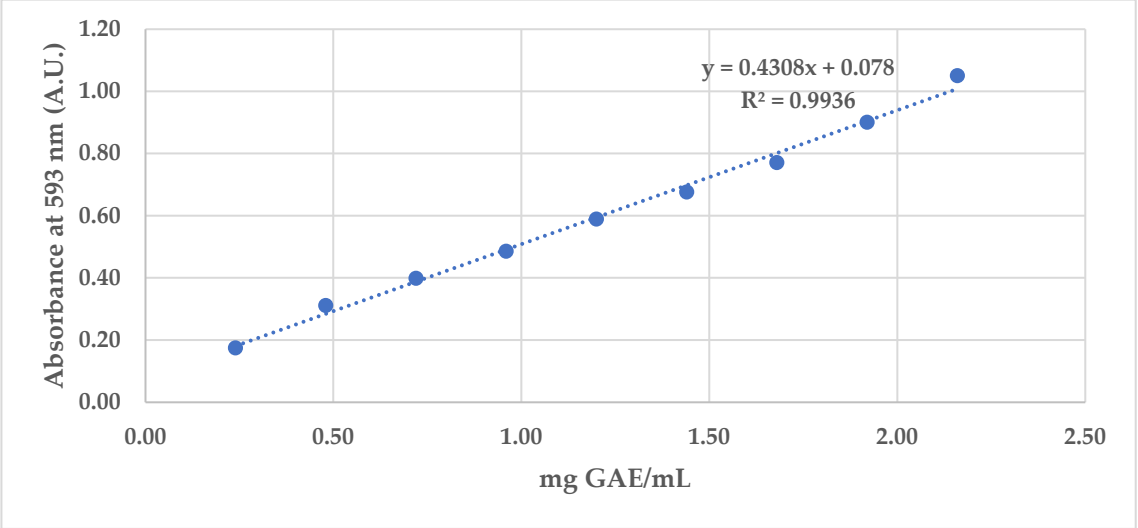
2,2′-azinobis-(3-ethylbenzthiazolin-6-sulfonic acid) radical-scavenging capacity (ABTS)



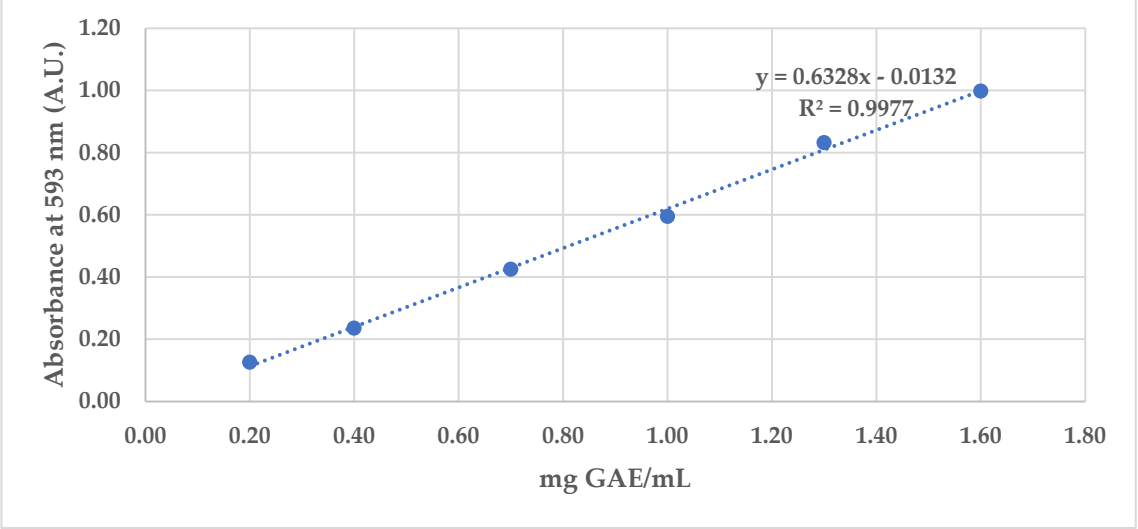
Cupric Reducing Antioxidant Capacity (CUPRAC)



Ferric Reducing Antioxidant Potential (FRAP)



Reducing Power (RP)



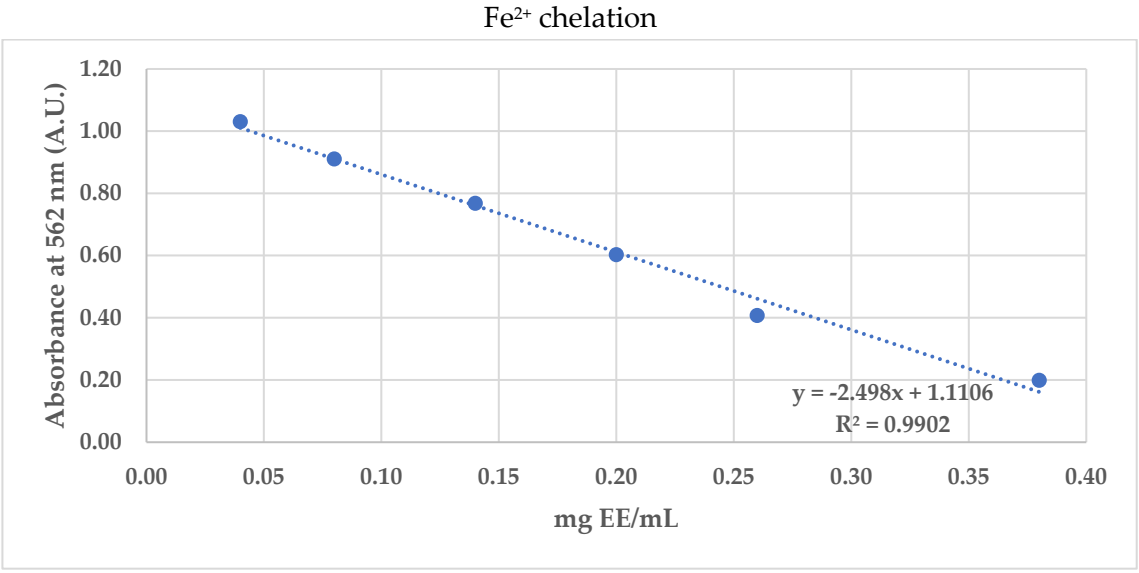
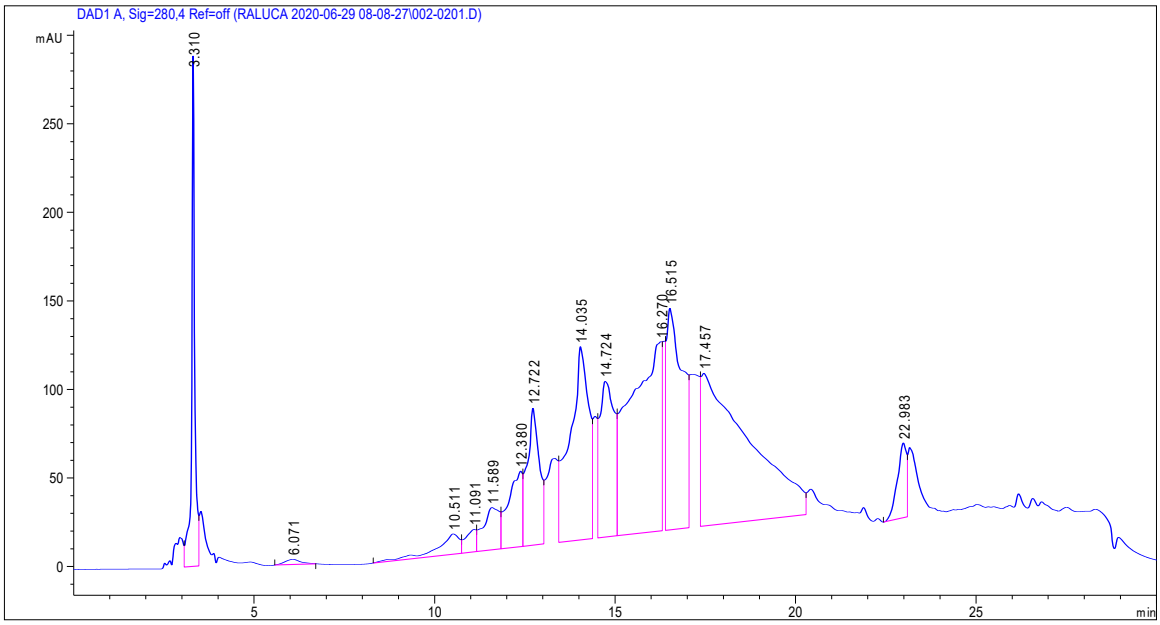


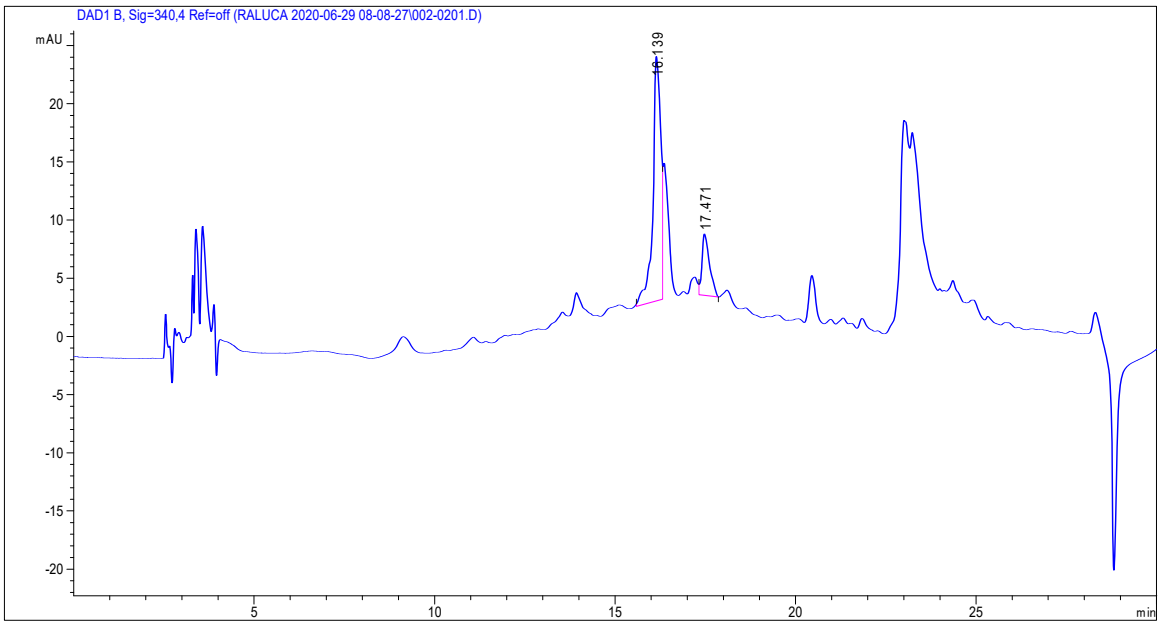
Figure S1. Calibration curves for the quantitative tests performed in this study

Table S1. Limit of detection (LOD), limit of quantification (LOQ) and recovery percentage of analyzed phenolics and fatty acids

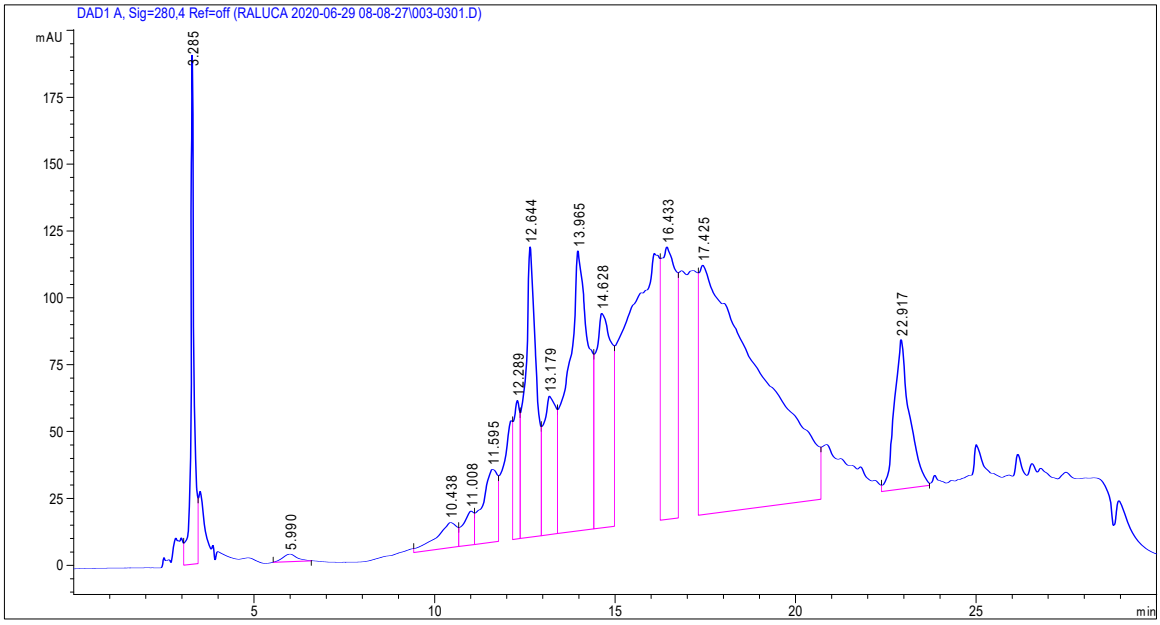
Analysed compounds (μg/mL)	LOD	LOQ	% recovery
Catechin	0.08	0.72	N/A
Gallic acid	0.36	1.44	N/A
Rutin	0.21	0.84	N/A
Cyanidin	0.36	1.44	N/A
Linolenic acid	0.002349	0.05683	98.84



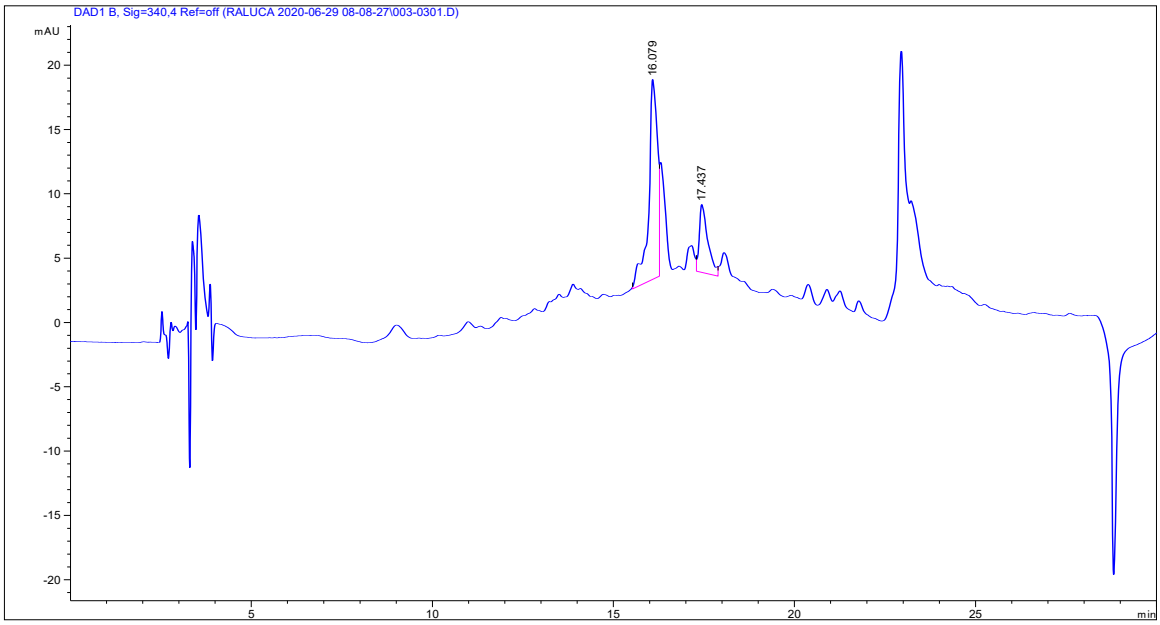
Blasius (BL)-280 nm



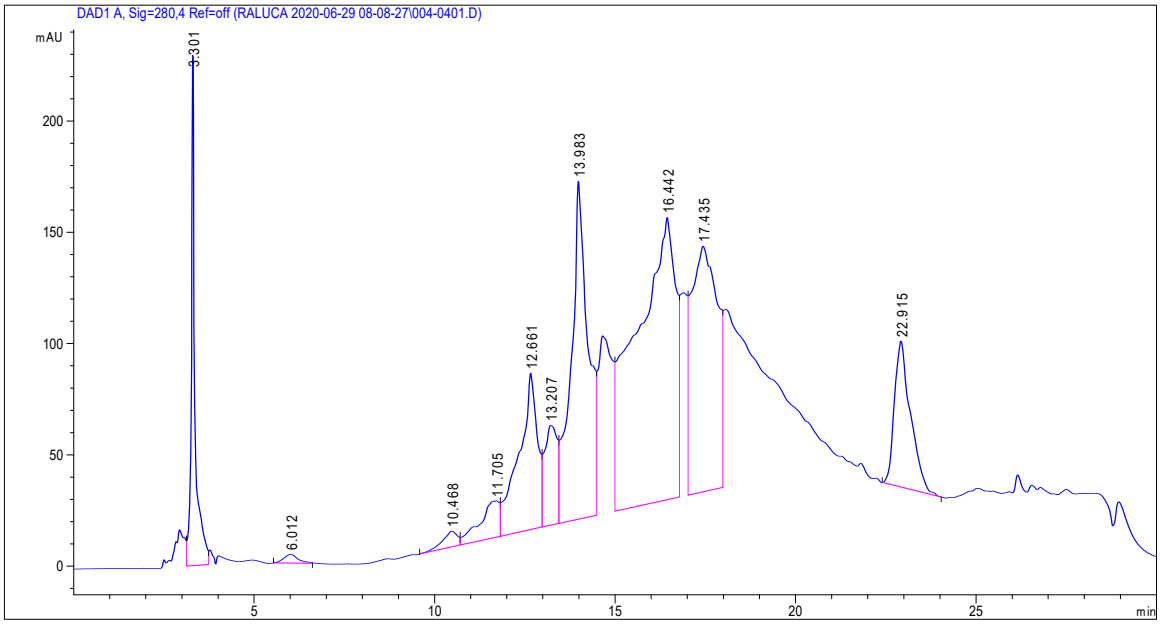
Blasius (BL)-340 nm



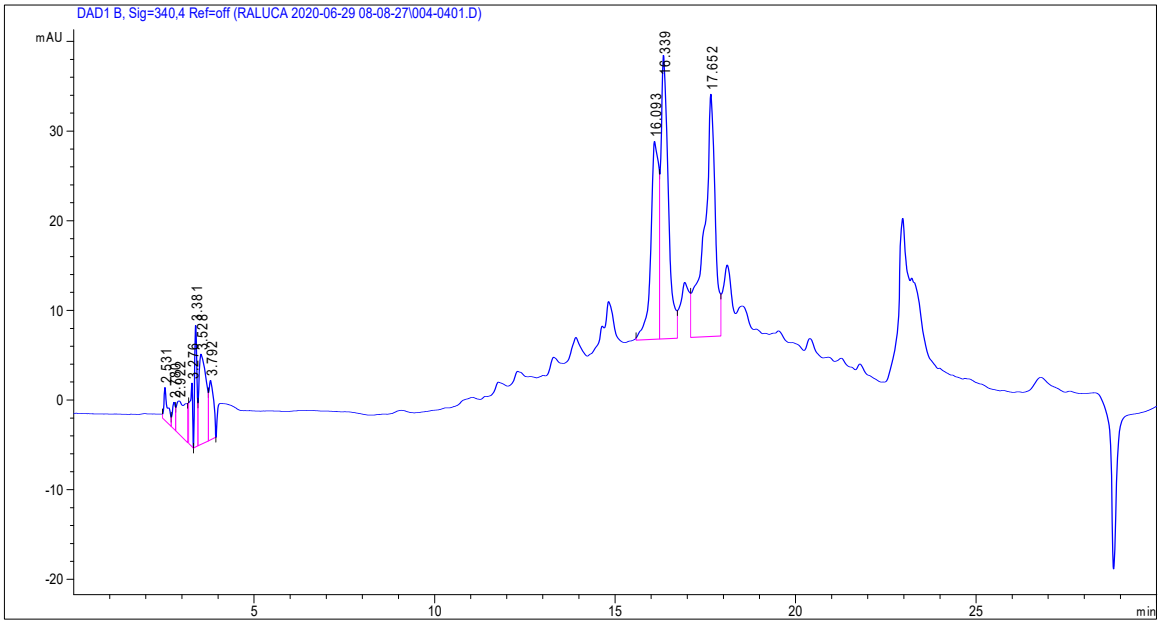
Riesling de Rhin (RR) -280 nm



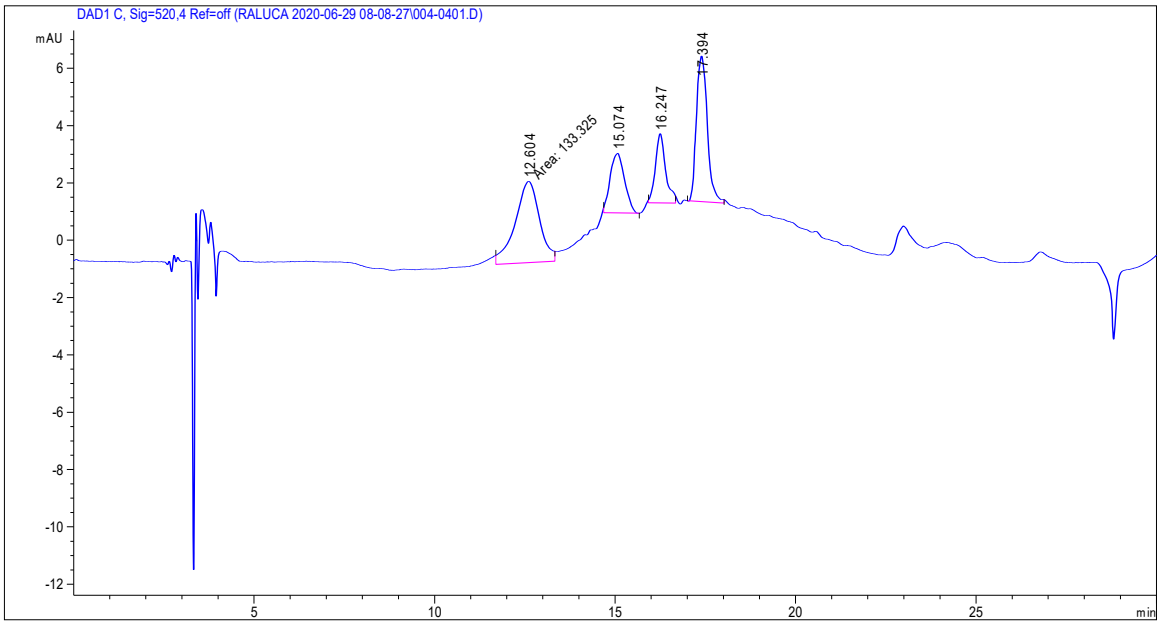
Riesling de Rhin (RR)-340 nm



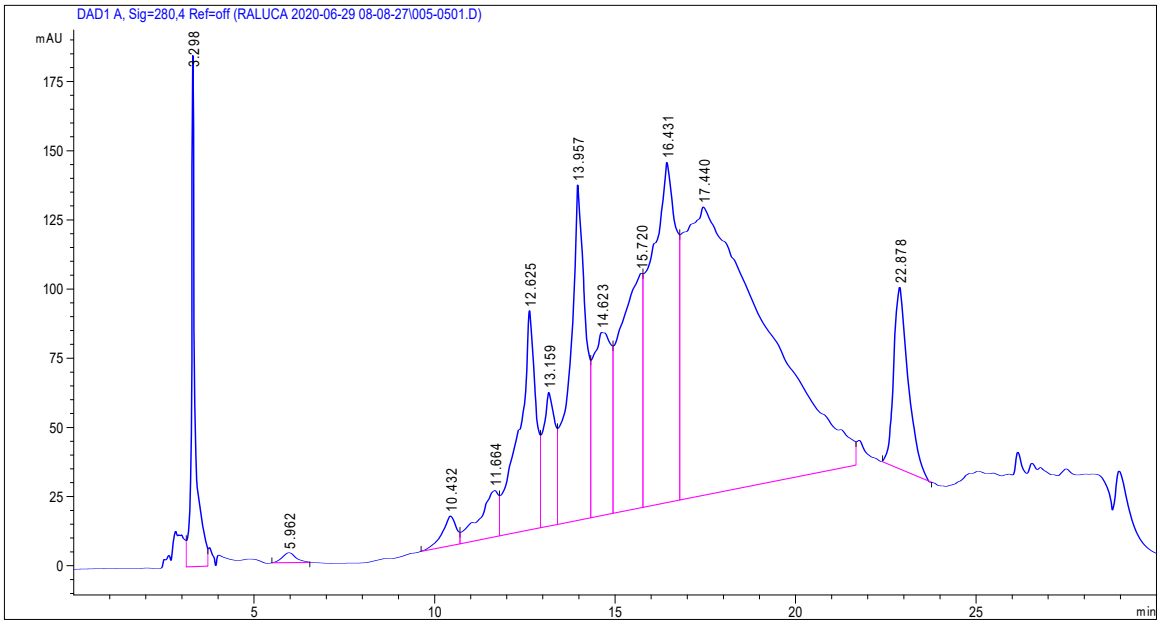
Amurg (AM)-280 nm



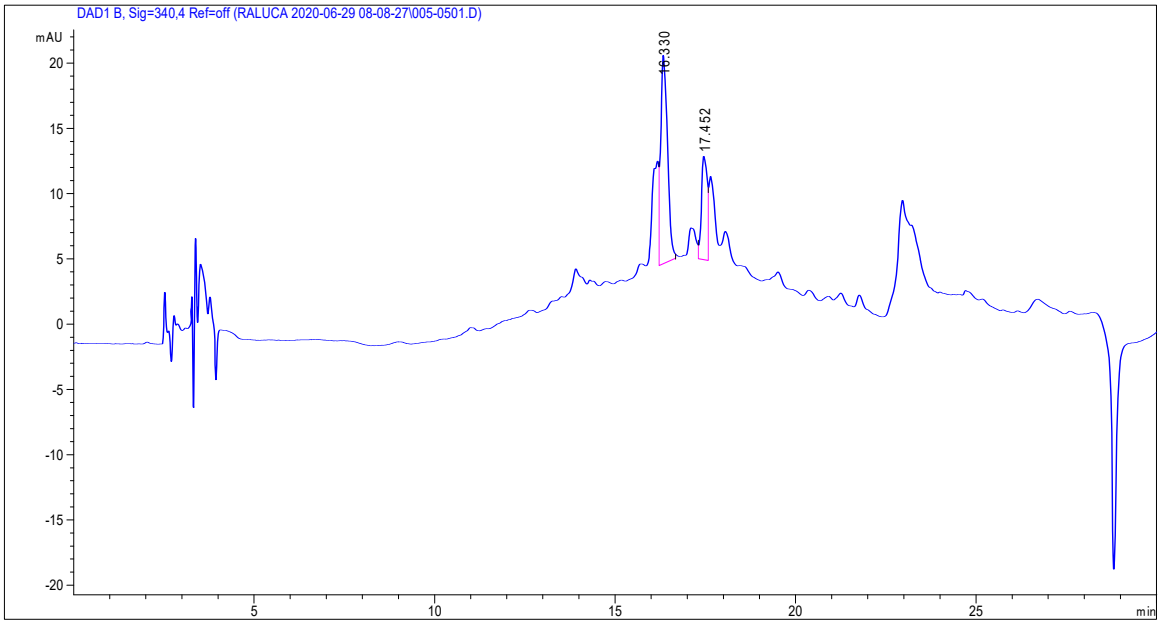
Amurg (AM)-340 nm



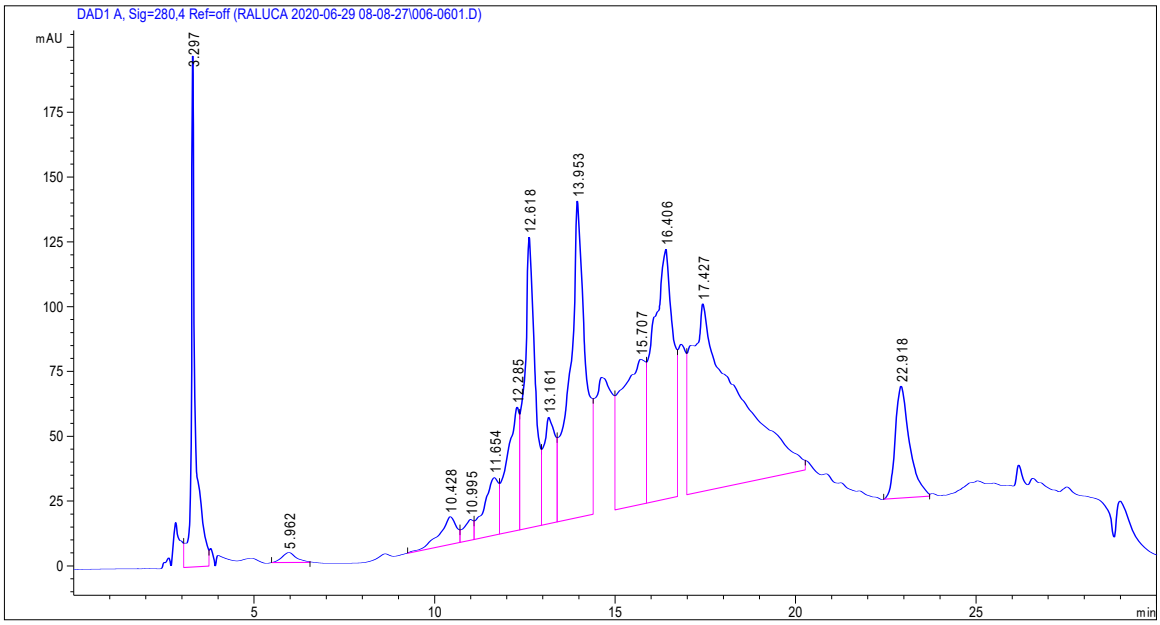
Amurg (AM)-520 nm



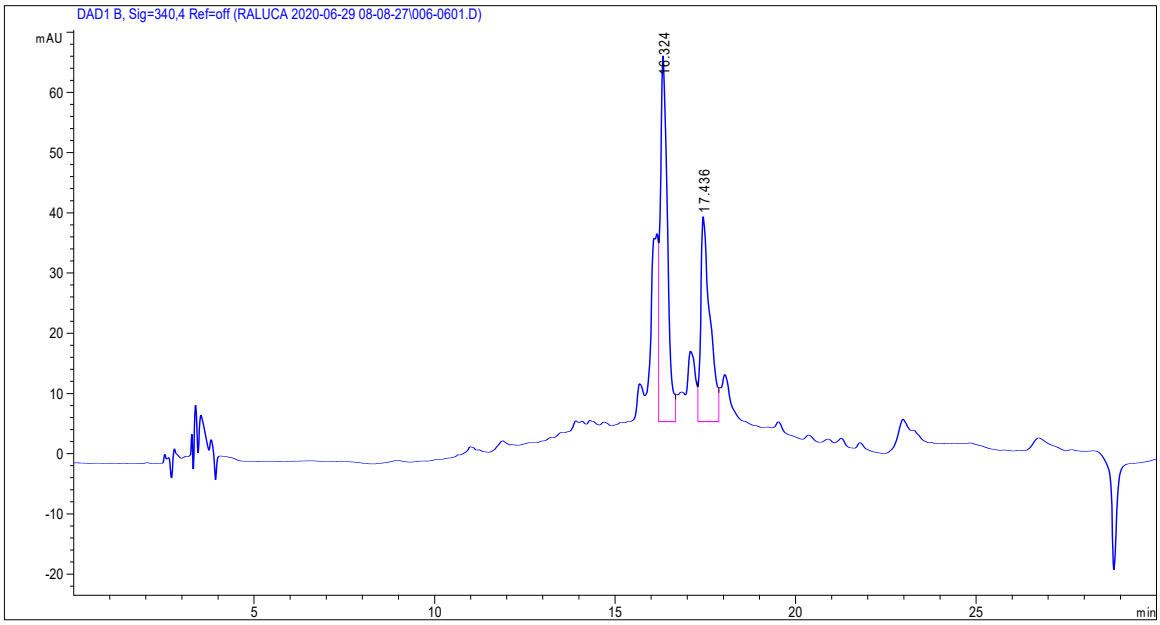
Roze Blaj (RB)-280 nm



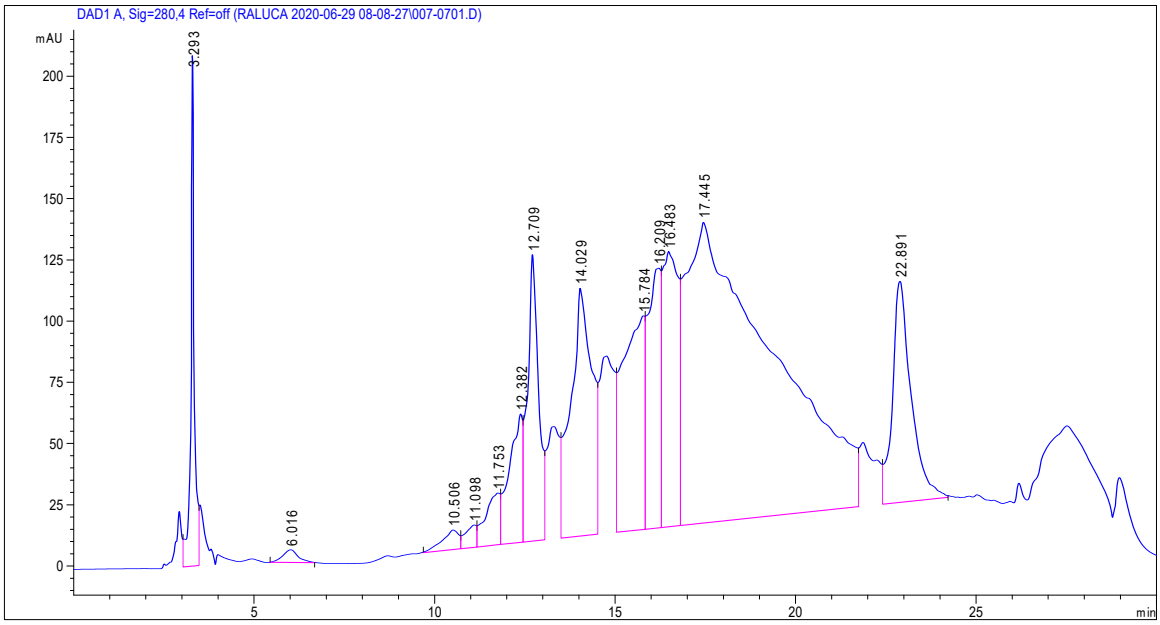
Roze Blaj (RB)-340 nm



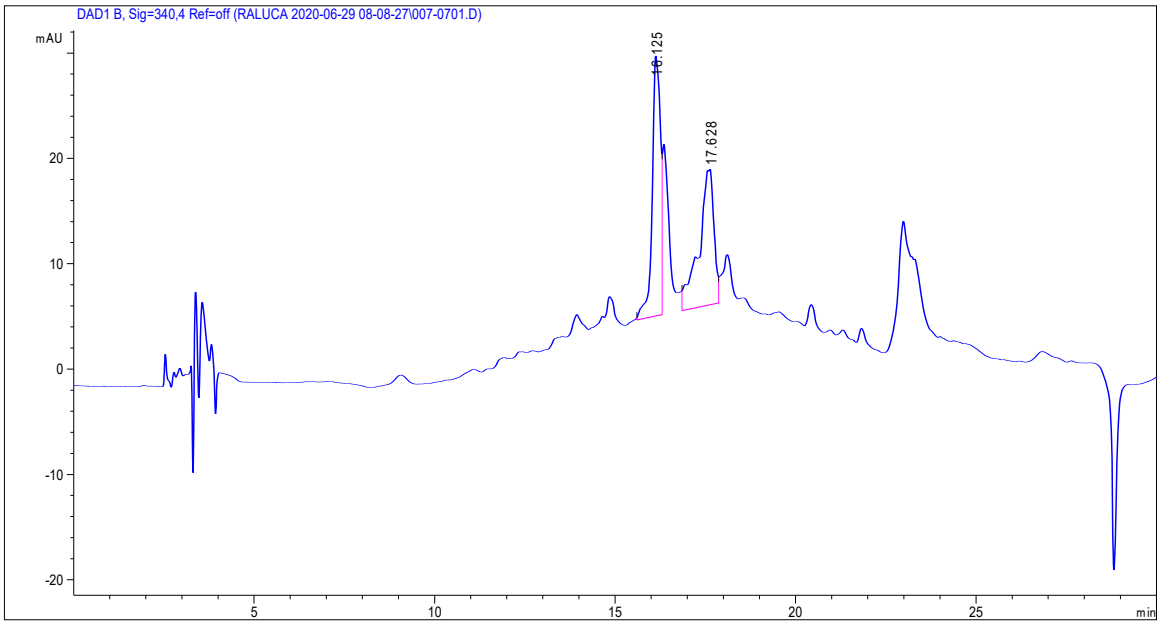
Astra-280 nm (AS)



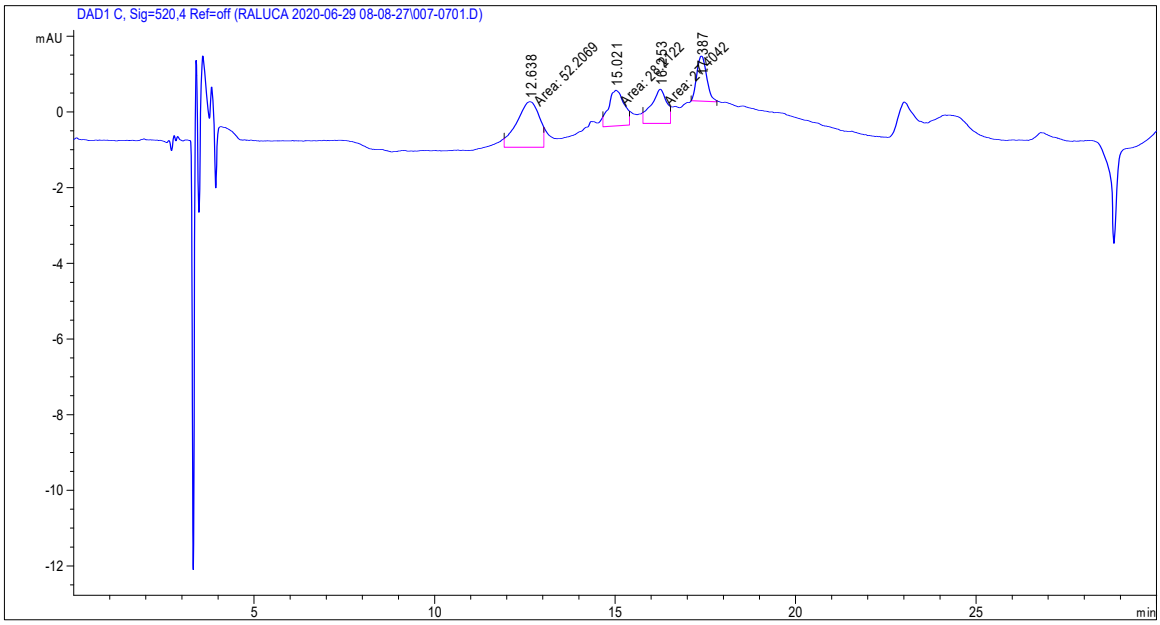
Astra (AS)-340 nm



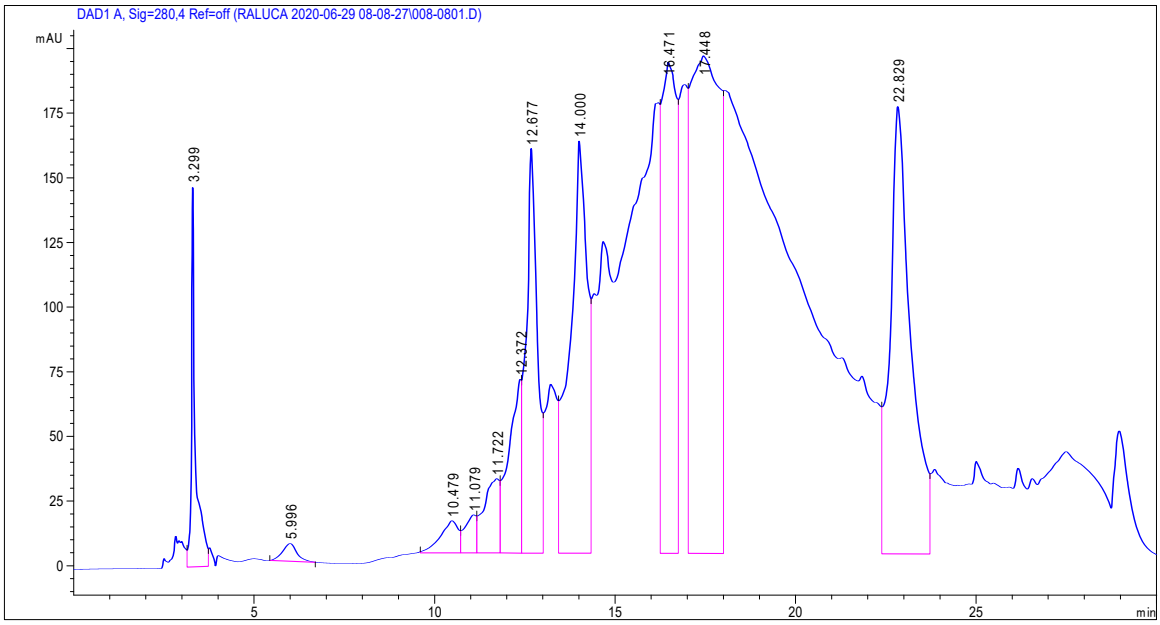
Syrah (SH)-280 nm



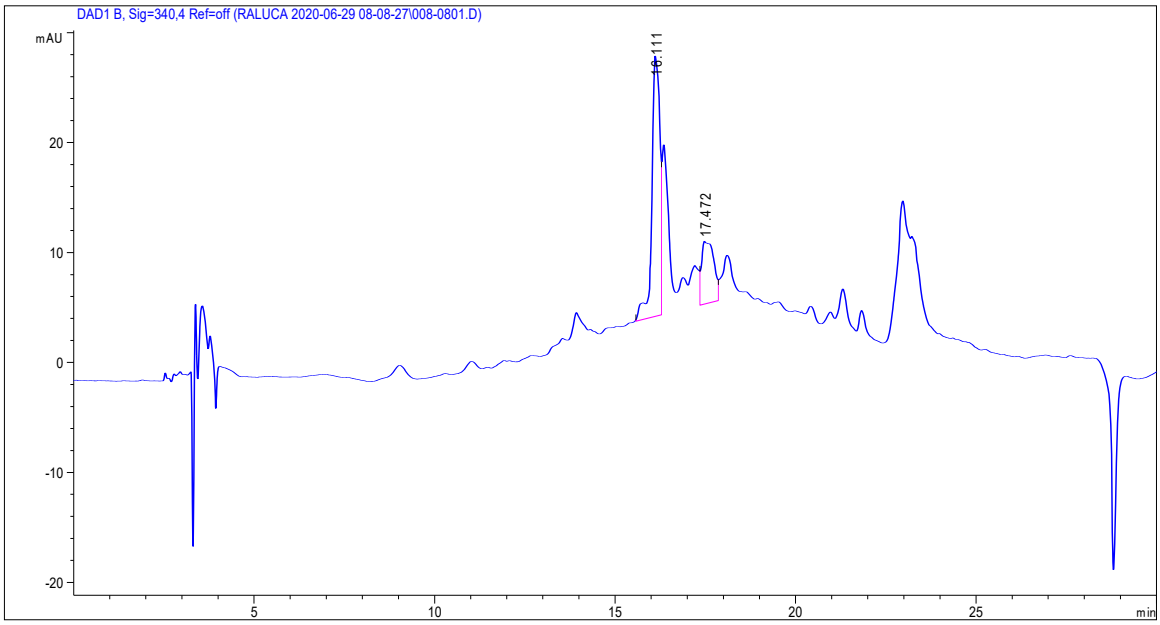
Syrah (SH)-340 nm



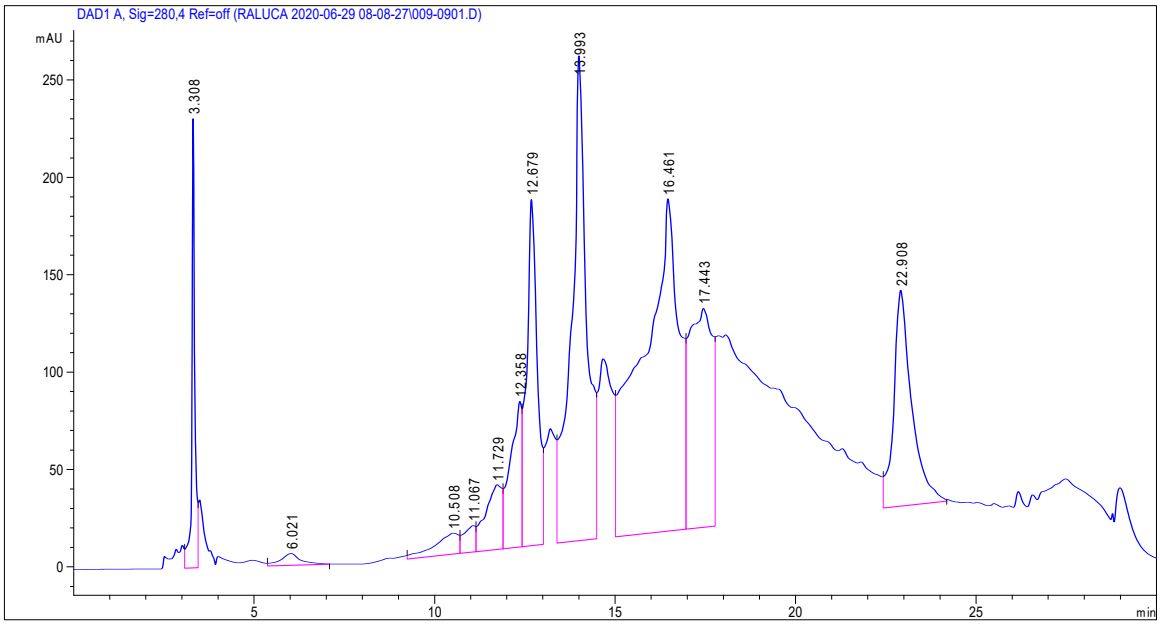
Syrah (SH)-520 nm



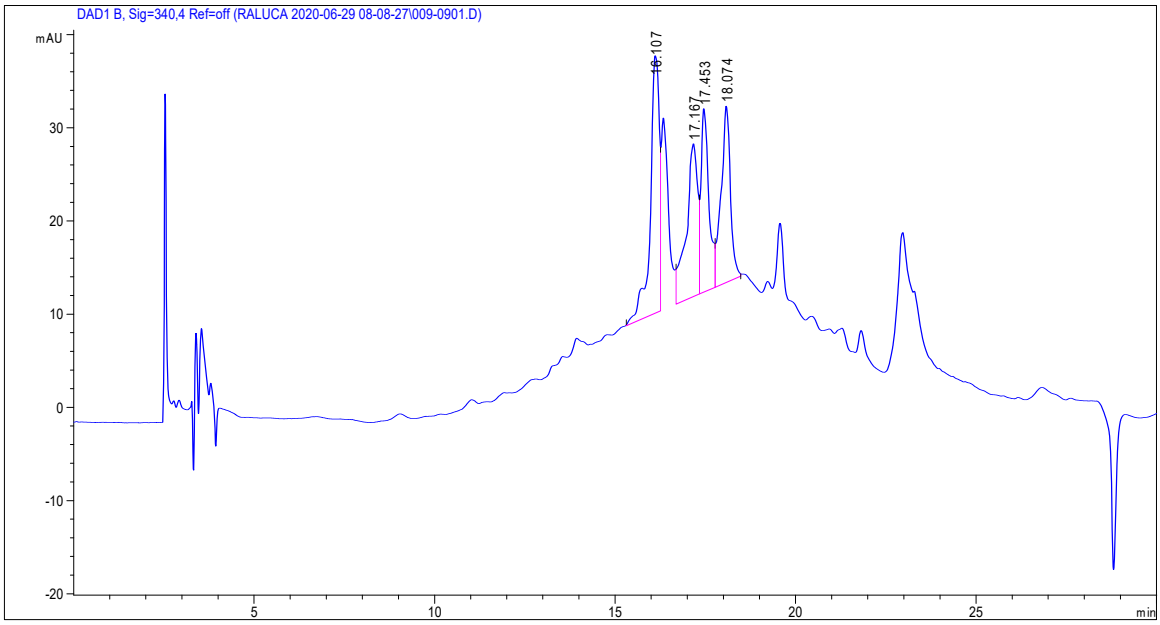
Traminer roz (TR)-280 nm



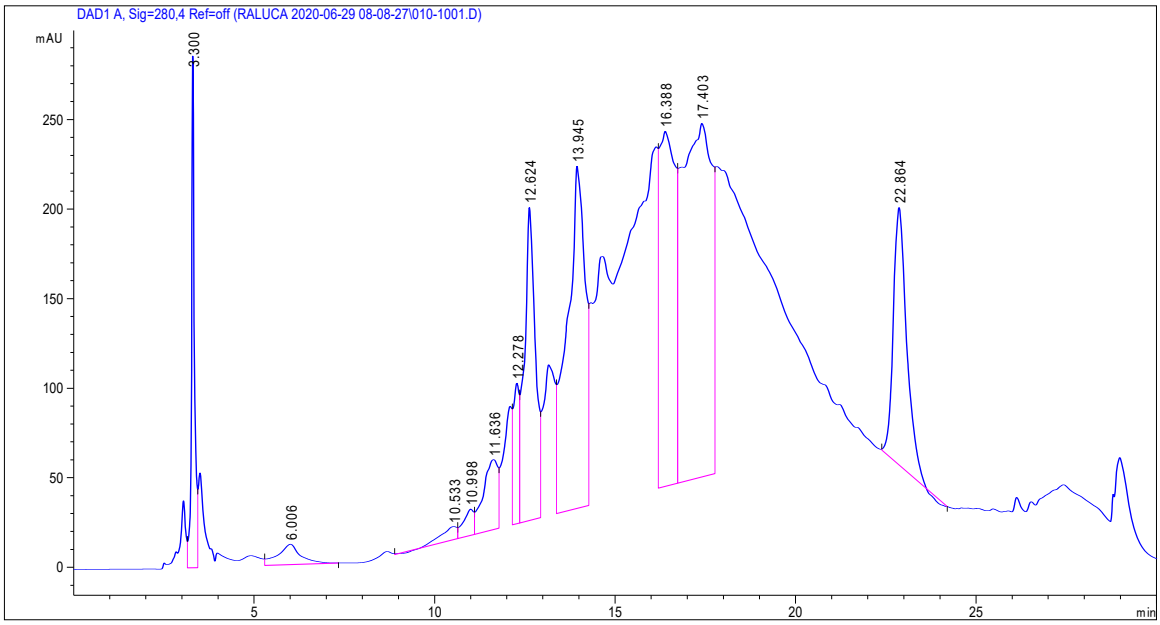
Traminer roz (TR)-340 nm



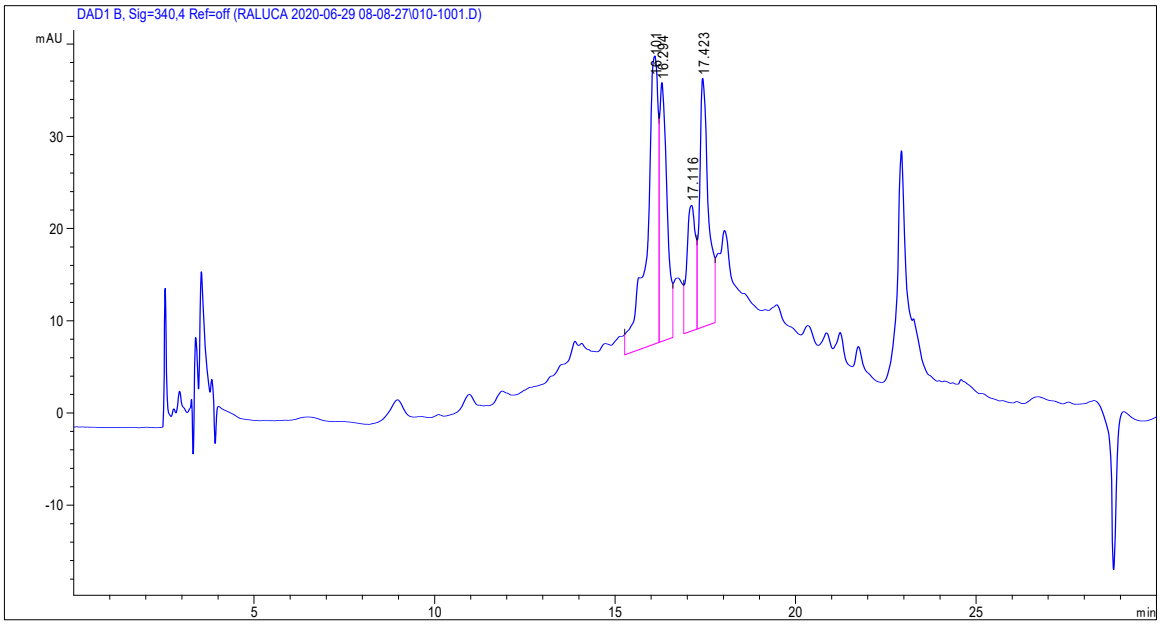
Brumăriu (BR)-280 nm



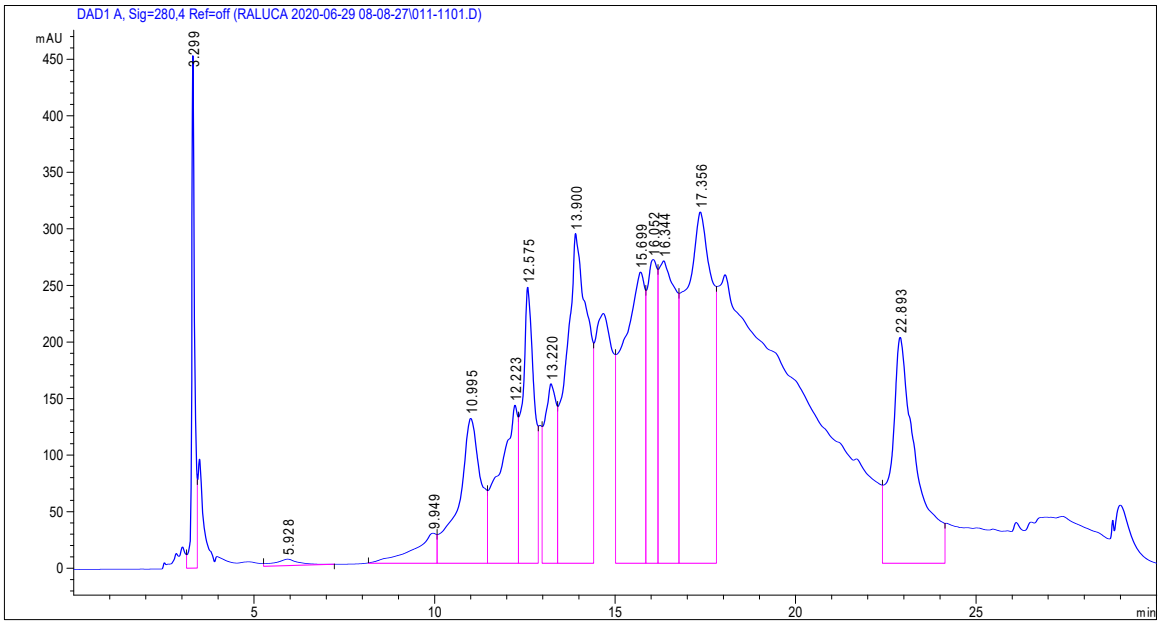
Brumăriu (BR)-340 nm



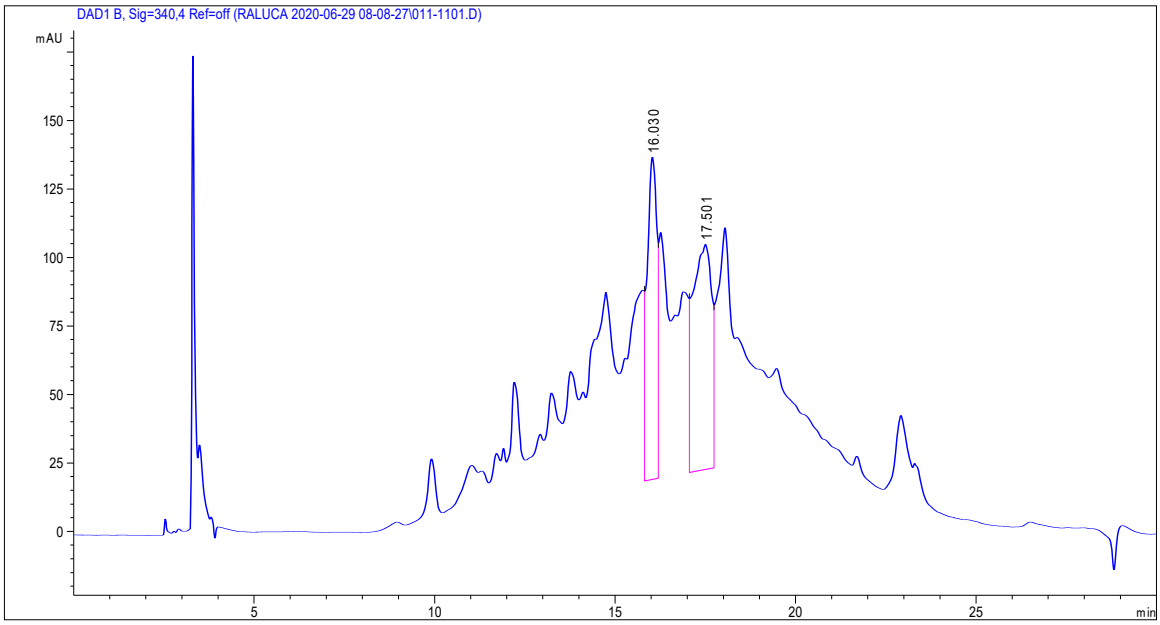
Johanniter (JO)-280 nm



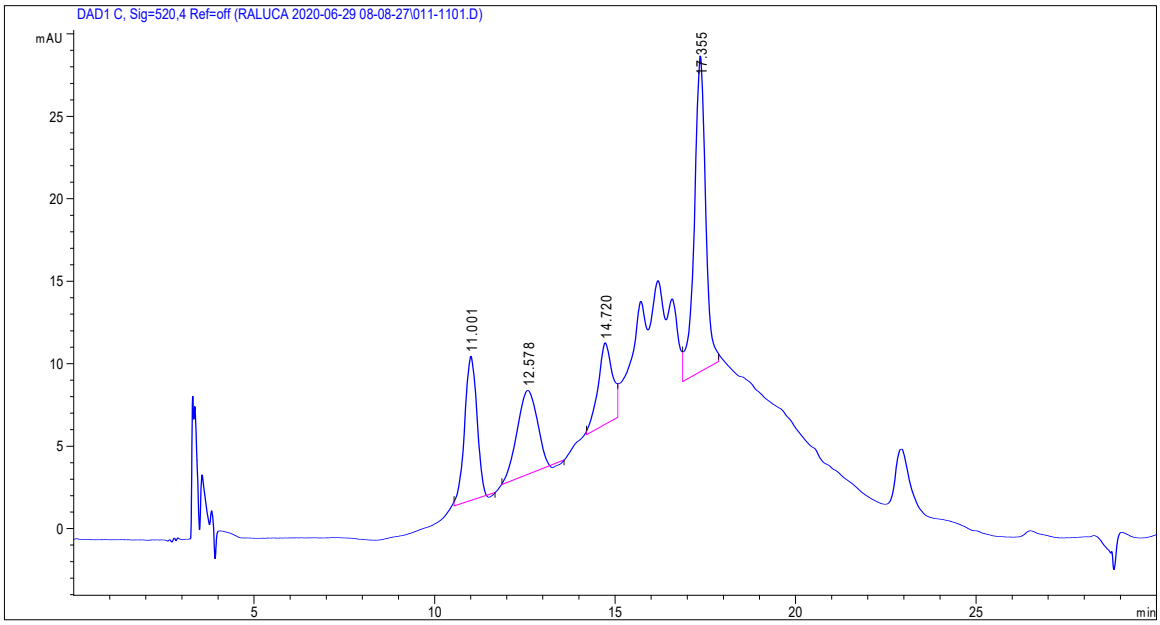
Johanniter (JO)-340 nm



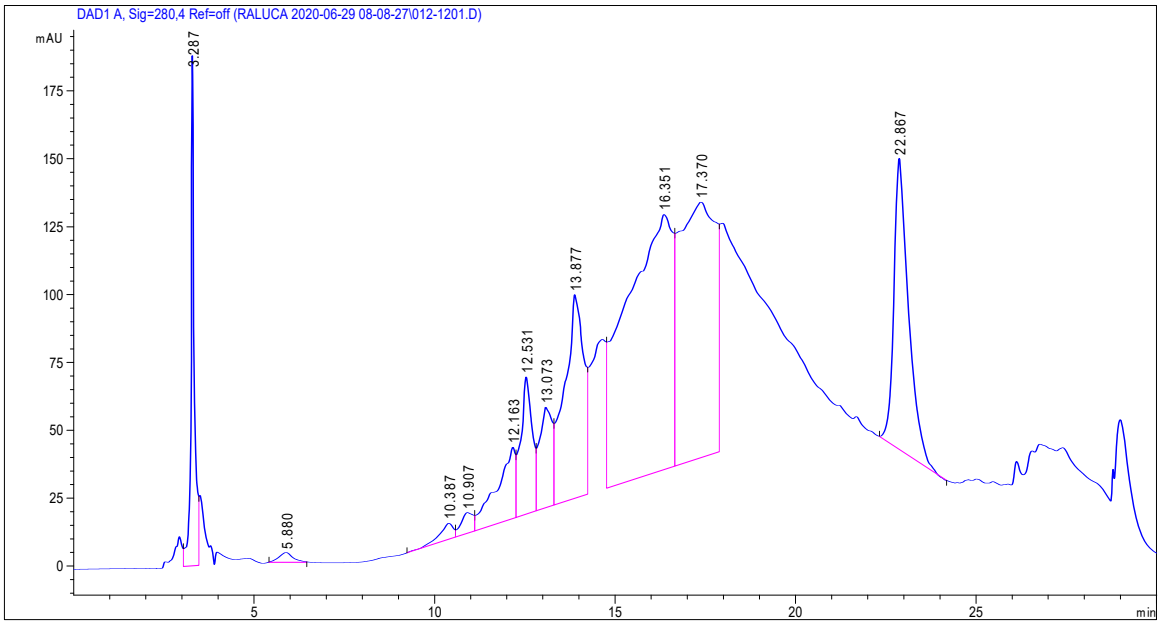
Regent (RE)-280 nm



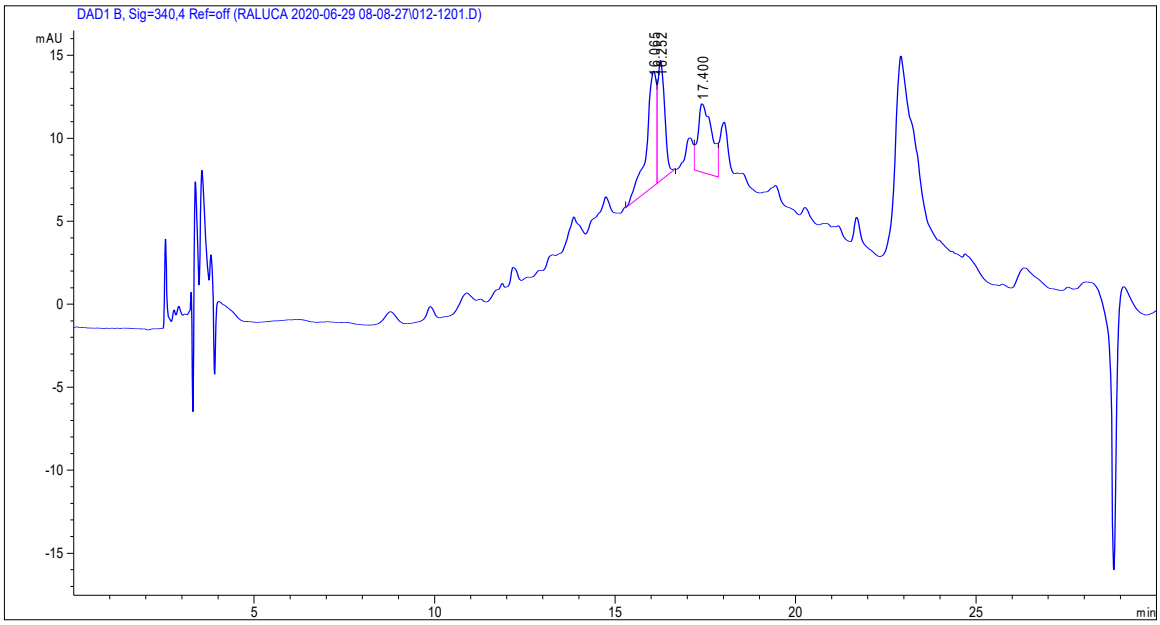
Regent (RE)-340 nm



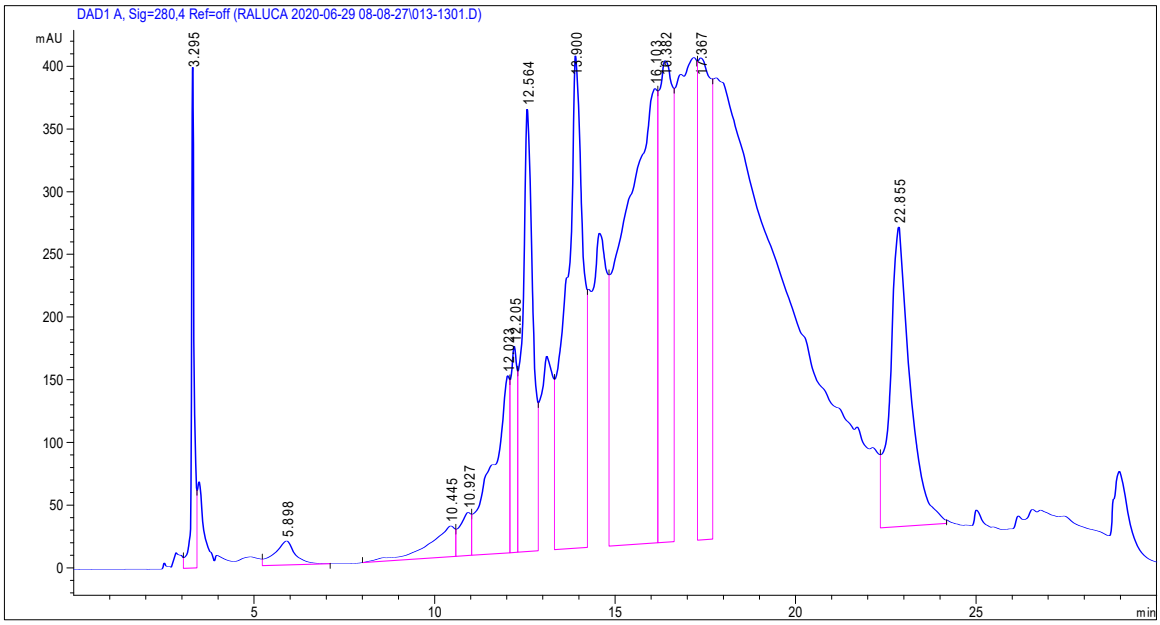
Regent (RE)-520 nm



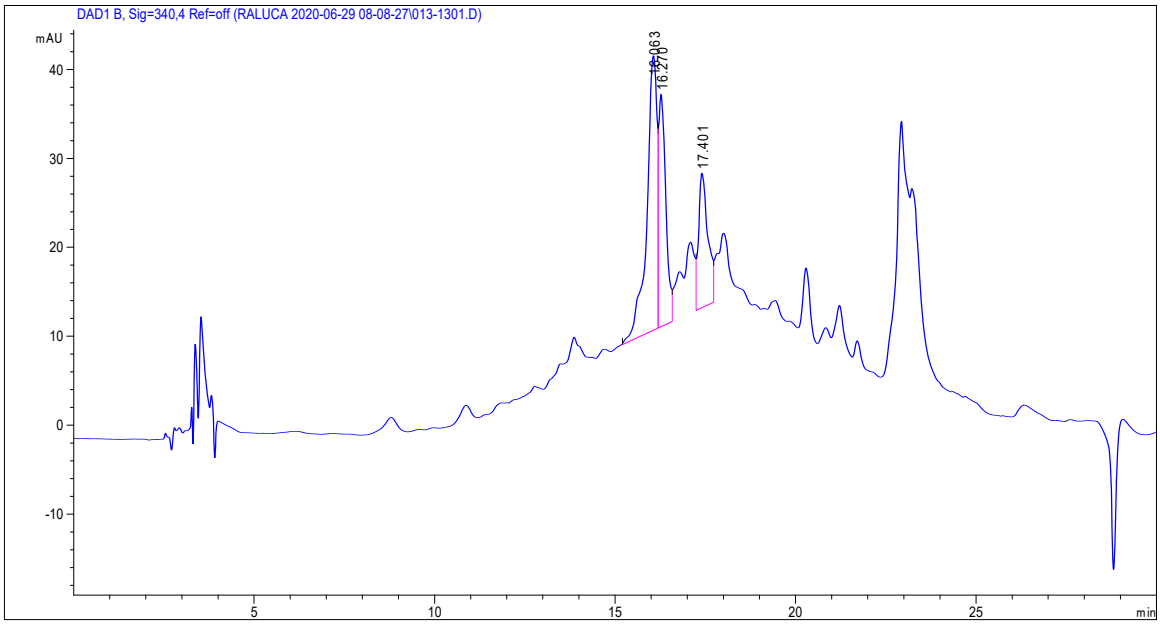
Selena (SE)-280 nm



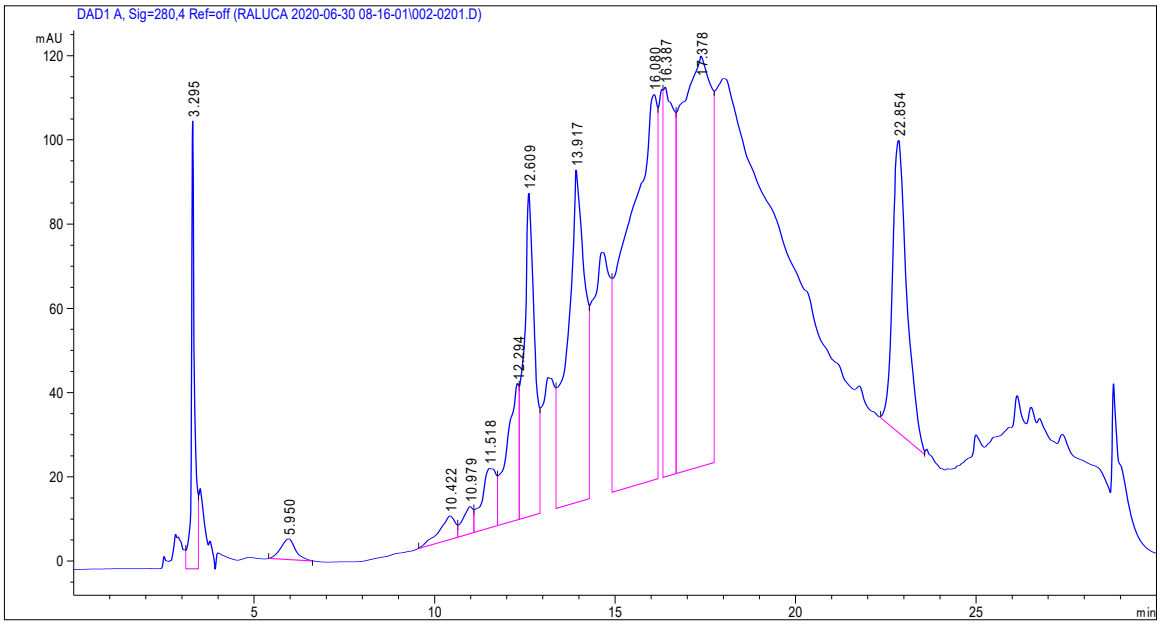
Selena (SE)-340 nm



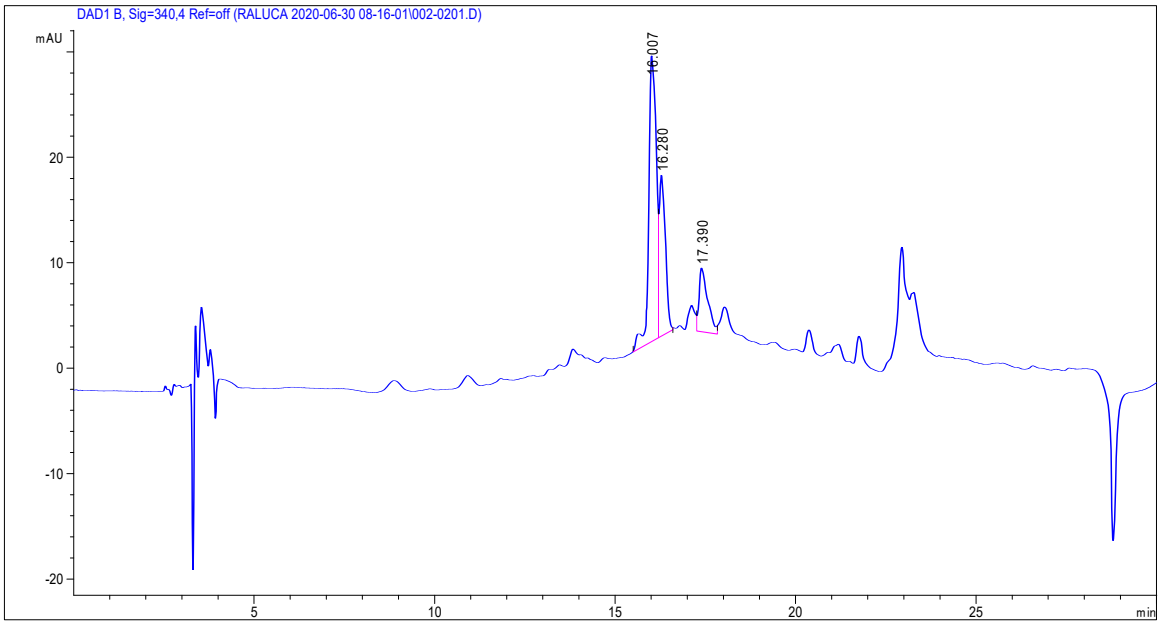
Neuburger (NE)-280 nm



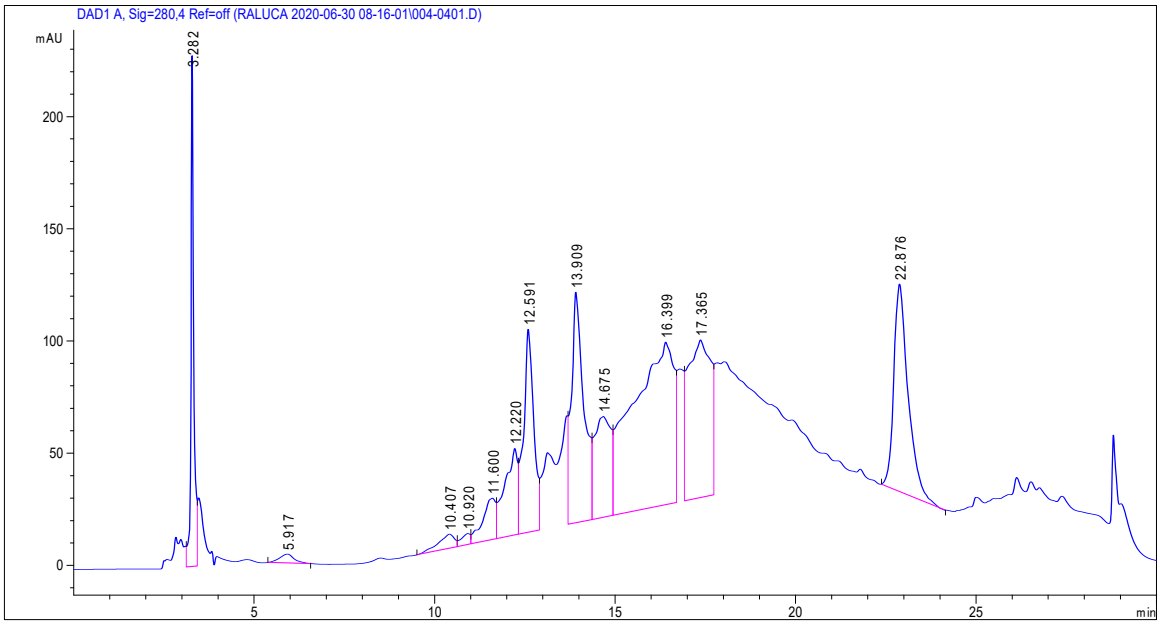
Neuburger (NE)-340 nm



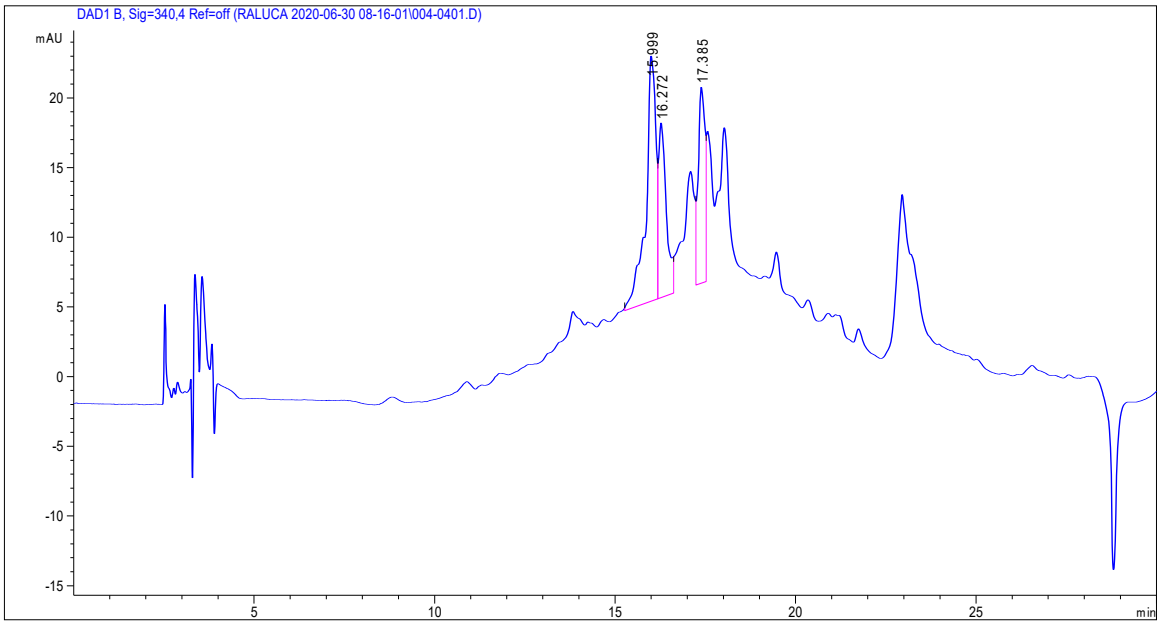
Muscat Ottonel (MO)-280 nm



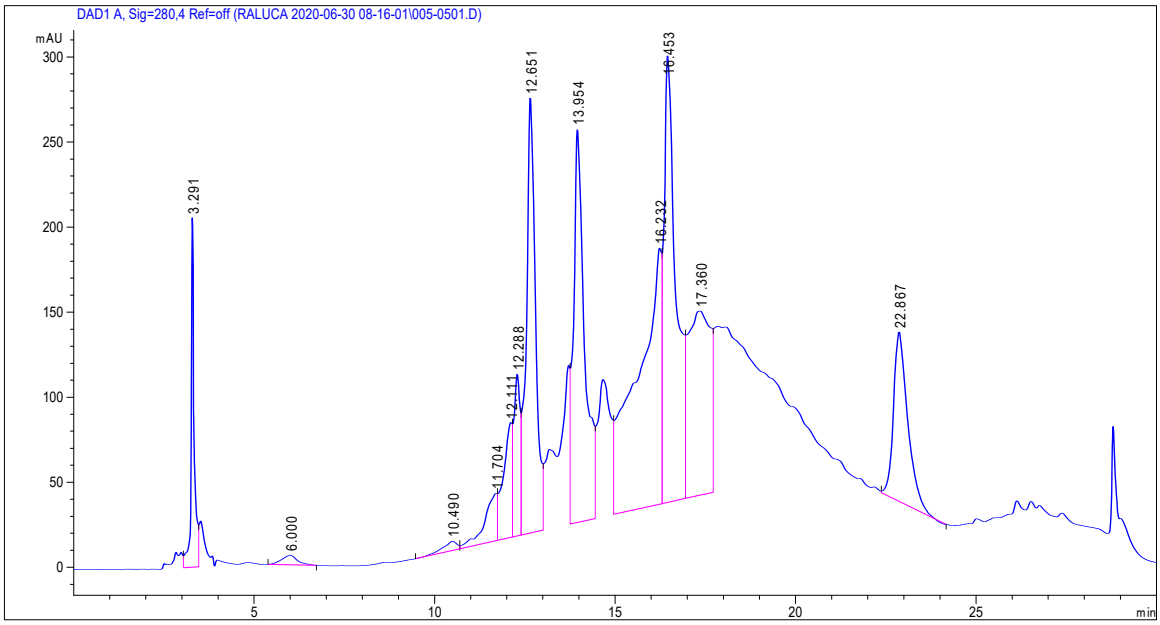
Muscat Ottonel (MO)-340 nm



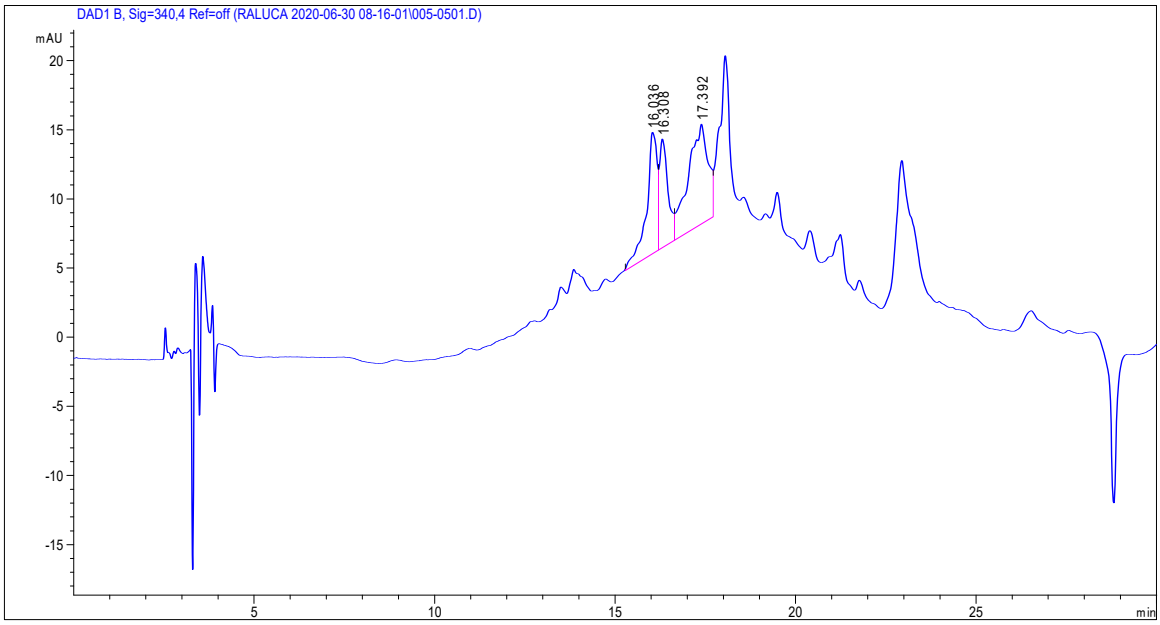
Rubin (RU)-280 nm



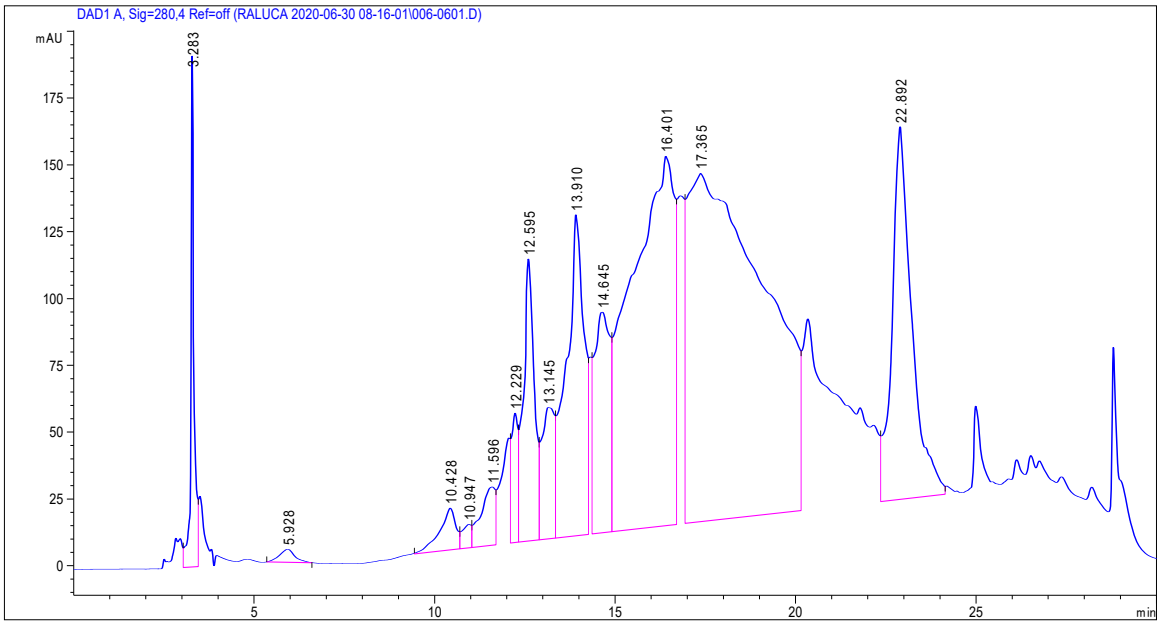
Rubin (RU)-340 nm



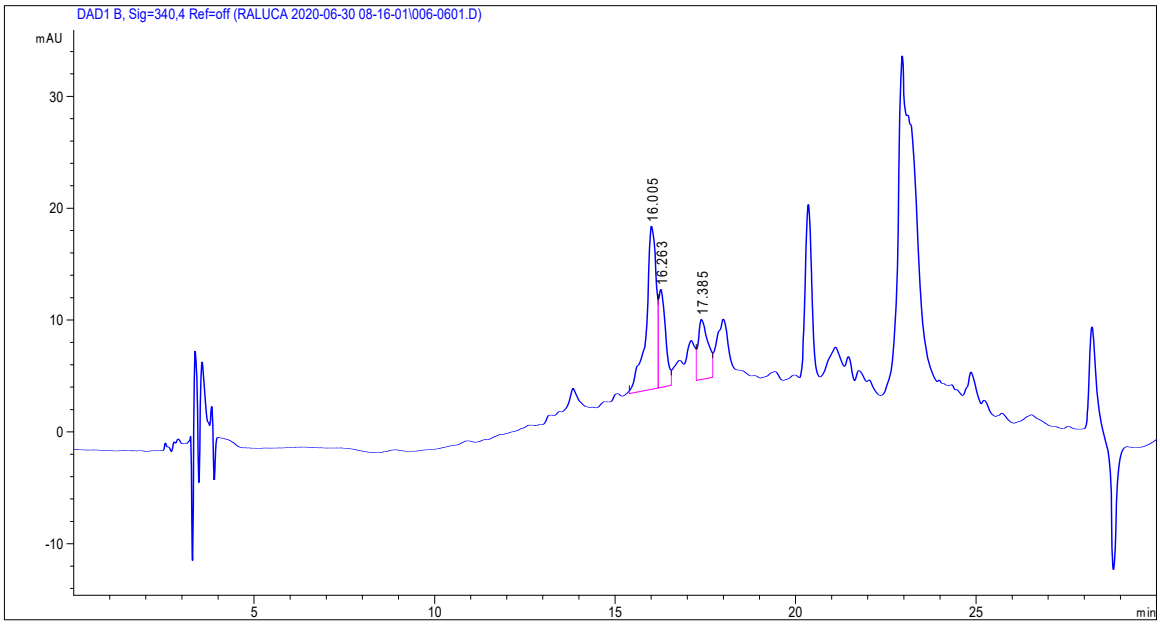
Radames (RA)-280 nm



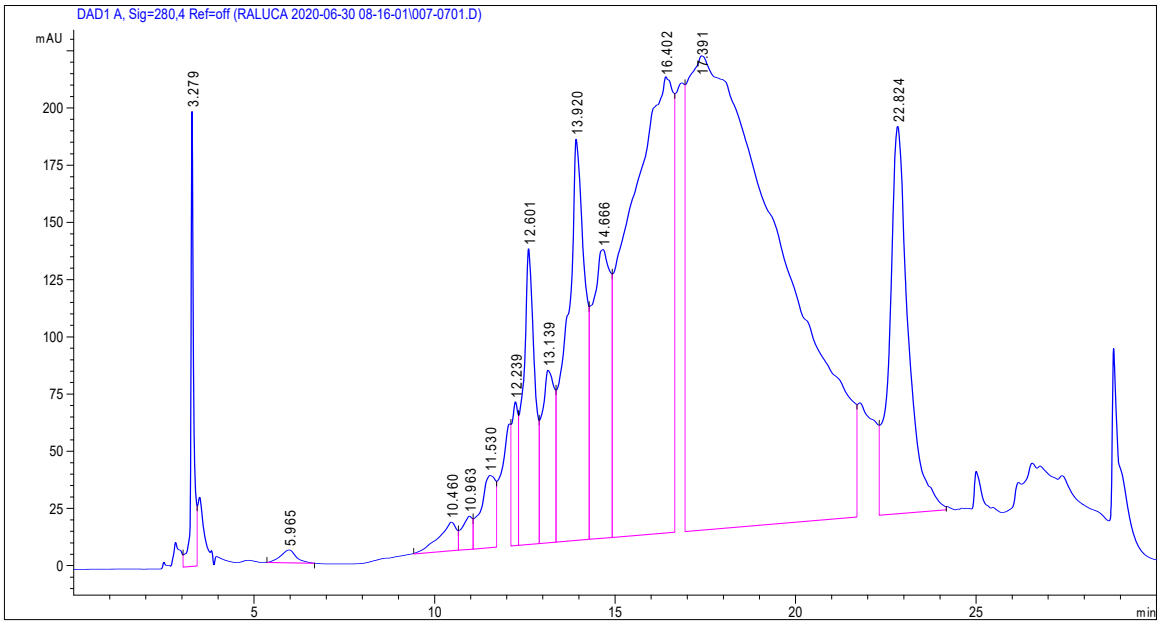
Radames (RA)-340 nm



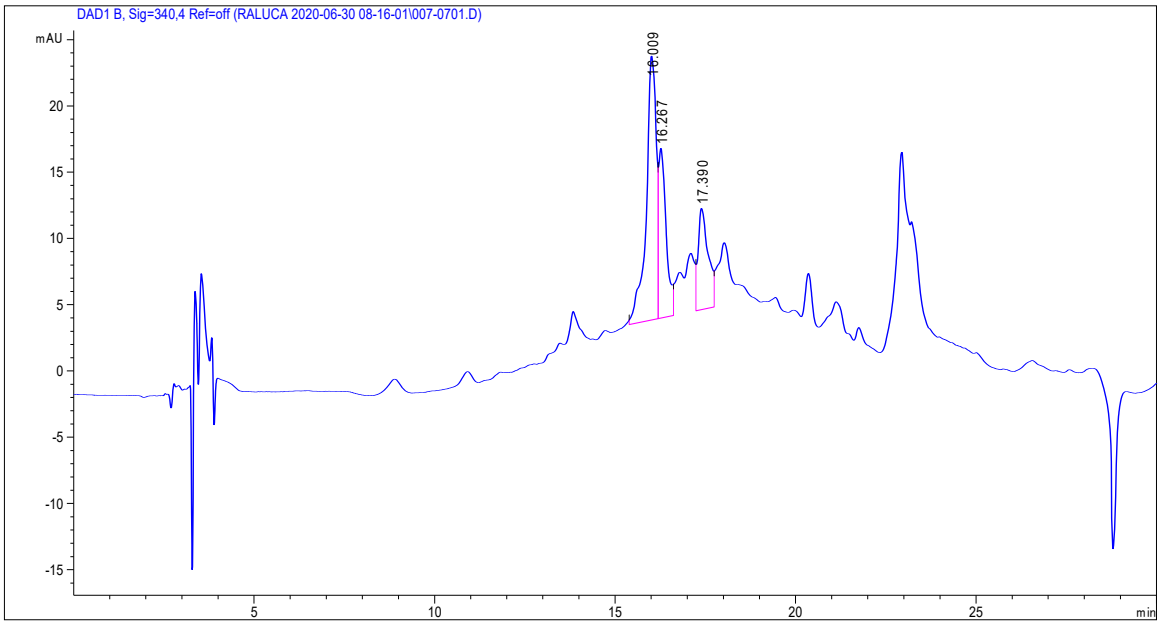
Sauvignon blanc (SB)-280 nm



Sauvignon blanc (SB) -340 nm

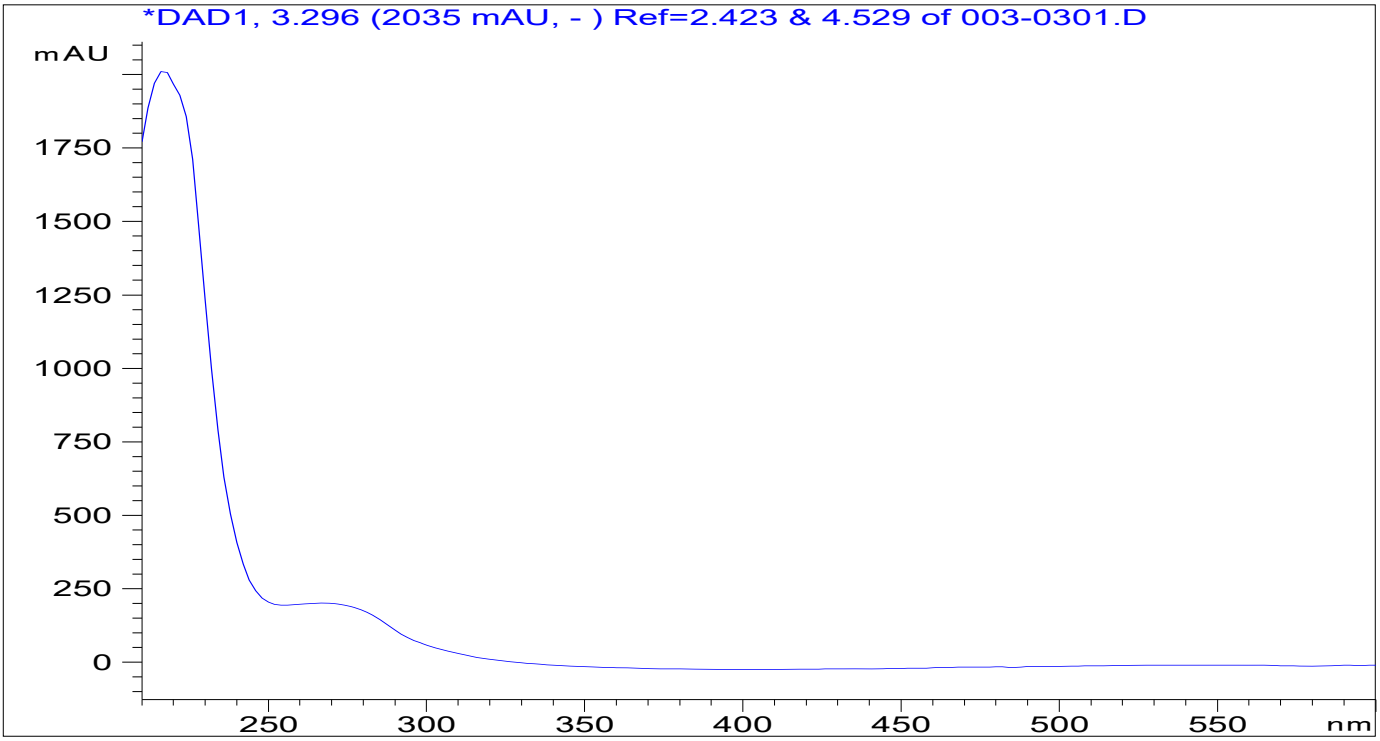


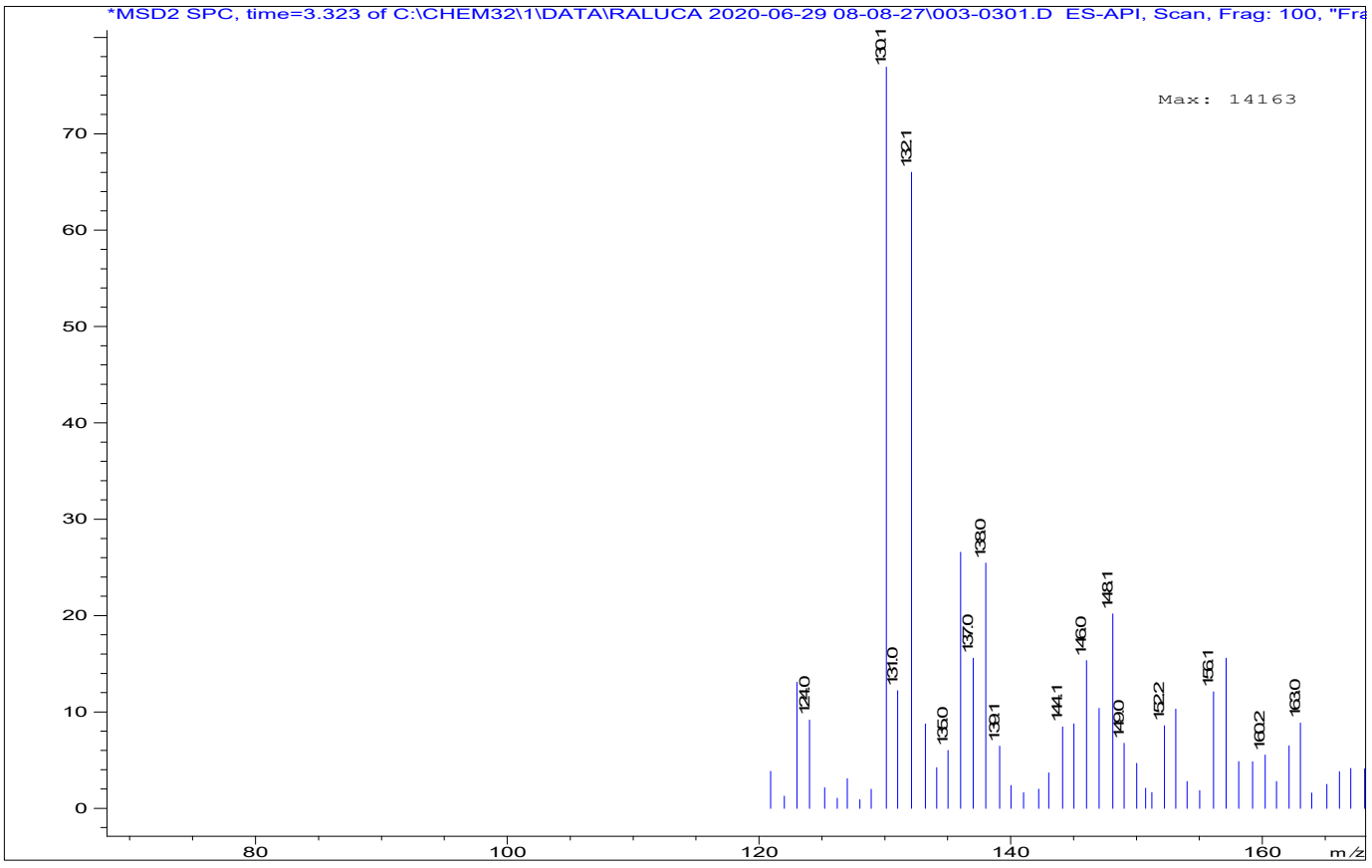
Fetească Regală (FR)-280 nm



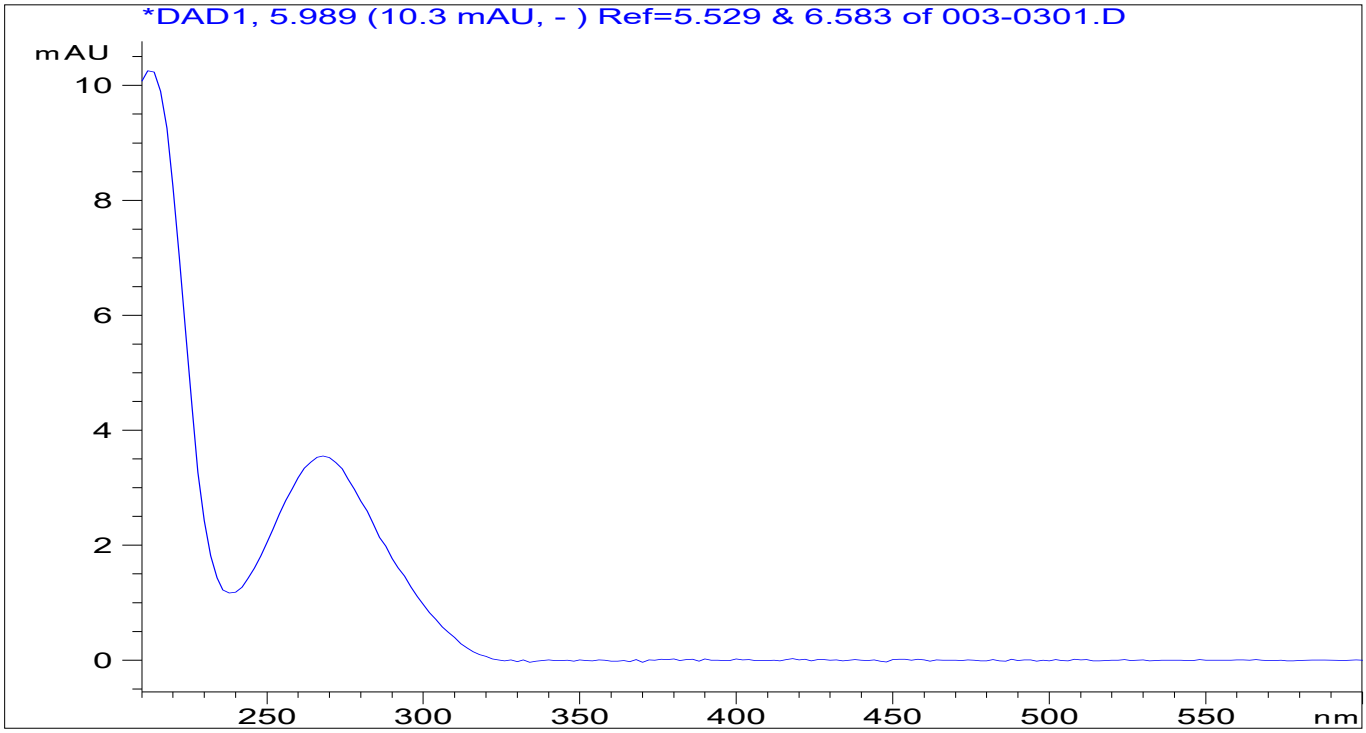
Fetească Regală -340 nm (FR)

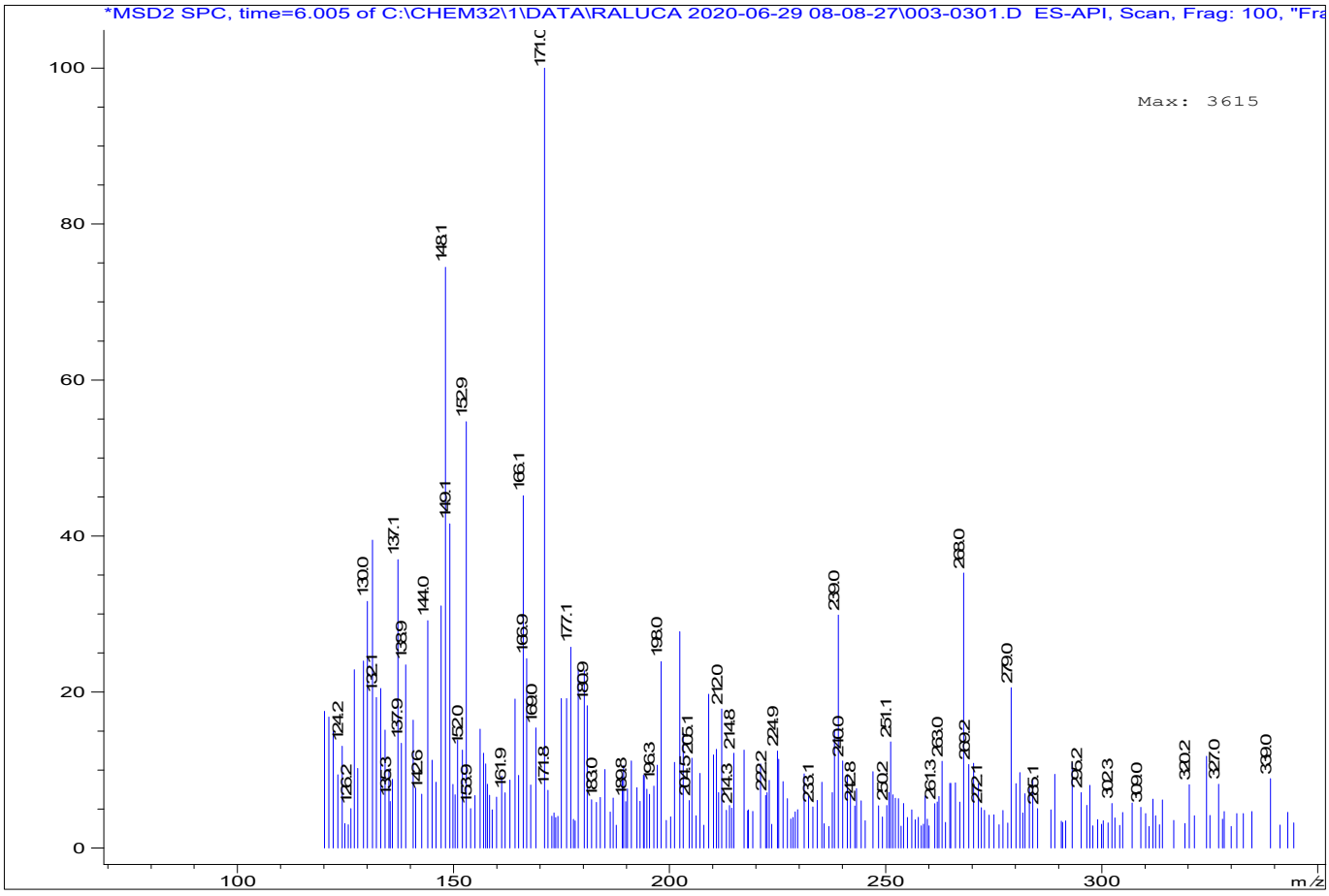
Figure S2. Chromatograms of phenolic extracts at 280 nm, 340 nm and 520 nm (for red GPs)



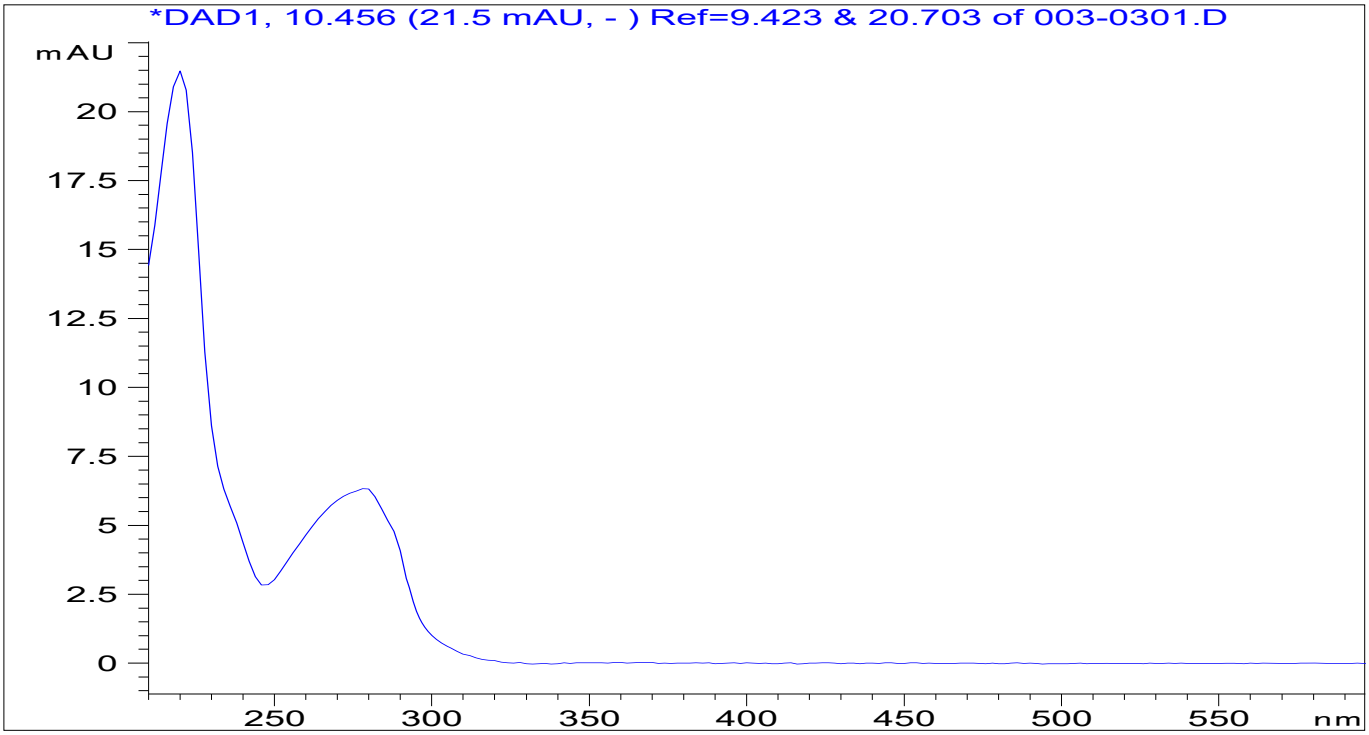


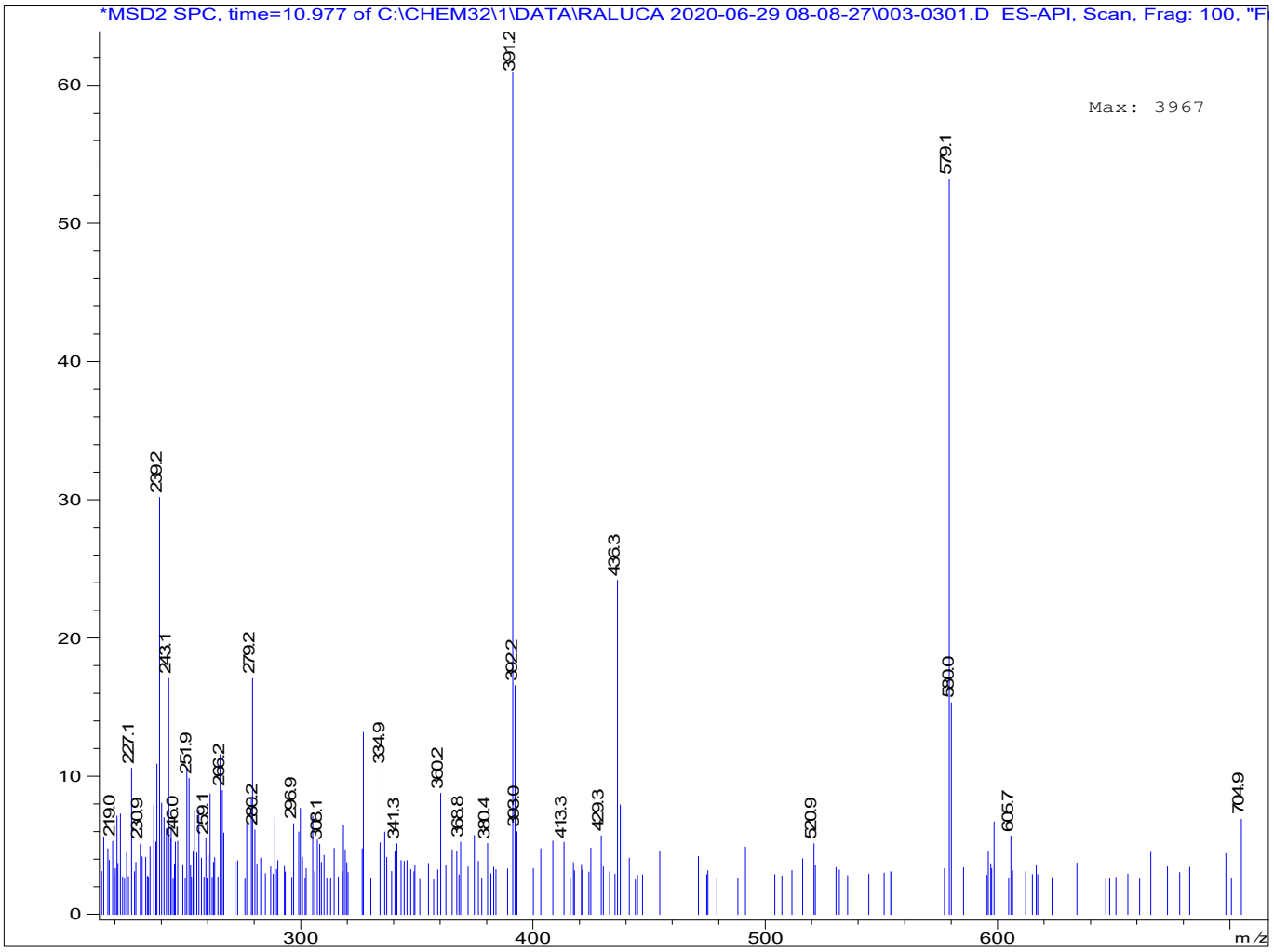
Rt=3.39 min Hydroxybenzoic acid



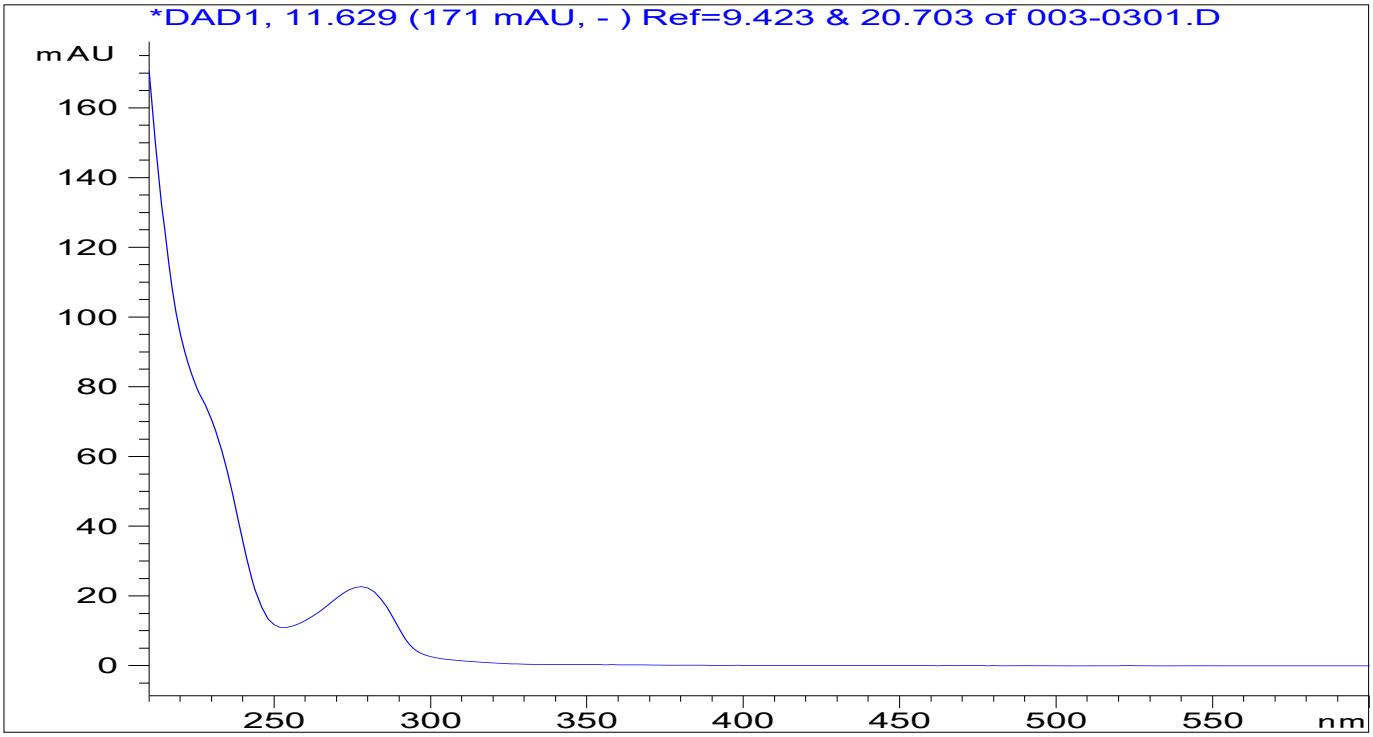


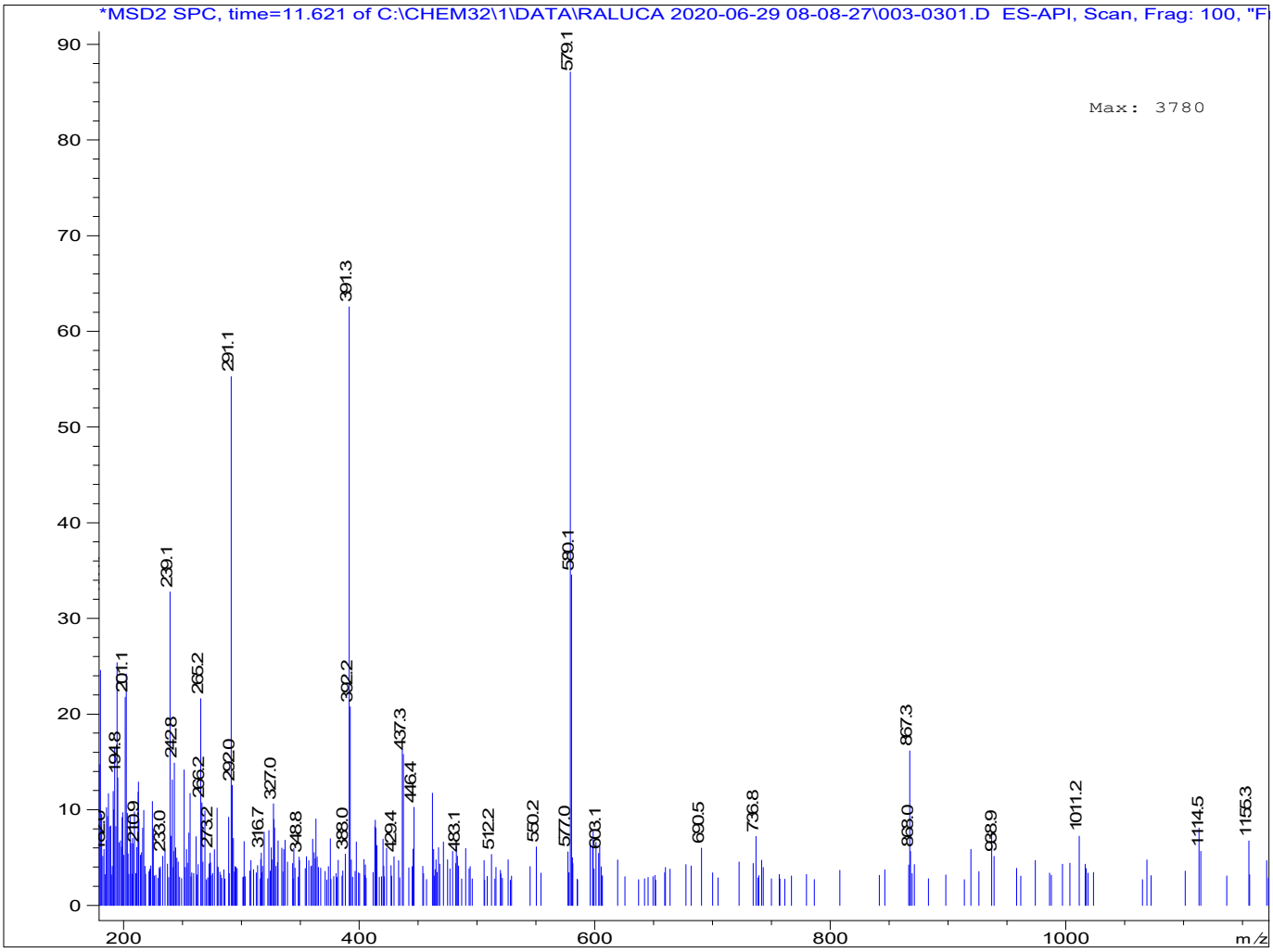
Rt=5.96 min Gallic acid



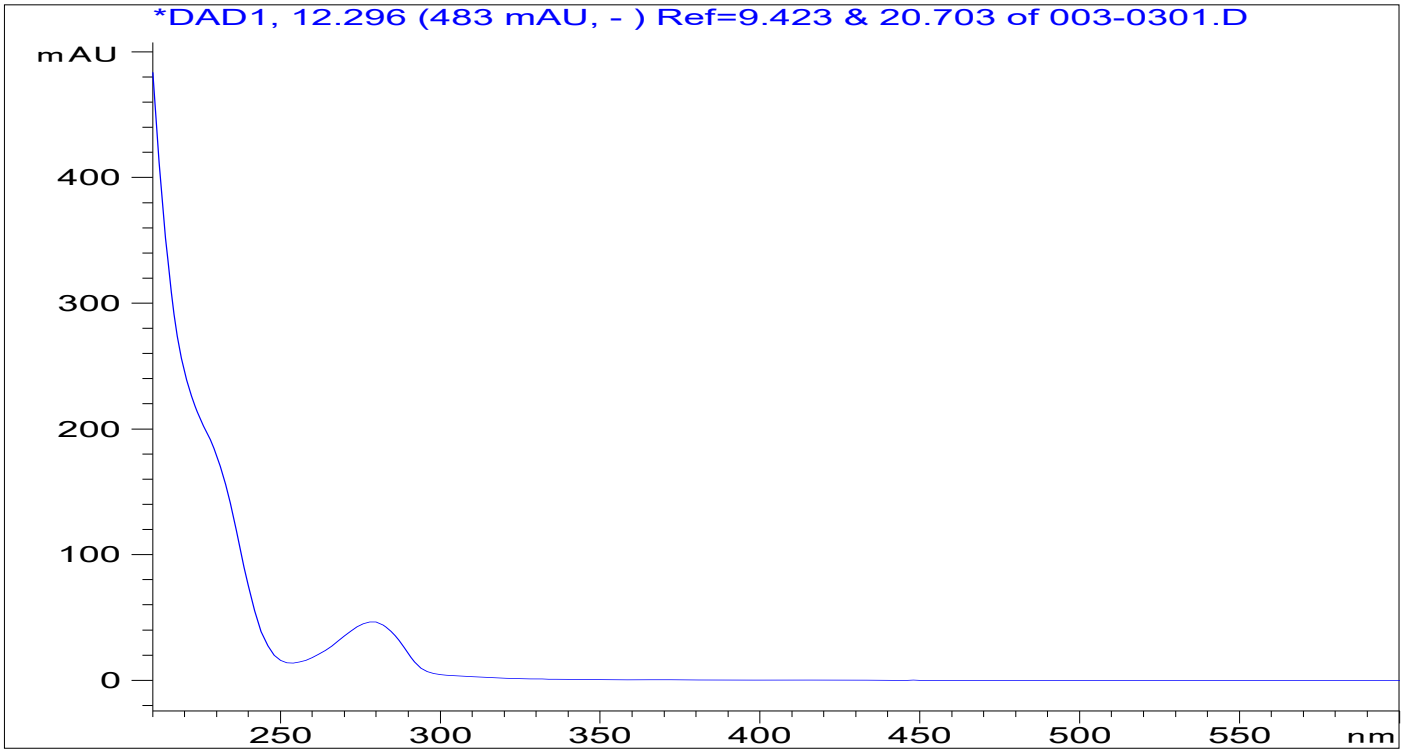


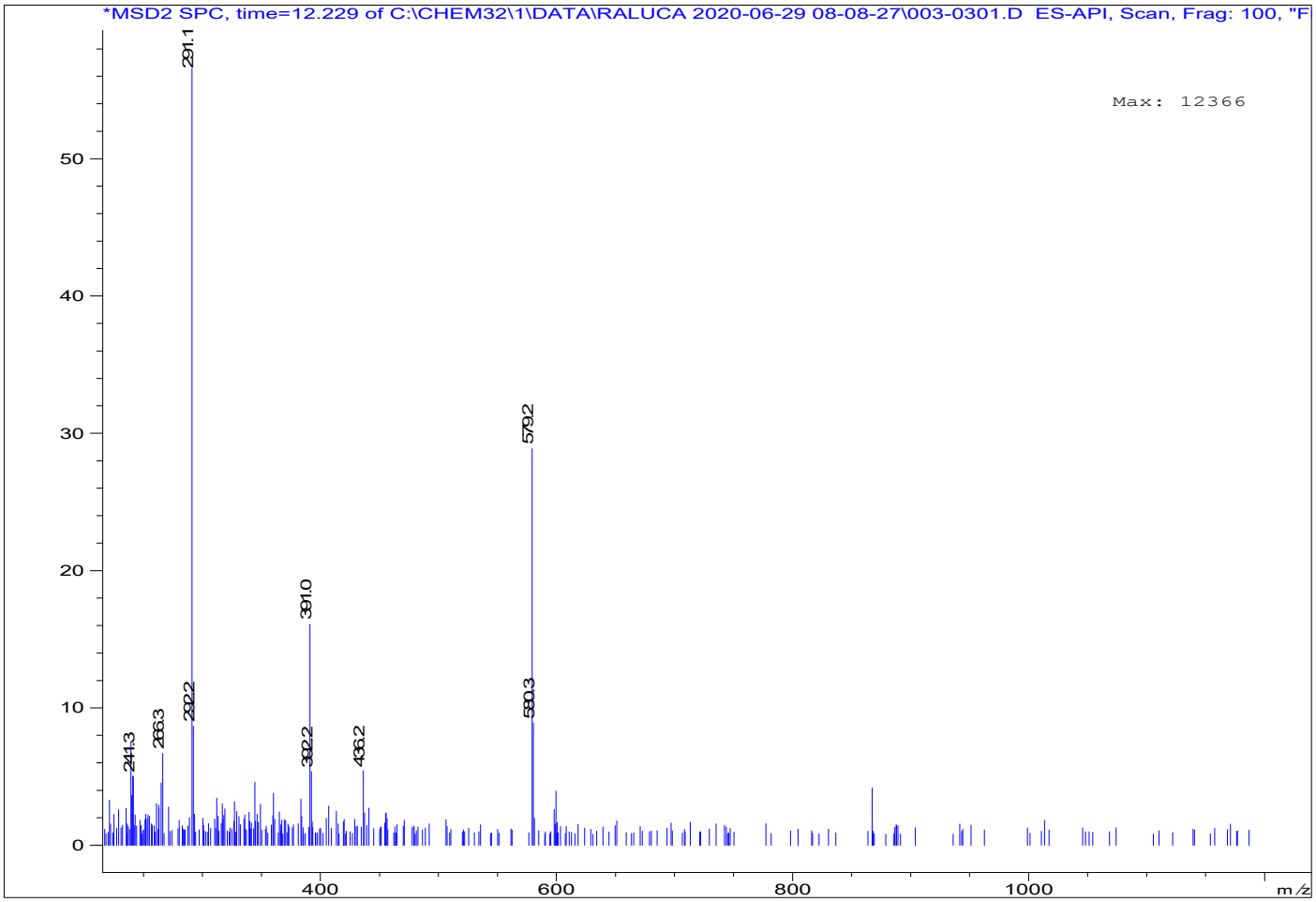
Rt=10.42 min Procyanidin dimer B1



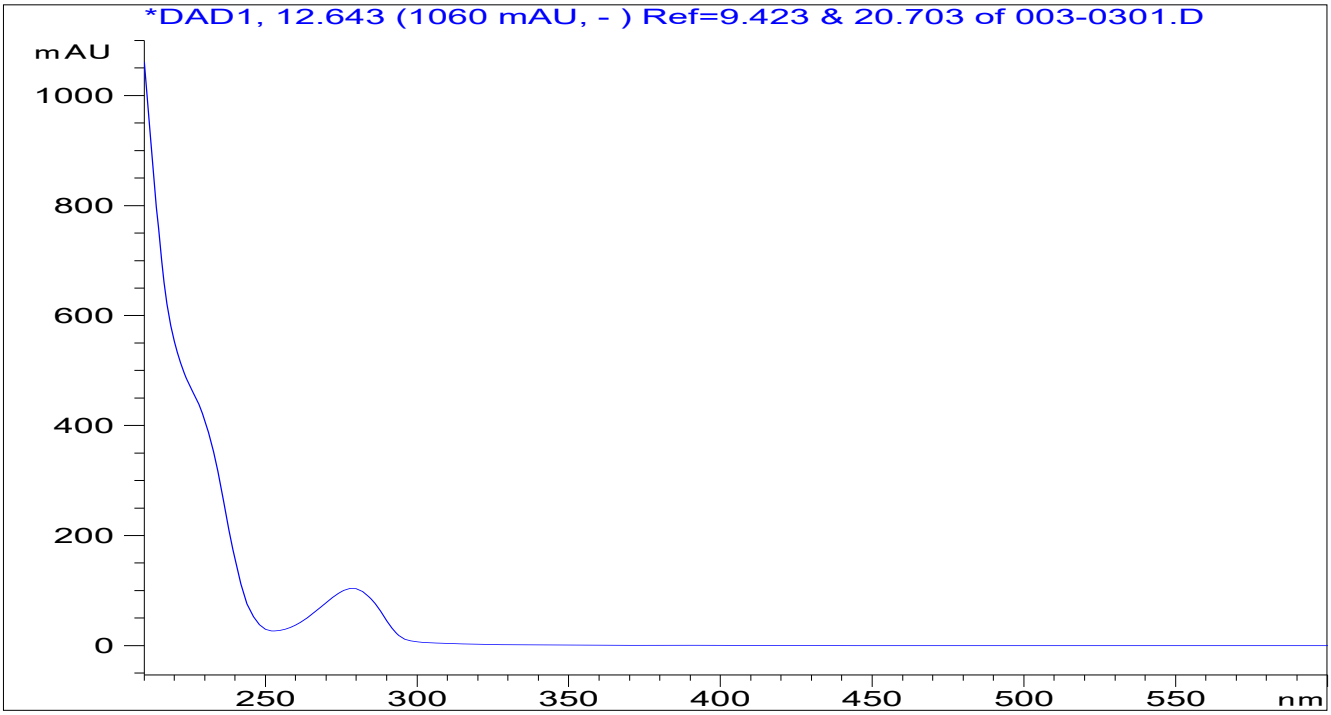


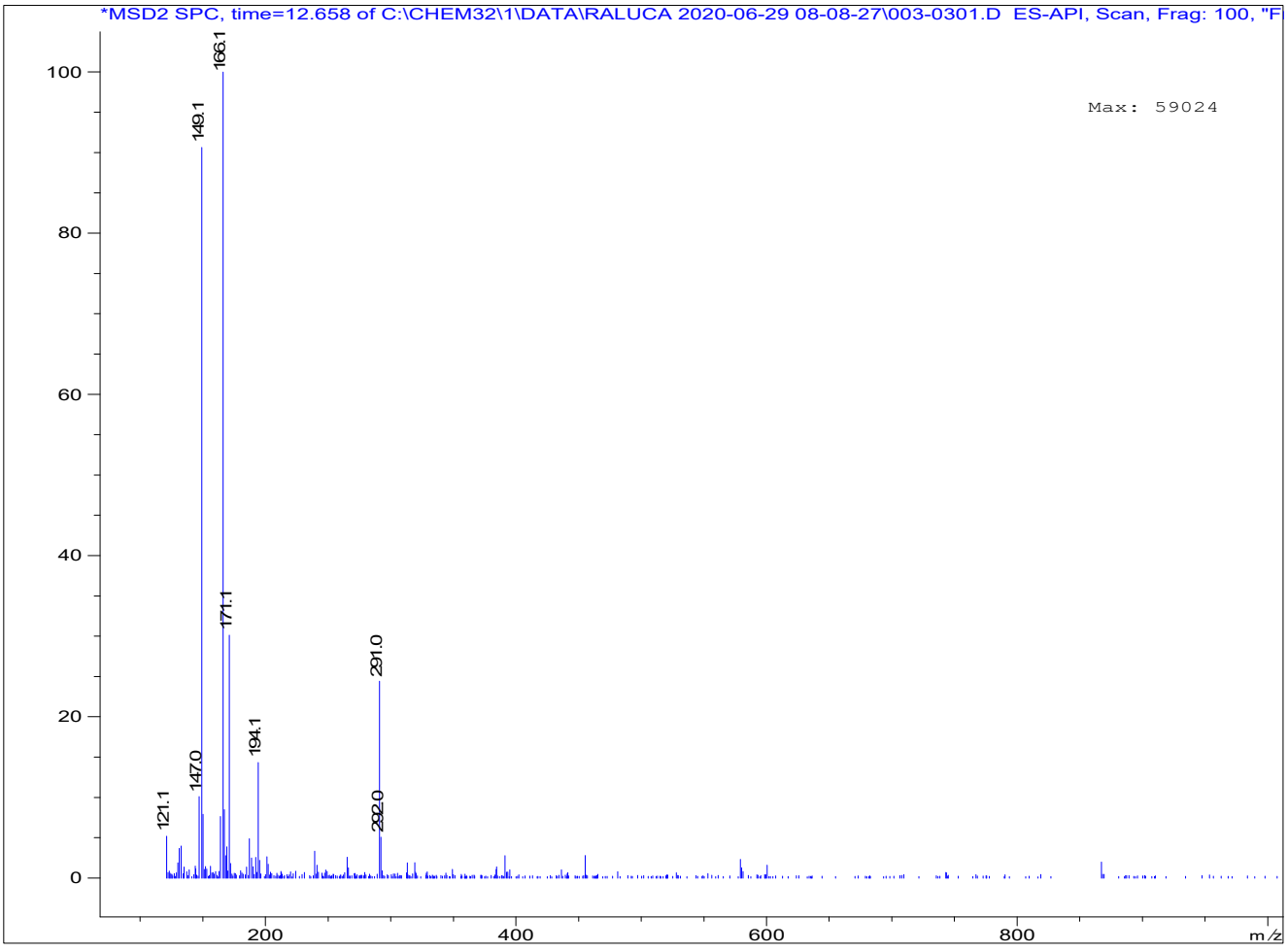
Rt=11.63 Procyanidin dimer B2



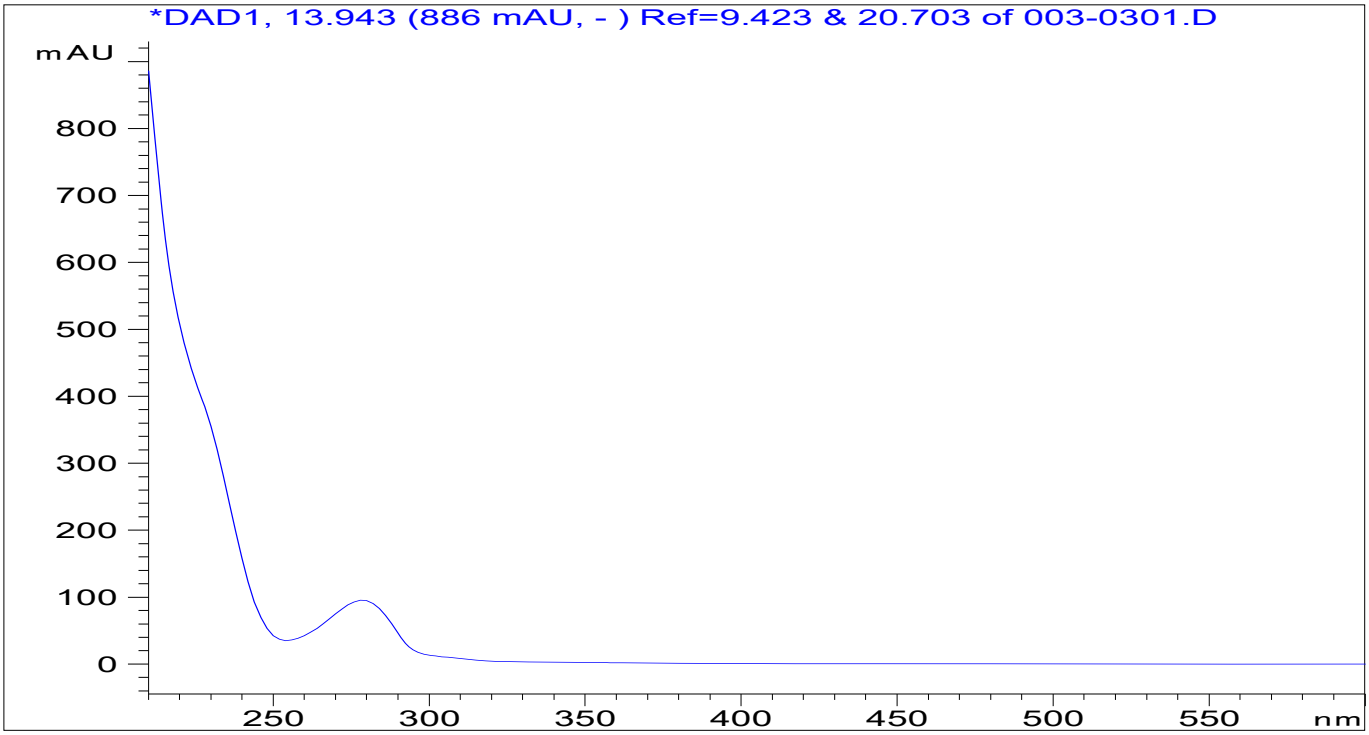


Rt=12.28 min Procyanidin dimer B3



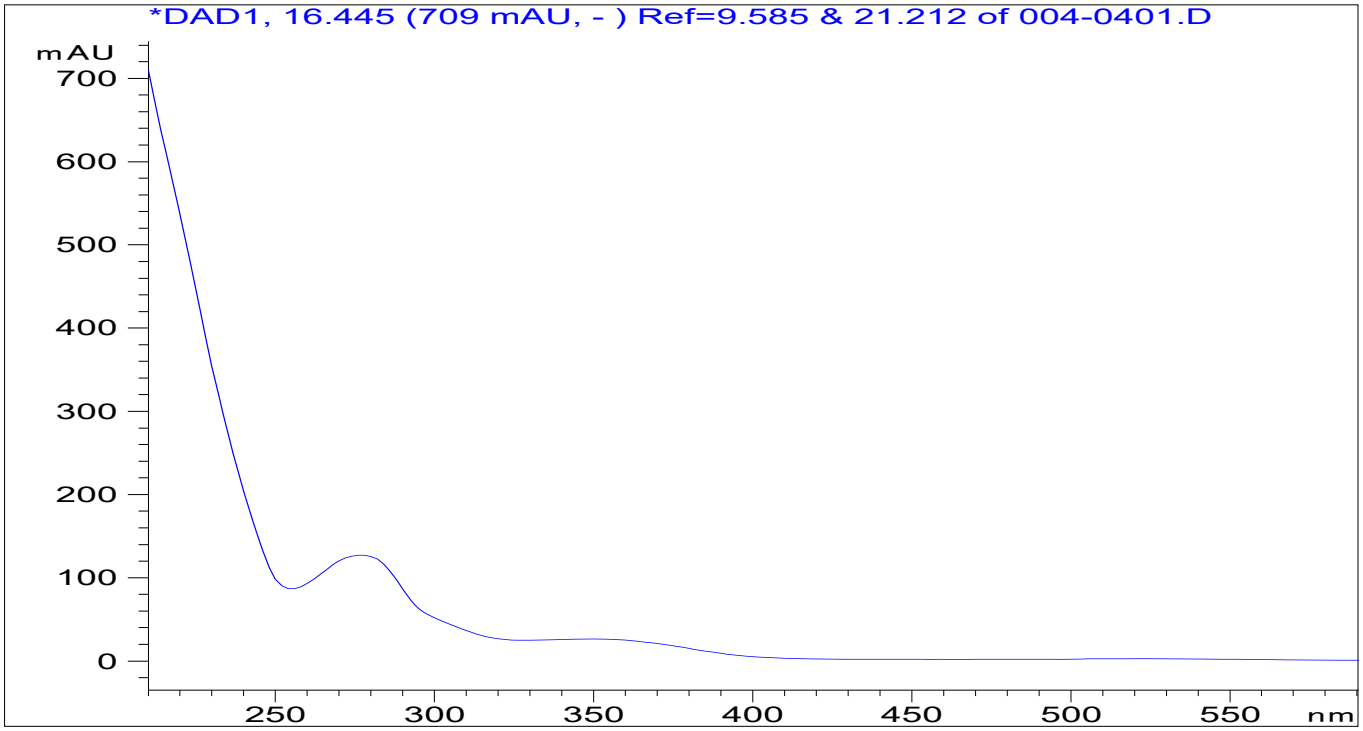


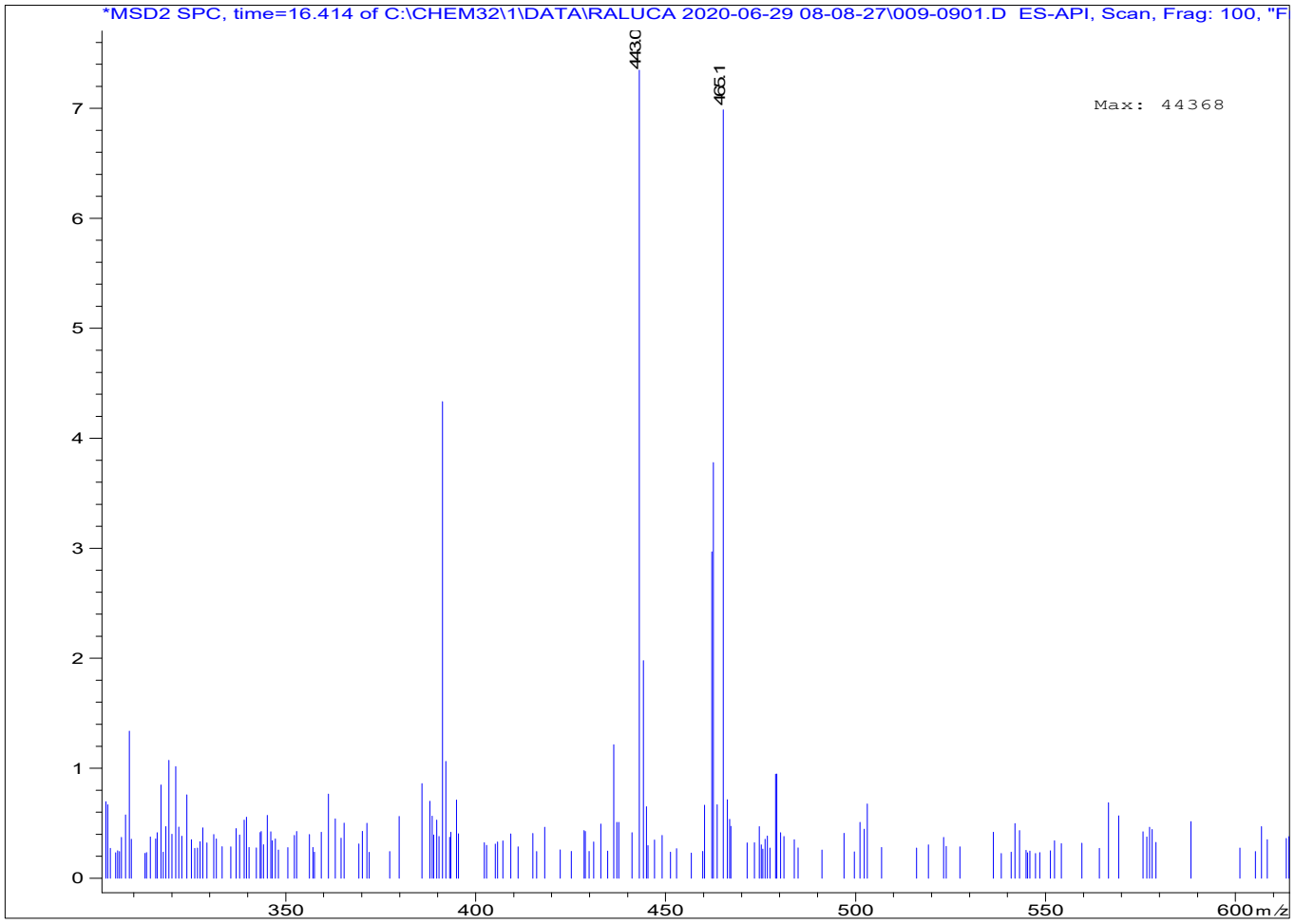
Rt=12.61 min Catechin



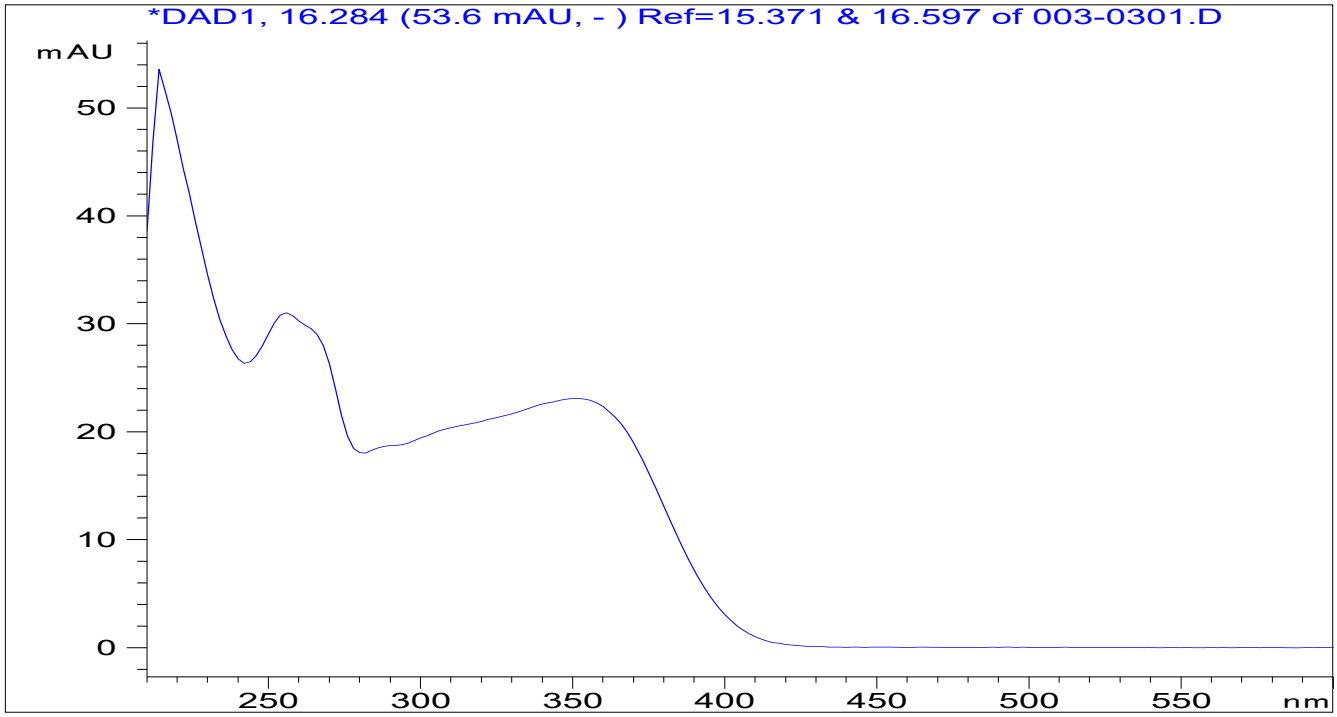


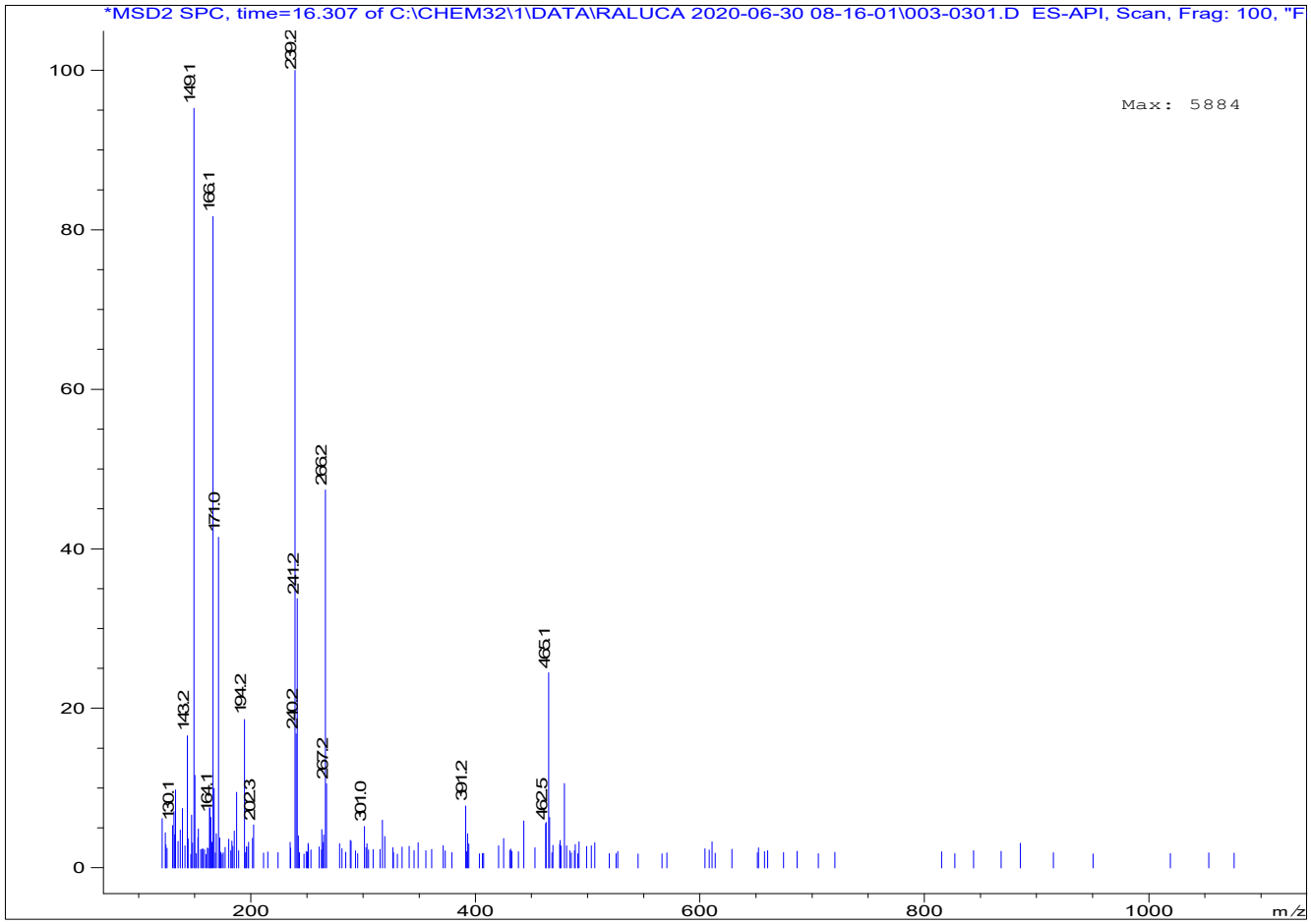
Rt=13.94 min Epicatechin



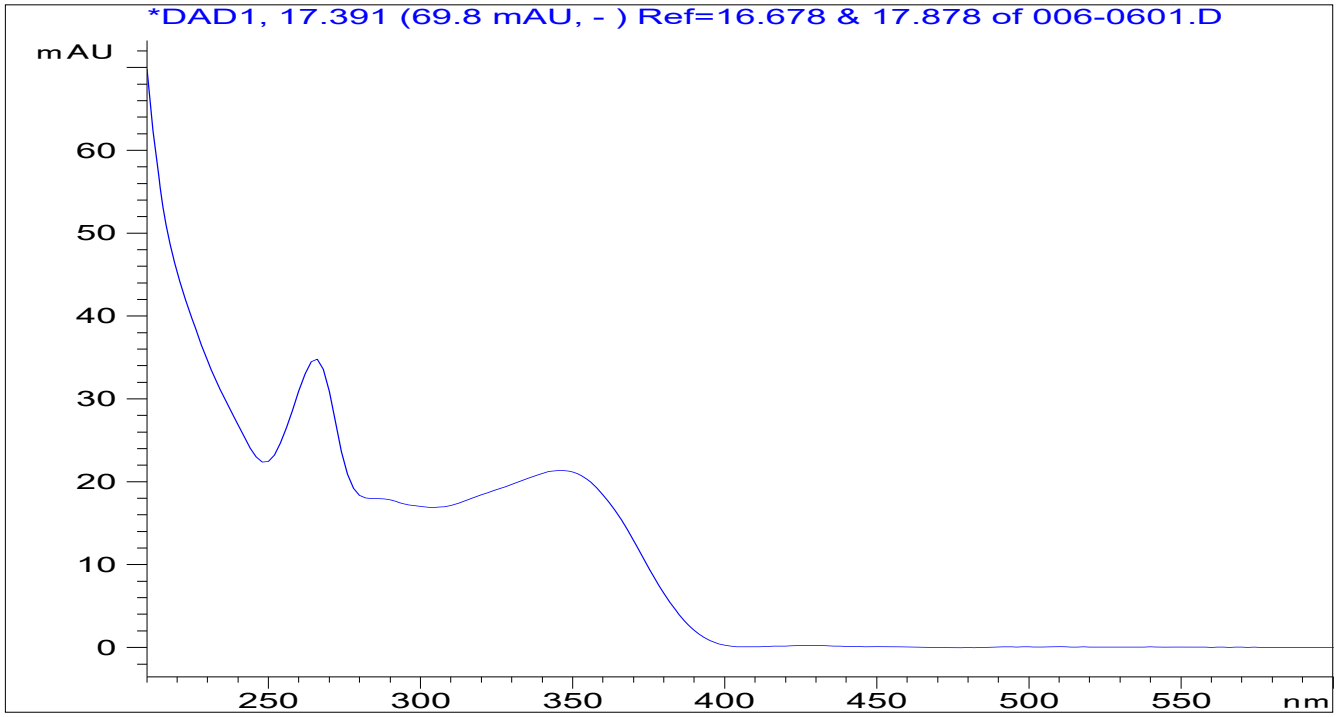


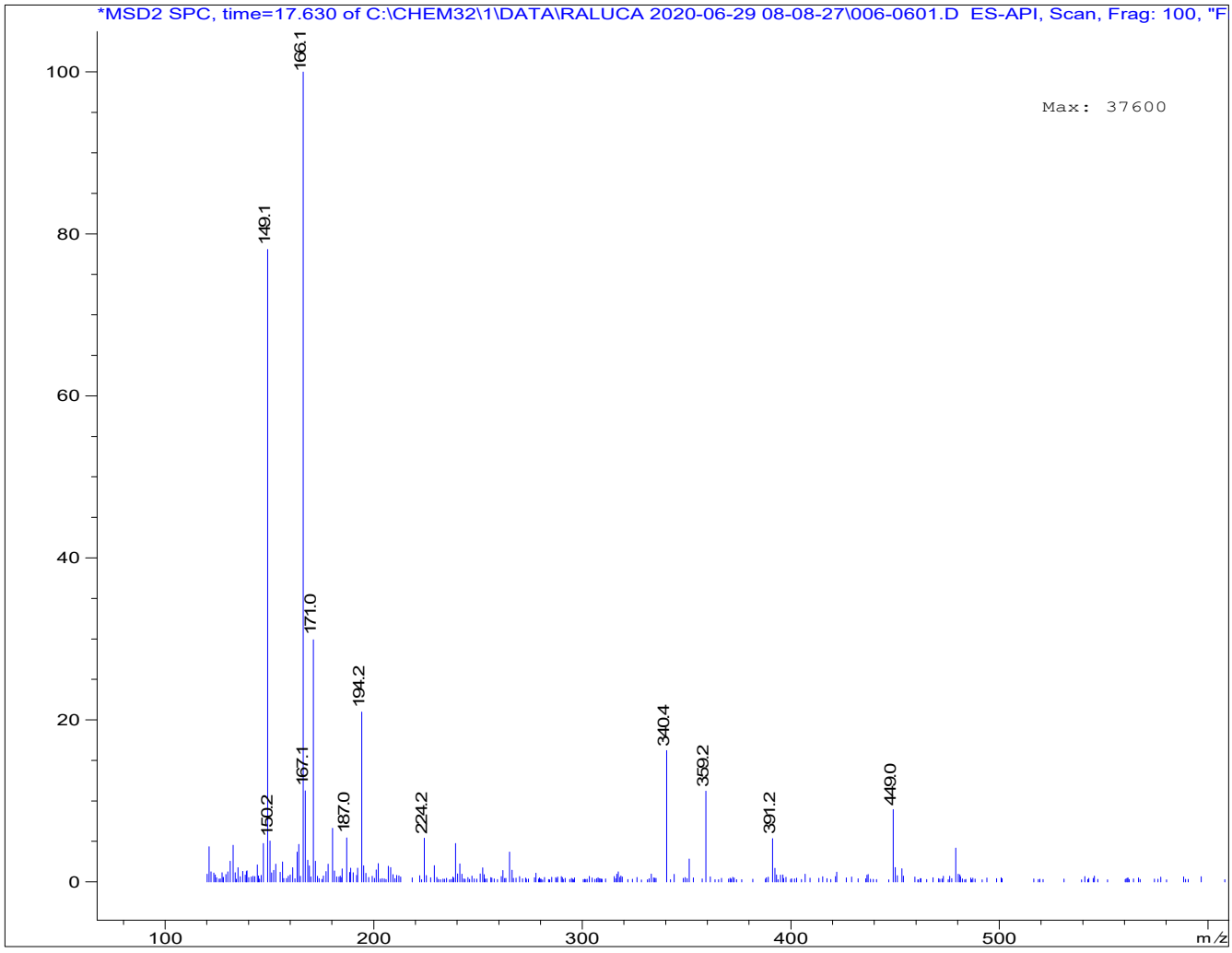
Rt=16.40 min Epicatechingallate



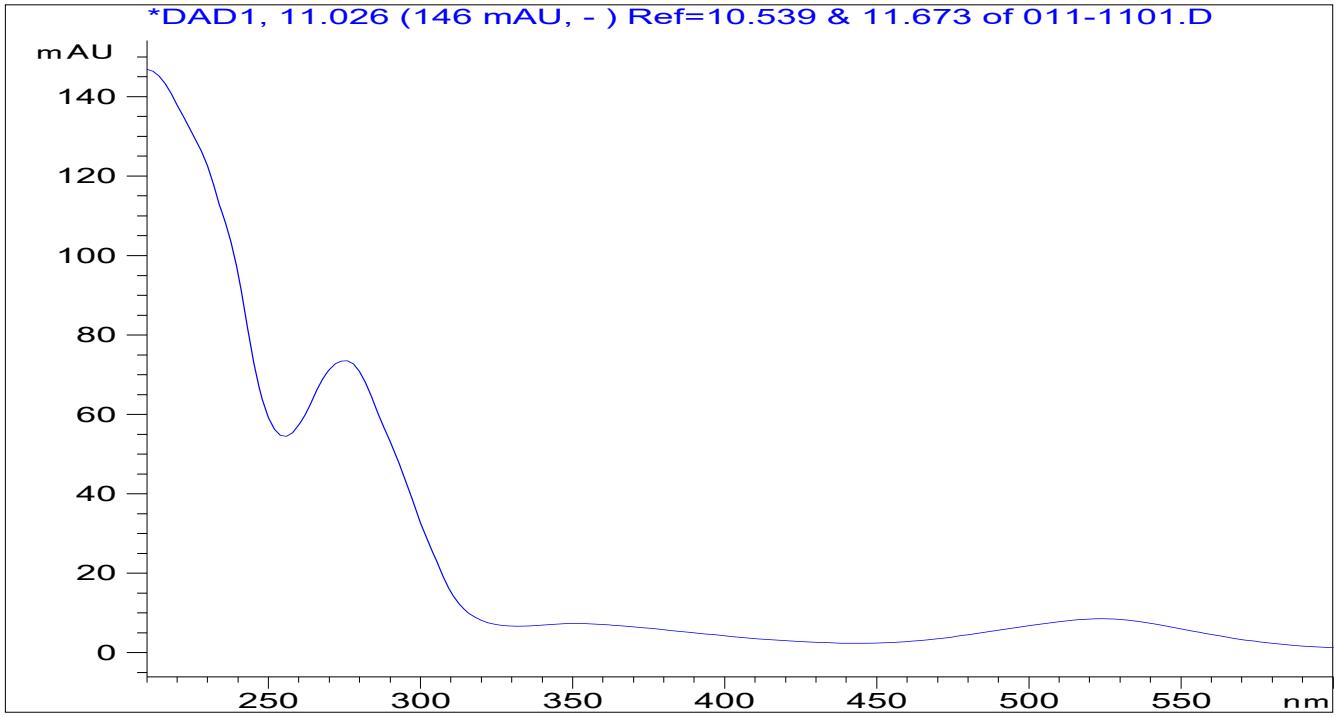


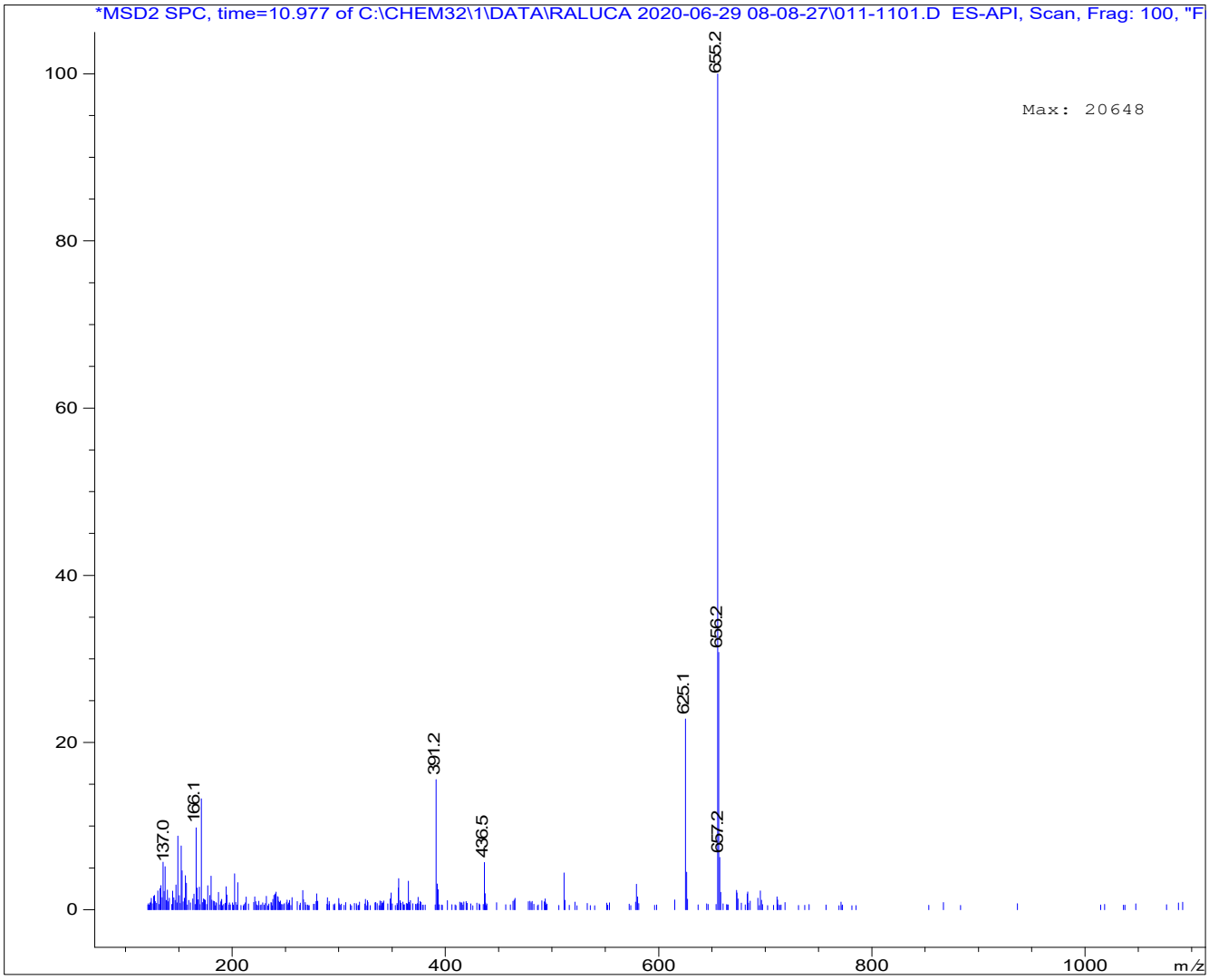
Rt=16.23 min Quercetin-glucoside



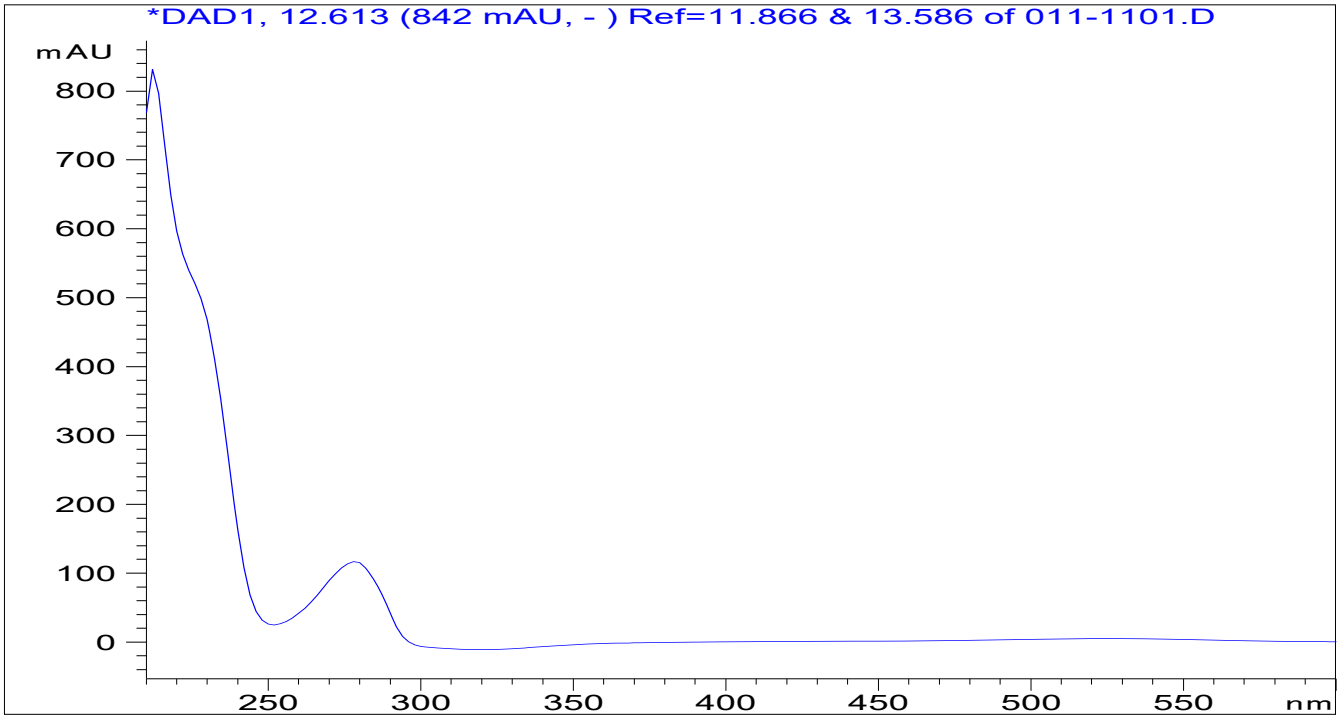


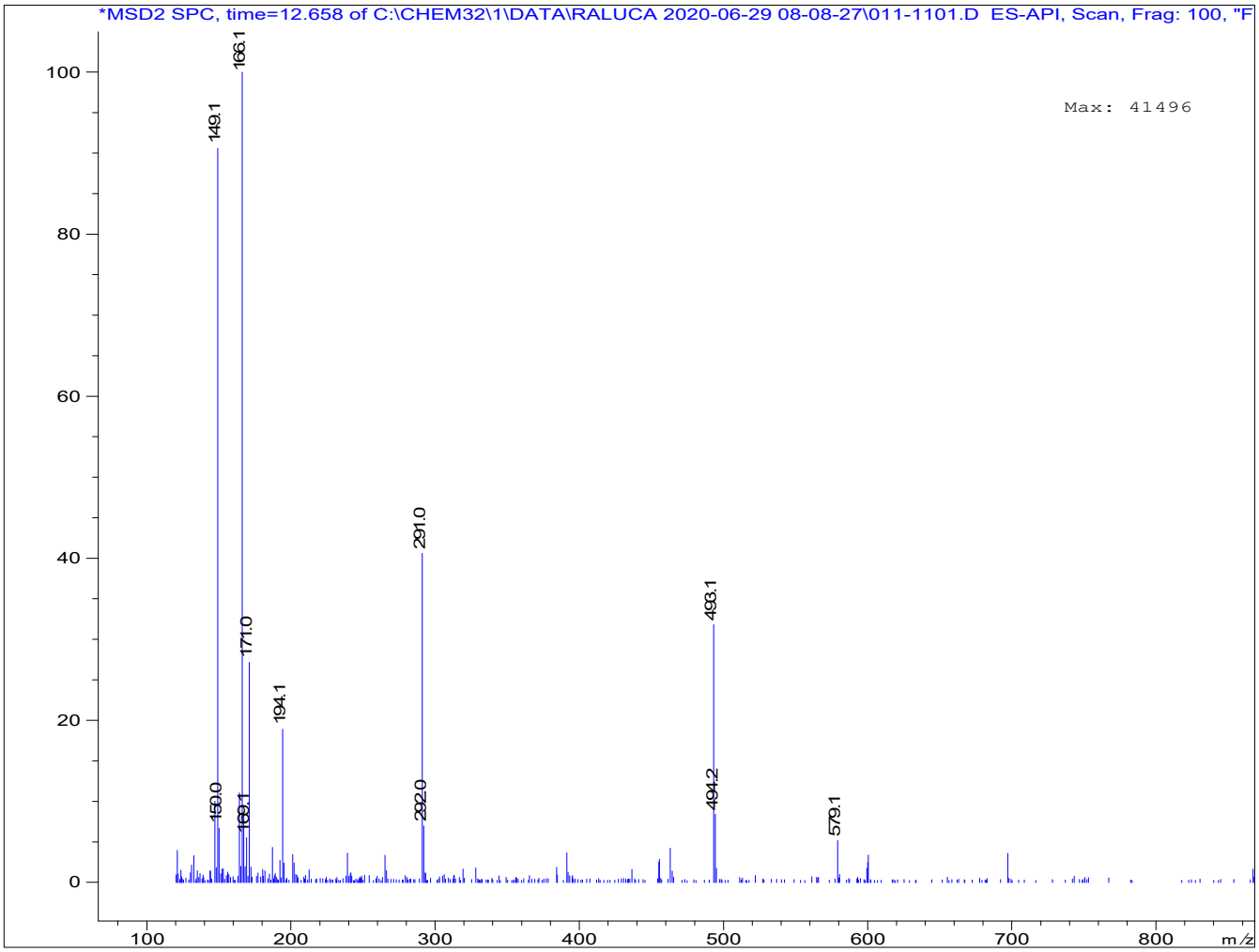
Rt=17.33 min Kaempferol-glucoside



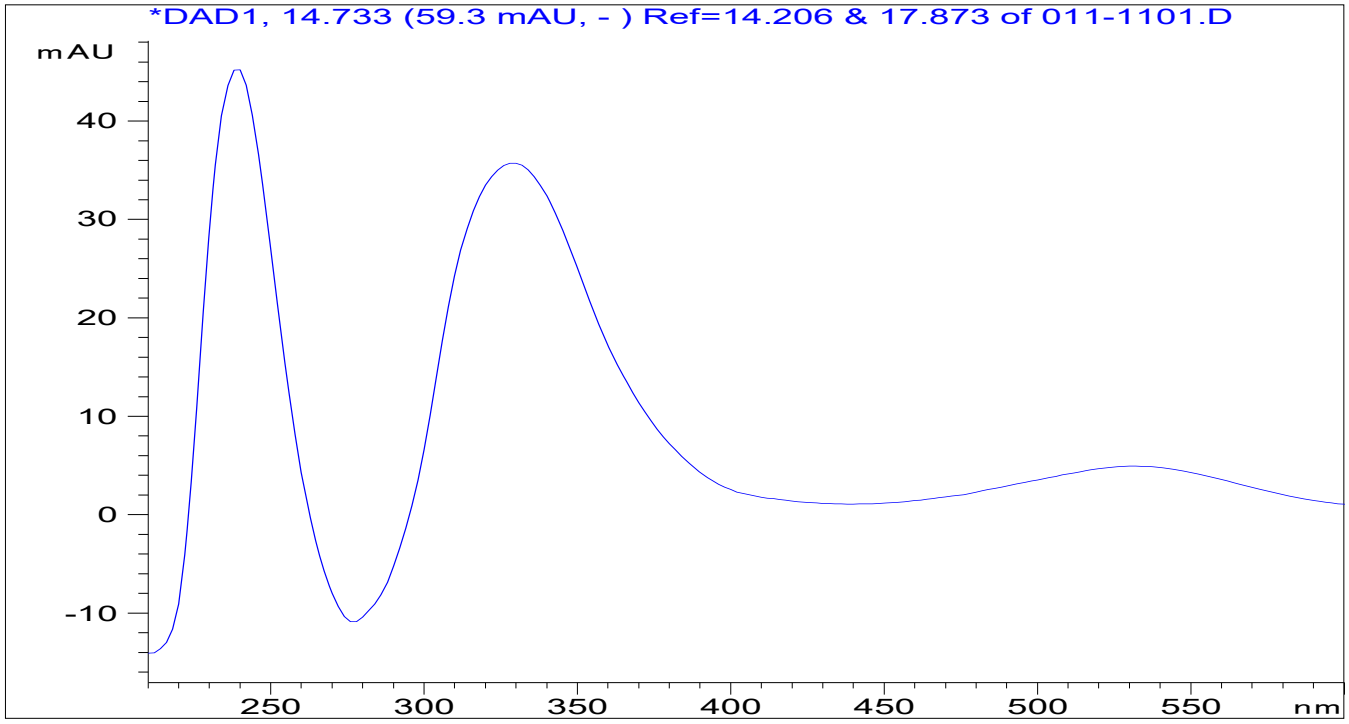


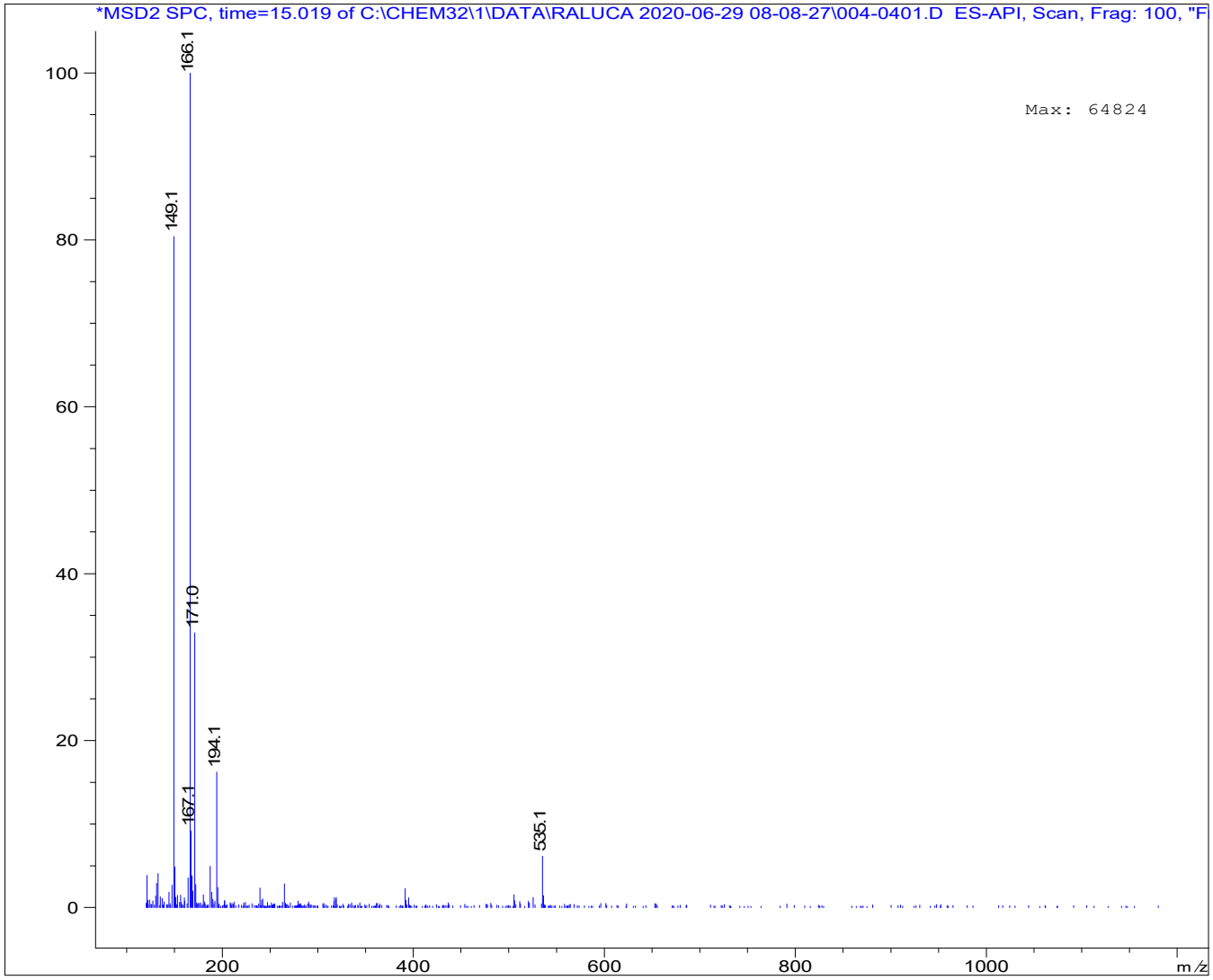
Rt=11.00 min Malvidn-caffeoyl-glucoside



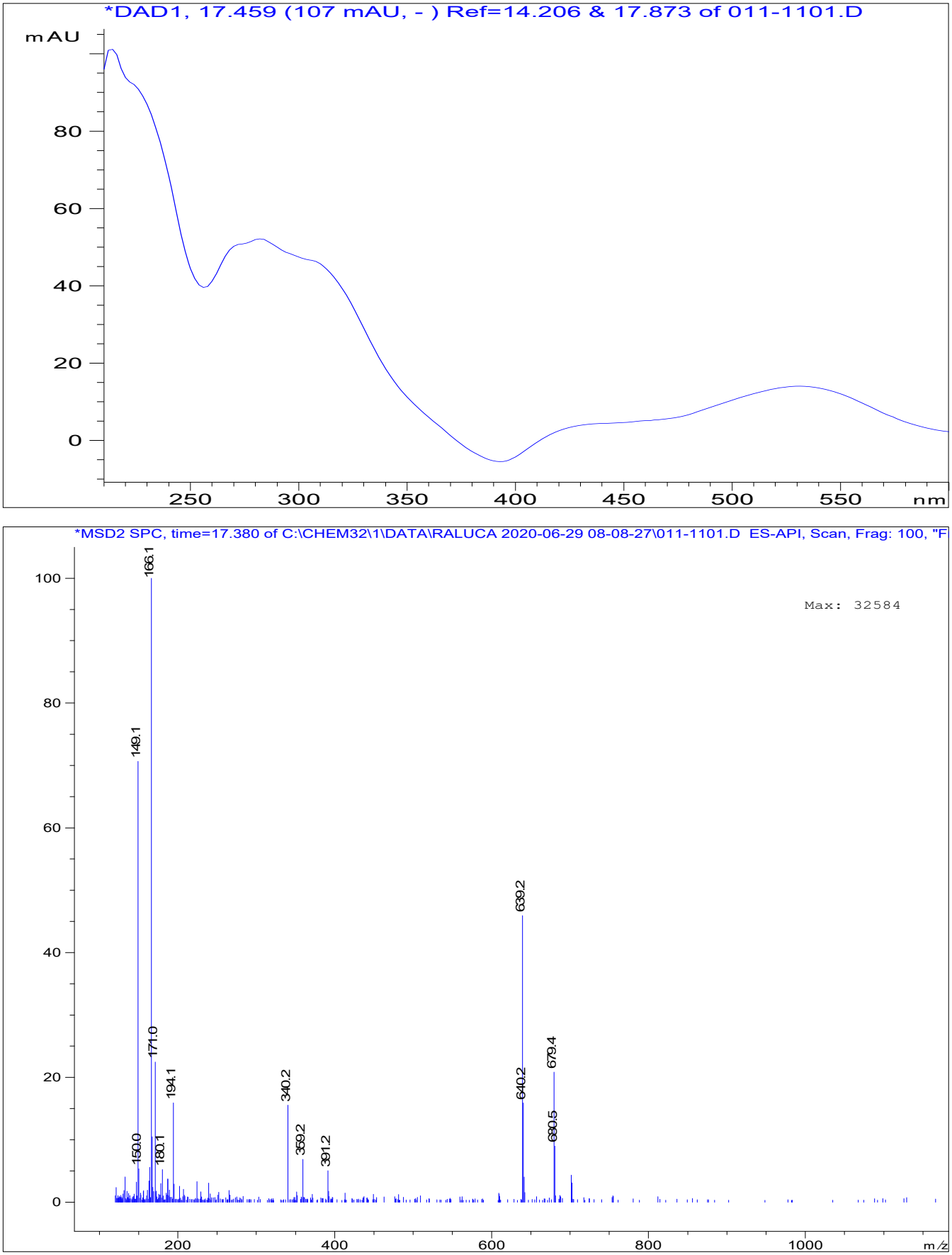


Rt=12.57 min Mlavidin-glucoside





Rt=14.70 min Malvidin-acetyl-glucoside



Rt=17.47 min Malvidin-coumaroyl-glucoside

Figure S3. UV-Vis DAD and MS after positive ionization spectra of the identified phenolic compounds

Table S2. Flavanol (μg/mL catechin equivalents) and hydroxybenzoic acid (μg/mL gallic acid equivalents) compounds determined in the grape pomace extracts by LC-MS

	RT (min); $[M+H]^+$ (*m/z*); λ_{max} (nm)										
Compounds concentration (μg/mL) / Samples	Hidroxy-benzoic acid 3.29 (min); 138 (*m/z*); 270 (nm)	Gallic acid 5.96 (min); 171 (*m/z*); 279 (nm)	Total phenolic acids	Procyanidin dimer B1 10.42 (min); 579, 291 (*m/z*); 280 (nm)	Procyanidin dimer B2 11.63 (min); 579, 291 (*m/z*); 280 (nm)	Procyanidin dimer B3 12.28 (min); 579, 291 (*m/z*); 280 (nm)	Catechin 12.61 (min); 291 (*m/z*); 280 (nm)	Epicatechin 13.95 (min); 291 (*m/z*); 280 (nm)	Epicatechin-gallate 16.40 (min); 443 (*m/z*); 280 (nm)	Catechin derivate 22.91 (min); - (*m/z*); 280 (nm)	Total Flavanols
BL	119.1 (118.6-119.6)	14.9 (14.6-14.9)[g]	134 (133.2-134.5)	31.3 (31.2-31.6)	40.4 (40.2-40.6)	37.8 (37.5-38)	56.8 (56.3-56.8)[g]	104.6 (103-105.6)	55.1 (54.7-55.5)	108.3 (107.5-109.3)[g]	434 (431-436.9)
RR	84.3 (82.7-85.8)	14.2 (14.1-14.6)	98.3 (97.1-99.9)[g]	24.2 (24.1-24.6)	30.9 (30.5-31.1)	25.6 (25.3-25.7)	61.1 (61-62)	90.3 (88.6-92.3)	22.1 (22-22.5)[k]	117 (114.6-120.6)	371.4 (366.8-378.6)[g]
RB	93.2 (91.5-95.1)	14.9 (14.4-14.9)	108.1 (105.9-110.1)[g]	24.5 (24.1-24.7)	11.9 (11.8-11.9)[a,h,o]	23.7 (23.6-23.8)	79 (78.1-80.3)	92 (90.1-94.1)	52.2 (50.3-54)	129.5 (124.7-134.5)	413 (403.2-423.4)
AS	106.7 (103.5-109.5)	15.7 (15.6-15.8)	122.5 (119.1-125.3)	21.8 (21.7-21.9)	13.5 (13.3-13.7)[o]	15.7 (15.4-15.8)[p]	108.3 (105.7-110.8)	106.3 (103.7-108.7)	66 (64.8-67.6)	86.8 (84.5-88.5)[g,o]	418.6 (416.4-420.3)
TR	81.4 (78.8-84.7)	21.3 (21.1-21.6)	102.8 (99.9-106.3)	24.4 (24.2-24.6)	19.9 (19.5-19.9)	26.4 (26.2-26.7)	148.9 (145.9-150.5)	116.1 (111.6-120.8)	28.7 (28.2-28.8)	246.1 (242.1-250.5)	610.9 (603.5-616.7)
JO	113.6 (111.9-115.8)	41.9 (41.1-42.5)	155.5 (153-158.4)	19.7 (19.6-19.8)	28.8 (28.8-29)	39 (38.8-39.4)	112.8 (110.7-114.9)	135.1 (133.3-137.2)	57.6 (56.4-58.3)	282.2 (279.2-285.7)	675.8 (667.4-684.4)
NE	144.6 (142.6-146.6)	59.1 (58.1-59.9)	203.7 (200.8-206.5)	27.9 (27.8-28.1)	24.1 (24-24.3)	37.3 (37.1-37.5)	217 (213.9-221)	279.2 (274.2-284.2)	35.8 (35.7-35.8)	398 (393-404.1)	1019.4 (1013.8-1027.4)
RU	87.6 (85.9-88.8)	15.9 (15.7-15.9)	103.6 (101.9-104.5)	21.5 (21.4-21.6)	40.1 (39.2-41.4)	26.5 (26-27.1)	73.9 (72.1-75.3)	96.1 (94.7-97.7)	31.2 (30.6-32.2)	176.3 (173.8-179)	466 (458.1-474.5)
SB	82.3 (81.3-83.8)	18.4 (18.2-18.7)	100.8 (99.6-102.5)	40.8 (39.5-41.6)	22.2 (22-22.6)	16.3 (16.3-16.7)	80.3 (78.3-82.2)	90.5 (88.4-92.3)	36.6 (35.8-36.9)	264.7 (260.5-268.4)	551.7 (541-561.2)
FR	78.1 (76.6-79.6)[o]	19.9 (19.7-20.1)	97.9 (96.3-99.6)	37.3 (37.1-37.4)	33.4 (33.2-33.7)	22.5 (22.4-22.6)	72.5 (71.2-74)	125 (122.9-127.6)	22.1 (21.8-22.6)[k]	281.1 (277.2-285.5)	594.3 (586-603.7)
RA	86.1 (84.6-87.9)	19.9 (19.9-20.1)	106.1 (104.5-108.1)	18.4 (18.4-18.5)	30.3 (30.2-30.5)	24.6 (24.5-24.7)	205.9 (201.1-209)	230.3 (226-234.3)	236.2 (231.4-239.9)	190.1 (187-194.5)	936.2 (918.9-951.7)
BR	94.4 (92.2-96.1)	24.1 (24-24.2)	118.5 (116.3-120.3)	25.8 (25.7-26)	24.9 (24.8-25) [1]	25.6 (25.5-25.7)	113.7 (111.7-115.5)	220.1 (216.6-223.6)	112 (110.9-114)	207.9 (204.7-210.8)	730.4 (720.2-740.8)

SE	85.4 (83.8-87.1)	15.1 (15-15.4)	100.5 (98.9-102.6)	17.7 (17.4-17.9)[i]	18 (17.9-18.4)	21.2 (21.1-21.5)	32.8 (32.5-33)[g,k]	58.9 (57.5-59.7)[g]	28.4 (28.2-28.7)	223.6 (220.1-227.4)	400.9 (395-406.8)
MO	51.2 (50.1-52.2)[g,o]	17.8 (17.5-17.9)	69.1 (67.6-70.1)[g,o]	17.4 (17.2-17.6)[i,j]	13.7 (13.5-13.8)	15.9 (15.8-16.1)[p]	70.5 (69.3-71.6)	55.9 (54.6-56.9)[g,k]	18.6 (18.5-18.7)[k,l]	134.2 (131.6-136.6)	326.5 (320.8-331.6)[g,k]
RE	173.3 (170.7-176.1)	26 (25.8-26.2)	199.3 (196.6-202.2)	34.6 (34.3-34.7)	134.3 (132.7-135.8)	40.1 (39.9-40.3)	112.6 (111.1-114.2)	203.1 (199.5-206.6)	48.7 (48.4-49)	293.2 (288.7-297.4)	866.3 (854.9-878)
SH	96.5 (94.8-97.9)	18.8 (18.7-18.9)	115.3 (113.5-116.9)	19.9 (19.8-20)	26.2 (26.1-26.3)	42.1 (41.8-42.4)	85 (83.5-86.6)	77.2 (75.6-78.5)	27.9 (27.8-28)	169 (166.5-171.8)	447.6 (441.4-453.9)
AM	113.1 (111.2-115.2)	15.7 (15.6-15.8)	128.8 (126.8-131.1)	21.9 (21.8-22)	14.7 (14.6-14.8)	15.7 (15.6-15.8)[p]	82.9 (81.4-84.4)	144.5 (142.3-146.9)	68.5 (67.2-70.2)	142.6 (140.4-144.7)	491.3 (483.6-499.1)

[†] Hydroxybenzoic acids were quantified as gallic acid equivalents, and flavanols were quantified as catechin equivalents. The Kruskal-Wallis test, a non-parametric alternative, was applied. Data were presented as medians with interquartile ranges (25th–75th percentiles). The significance of the values was adjusted using Bonferroni correction for multiple tests. A significance level of $p < 0.05$ was considered statistically significant.

Where: [a] represents statistically significant compared with BL; [g] represents statistically significant compared with NE; [h] represents statistically significant compared with RU; [i] represents statistically significant compared with SB; [j] represents statistically significant compared with FR; [k] represents statistically significant compared with RA; [l] represents statistically significant compared with BR; [o] represents statistically significant compared with RE; [p] represents statistically significant compared with SH.

The white grape cultivars are Blasius (BL), Rhine Riesling (RR), Roze Blaj (RB), Astra (AS), Traminer roz (TR), Johaniter (JO), Neuburger (NE), Rubin (RU), Sauvignon Blanc (SB), Fetească Regală (FR), Radames (RA), Brumăriu (BR), Selena (SE) Muscat Ottonel (MO) and the red grape cultivars included Regent (RE), Shiraz (SH), and Amurg (AM).

The analyzed solutions were obtained from 0.1 g of grape pomace (GP) powder which were extracted in a 3 mL solvent mixture of water : ethanol (30:70, v/v).

Table S3. Flavonols (μg/mL rutin equivalents) and anthocyanins (μg/mL cyanidin equivalents) determined in the grape pomace extracts by LC-MS

Compounds concentration (μg/mL) / Samples	RT (min); $[M+H]^+$ (*m/z*); λ_{max} (nm)							
	Quercetin-glucoside 16.23 (min); 465 (*m/z*); 263, 355 (nm)	Kaempferol-glucoside 17.33 (min); 449 (*m/z*); 253, 350 (nm)	Total Flavonols	Malvidin-caffeoyl-glucoside 11.00 (min); 655 (*m/z*); 278, 523 (nm)	Malvidin-glucoside 12.57 (min); 493 (*m/z*); 278, 520 (nm)	Malvidin-acetyl-glucoside 14.70 (min); 535 (*m/z*); 278, 521 (nm)	Malvidin-coumaroyl-glucoside 17.47 (min); 639 (*m/z*); 278, 522 (nm)	Total Anthocyanins
BL	4.21 (4.2-4.2)	0.03 (0.03-0.03)[d,q]	4.2 (4.2-4.3)	n.d.	n.d.	n.d.	n.d.	n.d.
RR	3.1 (3-3.1)	0.09 (0.09-0.09)[d]	3.2 (3.1-3.2)	n.d.	n.d.	n.d.	n.d.	n.d.
RB	2.6 (2.6-2.7)	1.03 (1.02-1.03)	3.7 (3.6-3.7)	n.d.	n.d.	n.d.	n.d.	n.d.
AS	12.4 (12.2-12.5)	5.9 (5.5-6.1)	18.4 (17.8-18.6)	n.d.	n.d.	n.d.	n.d.	n.d.
TR	5.6 (5.5-5.7)	0.63 (0.63-0.63)	6.2 (6.1-6.3)	n.d.	n.d.	n.d.	n.d.	n.d.
JO	11.5 (11.3-11.7)	4.3 (4.3-4.3)	15.9 (15.7-16.1)	n.d.	n.d.	n.d.	n.d.	n.d.
NE	10 (10-10)	2.2 (2.2-2.2)	12.3 (12.3-12.3)	n.d.	n.d.	n.d.	n.d.	n.d.
RU	4.2 (4.1-4.3)	0.91 (0.90-0.92)	5.1 (5-5.3)	n.d.	n.d.	n.d.	n.d.	n.d.
SB	3.6 (3.6-3.8)	0.27 (0.26-0.27)	3.9 (3.7-4)	n.d.	n.d.	n.d.	n.d.	n.d.
FR	4.3 (4.2-4.5)	0.79 (0.79-0.80)	5.1 (5-5.3)	n.d.	n.d.	n.d.	n.d.	n.d.
RA	1.7 (1.7-1.7)[o]	0.42 (0.41-0.43)	2.2 (2.1-2.2)[o]	n.d.	n.d.	n.d.	n.d.	n.d.
BR	8 (7.9-8.1)	2.4 (2.4-2.4)	10.4 (10.3-10.5)	n.d.	n.d.	n.d.	n.d.	n.d.
SE	1.7 (1.7-1.7)[d,g]	0.35 (0.25-0.35)	2 (2-2)[d,o]	n.d.	n.d.	n.d.	3.2 (3.12-3.37)	3.2 (3.12-3.37)

MO	5.7 (5.6-5.8)	0.25 (0.25-0.25)	5.9 (5.8-6.1)	n.d.	n.d.	n.d.	n.d.	n.d.
RE	16.5 (16.3-16.7)	4.5 (4.4-4.7)	21.1 (20.8-21.4)	6.2 (6.13-6.42)	6.1 (5.93-6.17)	5.0 (4.92-5.14)	10.1 (9.90-10.20)	27.5 (26.89-27.95)
SH	5.8 (5.7-5.9)	2.2 (2.1-2.3)	8.1 (7.8-8.30	n.d.	3.4 (3.25-3.55)	3.1 (3.04-3.29)	3.0 (2.89-3.11)	9.5 (9.19-9.96)
AM	8.1 (8-8.2)	5.7 (5.5-5-8)	13.9 (13.6-14.1)	n.d.	4.9 (4.79-5.06)	3.6 (3.50-3.70)	4.5 (4.35-4.64)	13.0 (12.66-13.42)

ᵗ Flavonols were quantified as rutin equivalents and anthocyanins as cyanidin equivalents (μg/mL). The Kruskal-Wallis test, a non-parametric alternative, was applied. Data were presented as medians with interquartile ranges (25th–75th percentiles). The significance of the values was adjusted using Bonferroni correction for multiple tests. A significance level of $p < 0.05$ was considered statistically significant.

Where: ᵈ represents statistically significant compared with AS; ᵍ represents statistically significant compared with NE; ᵒ represents statistically significant compared with RE; ᑫ represents statistically significant compared with AM; n.d. – non determined

The white grape cultivars are Blasius (BL), Rhine Riesling (RR), Roze Blaj (RB), Astra (AS), Traminer roz (TR), Johaniter (JO), Neuburger (NE), Rubin (RU), Sauvignon Blanc (SB), Fetească Regală (FR), Radames (RA), Brumăriu (BR), Selena (SE) Muscat Ottonel (MO) and the red grape cultivars included Regent (RE), Shiraz (SH), and Amurg (AM).

The analyzed solutions were obtained from 0.1 g of grape pomace (GP) powder which were extracted in a 3 mL solvent mixture of water : ethanol (30:70, v/v).

Table S4. Fatty acids composition (g/100 g of dried sample) of the studied grape pomaces by GC-FID

Sample/ Fatty acid (g FAME/ 100 g Total FAME)	BL	RR	AM	RB	AS	SH	TR	BR	JO	RE	SE	NE	MO	RU	RA	SB	FR
Saturated Fatty Acids (SFA)																	
Caprilic (C 8:0)	0.06 (0.05-0.08)	0.50 (0.46-0.54)	0.06 (0.04-0.07)	0.58 (0.55-0.620	0.01 (0.01-0.01)	0.14 (0.14-0.14)	0.04 (0.04-0.04)	0.00 (0.00-0.00)	0.02 90.01-0.03)	0.92 (0.89-0.95)	0.05 (0.04-0.05)	0.06 (0.05-0.07)	0.02 (0.01-0.03)	0.05 (0.03-0.06)	0.05 (0.04-0.06)	0.00 (0.00-0.00)	0.06 (0.04-0.07)
Capric (C 10:0)	0.12 (0.11-0.13)	0.09 (0.09-0.10)	0.11 (0.10-0.12)	0.04 (0.04-0.05)	0.04 (0.03-0.05)	0.15 (0.14-0.15)	0.07 (0.06-0.07)	0.07 (0.07-0.08)	0.14 (0.13-0.15)	0.09 (0.08-0.10)	0.06 (0.05-0.06)	0.07 (0.06-0.07)	0.04 (0.04-0.05)	0.10 (0.10-0.10)	0.13 (0.13-0.13)	0.08 (0.08-0.08)	0.07 (0.06-0.08)
Lauric (C12:0)	0.04 (0.04-0.05)	0.04 (0.04-0.05)	0.02 (0.01-0.02)	0.01 (0.01-0.01)	0.02 (0.01-0.02)	0.03 (0.03-0.04)	0.02 (0.02-0.02)	0.06 (0.06-0.07)	0.06 (0.05-0.07)	0.04 (0.04-0.04)	0.04 (0.03-0.05)	0.06 (0.05-0.08)	0.02 (0.02-0.03)	0.03 (0.02-0.03)	0.01 (0.00-0.02)	0.03 (0.02-0.04)	0.03 (0.02-0.03)
Miristic (C 14:0)	0.45 (0.43-0.46)	0.30 (0.29-0.31)	0.28 (0.27-0.29)	0.15 (0.14-0.17)	0.13 (0.13-0.13)	0.36 (0.35-0.36)	0.24 (0.22-0.25)	0.24 (0.24-0.25)	0.59 (0.53-0.65)	0.22 (0.21-0.23)	0.22 (0.21-0.24)	0.34 (0.33-0.36)	0.18 (0.18-0.19)	0.24 (0.23-0.24)	0.27 (0.27-0.27)	0.26 (0.26-0.26)	0.26 (0.25-0.28)
Pentadecanoic (C15:0)	0.13 (0.13-0.14)	0.10 (0.10-0.10)	0.09 (0.09-0.09)	0.03 (0.02-0.03)	0.02 (0.02-0.03)	0.15 (0.14-0.16)	0.08 (0.07-0.08)	0.03 (0.03-0.04)	0.06 (0.05-0.08)	0.05 (0.05-0.06)	0.04 (0.04-0.04)	0.18 (0.16-0.20)	0.06 (0.06-0.07)	0.10 (0.09-0.12)	0.10 (0.09-0.11)	0.04 (0.04-0.05)	0.04 (0.03-0.06)
Palmitic (C16:0)	15.53 (15.49-15.58)	12.86 (12.85-12.87)	12.43 (12.33-12.53)	9.07 (9.04-9.10)	8.92 (8.89-8.95)	11.55 (11.51-11.59)	12.02 (11.98-12.06)	11.32 (11.31-11.33)	12.22 (12.19-12.26)	11.08 (11.05-11.12)	10.40 (10.36-10.44)	13.82 (13.78-13.87)	11.68 (11.67-11.68)	10.83 (10.82-10.84)	11.99 (11.96-12.03)	11.76 (11.74-11.78)	12.28 (12.27-12.30)
Heptadecanoic (C17:0)	0.01 (0.00-0.02)	0.10 (0.10-0.10)	0.03 (0.03-0.04)	0.02 (0.02-0.02)	0.02 (0.02-0.02)	0.02 (0.02-0.03)	0.10 (0.09-0.11)	0.09 (0.09-0.10)	0.10 (0.09-0.11)	0.03 (0.03-0.04)	0.04 (0.00-0.08)	0.07 (0.06-0.09)	0.11 (0.10-0.12)	0.08 (0.07-0.10)	0.08 (0.07-0.09)	0.10 (0.09-0.10)	0.07 90.05-0.09)
Stearic (C18:0)	4.45 (4.33-4.57)	4.12 (4.09-4.14)	3.67 (3.64-3.69)	3.47 (3.44-347)	4.68 (4.67-4.69)	4.08 (4.06-4.10)	5.03 (5.02-5.04)	3.20 (3.19-3.20)	4.21 (4.20-4.22)	3.96 (3.94-3.97)	3.59 (3.52-3.65)	4.83 (4.79-4.87)	3.93 (3.91-3.96)	5.24 (5.19-5.30)	4.33 (4.31-4.35)	4.76 (4.72-4.80)	4.10 (4.09-4.11)
Arahidic (C 20:0)	0.00 (0.00-0.00)	0.00 (0.00-0.00)	0.01 (0.00-0.01)	0.05 (0.05-0.05)	0.01 (0.01-0.01)	0.00 (0.00-0.00)	0.04 (0.04-0.05)	0.03 (0.03-0.04)	0.07 (0.07-0.08)	0.06 (0.06-0.07)	0.03 (0.02-0.03)	0.03 (0.03-0.03)	0.02 (0.02-0.03)	0.03 (0.03-0.04)	0.05 (0.04-0.06)	0.03 (0.03-0.04)	0.43 (0.41-0.44)
Lignoceric (C 24:0)	0.23 (0.22-0.24)	0.19 (0.19-0.20)	0.14 (0.13-0.14)	0.13 (0.12-0.14)	0.16 (0.15-0.17)	0.27 (0.27-0.28)	0.24 (0.24-0.25)	0.16 (0.15-0.17)	0.15 (0.14-0.16)	0.21 (0.21-0.22)	0.18 (0.15-0.20)	0.21 (0.20-0.22)	0.18 (0.18-0.19)	0.22 (0.21-0.23)	0.19 (0.19-0.20)	0.24 (0.22-0.26)	0.22 (0.21-0.22)

Total SFA	21.03 (20.69-21.11)	17.85 (17.85-17.86)	16.84 (16.77-16.91)	13.55 (13.47-13.63)	14.01 (13.99-14.03)	16.76 (16.69-16.83)	17.87 (17.82-17.93)	15.22 (15.18-15.26)	17.63 (17.56-17.71)	16.68 (16.68-16.68)	14.64 (14.51-14.76)	19.69 (19.67-19.71)	16.26 (16.18-16.34)	16.93 (16.87-16.99)	17.21 (17.13-17.28)	17.30 (17.28-17.32)	18.16 (18.14-18.18)
Unsaturated Fatty Acids (UFA)																	
Monounsaturated Fatty Acids (MUFA)																	
Pentadecenoic (C15:1)	0.05 (0.04-0.05)	0.02 (0.02-0.03)	0.02 (0.02-0.03)	0.02 (0.02-0.02)	0.01 (0.01-0.02)	0.05 (0.05-0.05)	0.03 (0.02-0.03)	0.05 (0.04-0.06)	0.04 (0.04-0.04)	0.03 (0.03-0.03)	0.04 (0.02-0.05)	0.12 (0.12-0.12)	0.02 (0.02-0.03)	0.10 (0.09-0.12)	0.13 (0.11-0.15)	0.05 (0.05-0.06)	0.04 (0.04-0.04)
Palmitoleic (C16:1)	1.81 (1.80-1.83)	1.17 (1.16-1.18)	1.14 (1.12-1.15)	0.46 (0.44-0.49)	0.73 (0.72-0.74)	1.05 (1.04-1.06)	0.97 (0.96-0.99)	1.54 (1.53-1.54)	1.36 (1.35-1.36)	0.78 (0.77-0.78)	0.56 (0.54-0.59)	1.23 (1.22-1.25)	0.73 (0.72-0.74)	0.87 (0.86-0.87)	1.36 (1.31-1.40)	0.75 (0.73-0.78)	0.95 (0.92-0.97)
Oleic cis (C18:1)	17.71 (17.71-17.72)	17.01 (16.97-17.04)	18.39 (18.34-18.44)	16.48 (16.46-16.49)	15.82 (15.79-15.86)	13.63 (13.62-13.64)	16.53 (16.50-16.56)	18.72 (18.66-18.78)	14.78 (14.71-14.86)	14.22 (14.20-14.24)	16.48 (16.41-16.54)	17.86 (17.85-17.87)	17.16 (17.13-17.19)	15.81 (15.80-15.83)	16.28 (16.21-16.35)	15.68 (15.63-15.73)	16.15 (16.08-16.21)
Total MUFA	19.57 (19.56-19.59)	18.20 (18.17-18.23)	19.55 (19.49-19.61)	16.96 (16.95-16.97)	16.57 (16.52-16.61)	14.73 (14.72-14.74)	17.53 (17.52-17.54)	20.30 (20.23-20.38)	16.18 (16.10-16.26)	15.02 (15.00-15.05)	17.08 (17.00-17.15)	19.21 (19.18-19.23)	17.91 (17.87-17.95)	16.77 (16.77-16.78)	17.76 (17.76-17.77)	16.49 (16.41-16.56)	17.13 (17.09-17.18)
Polyunsaturated Fatty Acids (PUFA)																	
Polyunsaturated Fatty Acids omega 3 (PUFA ω-3)																	
a-Linoleic (C18:3n3)	1.60 (1.60-1.610	1.30 (1.30-1.31)	1.87 (1.87-1.87)	0.70 (0.69-0.70)	0.64 (0.63-0.650	1.11 (1.11-1.11)	1.17 (1.16-1.170	1.49 (1.49-1.50)	1.74 (1.74-1.75)	1.85 (1.84-1.86)	1.01 (1.01-1.01)	1.50 (1.50-1.50)	1.06 (1.06-1.07)	1.15 (1.14-1.17)	1.15 (1.14-1.15)	1.30 (1.30-1.310	1.11 (1.10-1.11)
Octadecatetraenoic (C18:4n3)	0.51 (0.51-0.52)	0.44 (0.42-0.46)	0.28 (0.28-0.29)	0.17 (0.15-0.19)	0.40 (0.39-0.42)	0.33 (0.31-0.35)	0.62 (0.62-0.63)	0.50 (0.50-0.51)	0.50 (0.48-0.52)	0.26 (0.25-0.28)	0.43 (0.39-0.46)	1.12 (1.10-1.14)	0.52 (0.50-0.55)	1.27 (1.23-1.31)	1.28 (1.26-1.30)	0.55 (0.52-0.57)	0.28 (0.28-0.28)
Eicosatrienoic (C20(3n3))	0.04 (0.03-0.04)	0.05 (0.05-0.05)	0.11 (0.11-0.12)	0.07 (0.07-0.08)	0.11 (0.11-0.12)	0.16 (0.14-0.19)	0.11 (0.11-0.11)	0.06 (0.06-0.06)	0.07 (0.07-0.08)	0.00 (0.00-0.00)	0.05 (0.04-0.06)	0.07 (0.06-0.09)	0.06 (0.06-0.07)	0.07 (0.07-0.08)	0.08 (0.08-0.09)	0.07 (0.07-0.08)	0.06 (0.06-0.06)
Eicosapentaenoic (C 20:5n3)	0.18 (0.17-0.18)	0.14 (0.13-0.14)	0.12 (0.12-0.13)	0.06 (0.05-0.07)	0.08 (0.08-0.08)	0.10 (0.10-0.10)	0.18 (0.18-0.19)	0.13 (0.12-0.13)	0.14 (0.13-0.15)	0.11 (0.11-0.11)	0.14 (0.12-0.16)	0.20 (0.20-0.20)	0.14 (0.14-0.14)	0.20 (0.19-0.20)	0.18 (0.16-0.19)	0.16 (0.14-0.19)	0.16 (0.14-0.18)
Total PUFA ω-3	2.33 (2.32-2.34)	1.93 (1.91-1.95)	2.39 (2.39-2.39)	1.00 (0.99-1.01)	1.24 (1.23-1.25)	1.70 (1.69-1.71)	2.08 (2.07-2.10)	2.18 (2.17-2.18)	2.45 (2.44-2.47)	2.23 (2.23-2.23)	1.62 (1.61-1.63)	2.90 (2.89-2.90)	1.78 (1.76-1.81)	2.69 (2.66-2.72)	2.69 (2.68-2.69)	2.08 (2.02-2.14)	1.60 (1.60-1.61)
Polyunsaturated Fatty Acids omega 6 (PUFA ω-6)																	

Linoleic cis (C 18:2n6)	55.68 (55.60-55.76)	61.04 (61.00-61.07)	60.47 (60.43-60.52)	67.86 (67.83-67.90)	67.29 (67.28-67.31)	66.13 (66.12-66.14)	60.70 (60.69-60.71)	60.80 (60.66-60.93)	61.58 (61.48-61.68)	65.61 (65.57-65.65)	65.49 (65.38-65.59)	56.95 (56.92-56.99)	62.60 (62.58-62.62)	61.63 (61.60-61.65)	60.56 (60.51-60.62)	62.76 (62.74-62.77)	62.12 (62.10-62.15)
Eicosadienoic (C20(2n6))	0.30 (0.29-0.31)	0.13 (0.12-0.14)	0.13 (0.12-0.13)	0.17 (0.16-0.18)	0.19 (0.18-0.20)	0.07 (0.07-0.07)	0.15 (0.14-0.15)	0.52 (0.50-0.55)	0.22 (0.22-0.23)	0.11 (0.11-0.12)	0.30 (0.28-0.33)	0.24 (0.20-0.28)	0.11 (0.10-0.11)	0.57 (0.52-0.630	0.61 (0.61-0.620	0.24 (0.22-0.27)	0.07 (0.07-0.08)
Eicosatrienoic (C20(3n6))	0.04 (0.04-0.05)	0.16 (0.16-0.16)	0.19 (0.19-0.19)	0.06 (0.05-0.06)	0.08 (0.07-0.09)	0.07 (0.06-0.07)	0.11 (0.11-0.11)	0.07 (0.06-0.08)	0.11 (0.10-0.11)	0.00 (0.00-0.00)	0.04 (0.04-0.05)	0.17 (0.16-0.18)	0.06 (0.05-0.06)	0.13 (0.10-0.16)	0.14 (0.11-0.18)	0.10 (0.09-0.11)	0.14 (0.13-0.14)
Arachidonic (C20(4n6))	0.26 (0.25-0.27)	0.04 (0.03-0.05)	0.04 (0.04-0.04)	0.07 (0.06-0.07)	0.05 (0.05-0.05)	0.04 (0.04-0.05)	0.39 (0.37-0.40)	0.11 (0.10-0.11)	0.27 (0.26-0.29)	0.08 (0.08-0.08)	0.10 (0.09-0.11)	0.27 (0.24-0.31)	0.18 (0.17-0.18)	0.22 (0.18-0.27)	0.20 (0.17-0.23)	0.11 (0.11-0.12)	0.10 (0.10-0.11)
Docosadienoic (C 22:2n6)	0.06 (0.06-0.07)	0.06 (0.06-0.07)	0.06 (0.05-0.06)	0.03 (0.03-0.04)	0.06 (0.05-0.06)	0.09 (0.08-0.09)	0.55 (0.53-0.58)	0.55 (0.55-0.55)	0.64 (0.63-0.66)	0.13 (0.13-0.13)	0.57 (0.56-0.58)	0.35 (0.34-0.36)	0.40 (0.40-0.40)	0.74 (0.66-0.81)	0.59 (0.53-0.650	0.65 (0.61-0.68)	0.06 (0.05-0.07)
Total PUFA ω-6	56.35 (56.24-56.45)	61.42 (61.38-61.46)	60.89 (60.83-60.940	68.19 (68.12-68.25)	67.67 (67.64-67.70)	66.40 (66.38-66.41)	61.89 (61.88-61.90)	62.04 (61.93-62.16)	62.83 (62.74-62.92)	65.93 (65.90-65.97)	66.50 (66.39-66.61)	57.98 (57.97-58.00)	63.34 (63.33-63.35)	63.29 (63.26-63.32)	62.10 (61.99-62.20)	63.86 (63.86-63.86)	62.50 (62.47-62.53)
Total PUFA	58.67 (58.58-58.77)	63.35 (63.33-63.37)	63.28 (63.22-63.33)	69.19 (69.14-69.24)	68.91 (68.89-69.93)	68.09 (68.09-68.10)	63.98 (63.95-64.00)	64.22 (64.11-64.33)	65.28 (65.18-65.39)	68.16 (68.12-68.19)	68.12 (68.00-68.24)	60.88 (60.88-60.89)	65.12 (65.09-65.150	65.98 (65.92-66.04)	64.78 (64.68-64.89)	65.94 (65.88-66.00)	64.10 (64.07-64.14)
Total UFA (MUFA+PUFA)	78.25 (78.14-78.36)	81.55 (81.50-81.60)	82.83 (82.71-82.95)	86.15 (86.11-86.19)	85.47 (85.41-85.54)	82.82 (82.80-82.85)	81.51 (81.47-81.54)	84.52 (84.49-84.56)	81.46 (81.44-81.49)	83.18 (83.17-83.19)	85.20 (85.15-85.24)	80.09 (80.06-80.12)	83.04 (82.97-83.11)	82.75 (82.69-82.82)	82.55 (82.45-82.64)	82.43 (82.41-82.45)	81.23 (81.22-81.25)
Other fatty acids	0.72 (0.69-0.76)	0.60 (0.55-0.650	0.34 (0.29-0.390	0.30 (0.26-0.34)	0.52 (0.47-0.57)	0.42 (0.37-0.46)	0.62 (0.60-0.64)	0.26 (0.26-0.26)	0.91 (0.86-0.96)	0.14 (0.13-0.15)	0.17 (0.09-0.25)	0.22 (0.21-0.24)	0.70 (0.70-0.71)	0.32 (0.31-0.33)	0.24 (0.23-0.26)	0.27 (0.27-0.27)	0.61 (0.60-0.62)
SFA/UFA	0.27 (0.27-0.27)	0.22 (0.22-0.22)	0.20 (0.20-0.20)	0.16 (0.16-0.16)	0.16 (0.16-0.16)	0.20 (0.20-0.20)	0.22 (0.22-0.22)	0.18 (0.18-0.18)	0.22 (0.22-0.22)	0.20 (0.20-0.20)	0.17 (0.17-0.17)	0.25 (0.25-0.25)	0.20 (0.20-0.20)	0.20 (0.20-0.20)	0.21 (0.21-0.21)	0.21 (0.21-0.21)	0.22 (0.22-0.22)
PUFA/MUFA	3.00 (3.00-3.00)	3.48 (3.48-3.48)	3.24 (3.23-3.24)	4.08 (4.07-4.09)	4.16 (4.15-4.17)	4.62 (4.62-4.63)	3.65 (3.65-3.650	3.16 (3.15-3.18)	4.04 (4.01-4.06)	4.54 (4.53-4.55)	3.99 (3.96-4.01)	3.17 (3.17-3.17)	3.64 (3.63-3.64)	3.93 (3.93-3.94)	3.65 (3.64-3.65)	4.00 (3.98-4.02)	3.74 (3.73-3.75)
ω-6 / ω-3	24.19 (24.05-24.33)	31.87 (31.48-32.25)	25.50 (25.50-25.51)	68.11 (67.17-69.06)	54.69 (54.29-55.10)	39.10 (38.94-39.26)	29.69 (29.50-29.88)	28.52 (28.35-28.69)	25.61 (25.48-25.74)	29.63 (29.62-29.65)	41.06 (40.82-41.30)	20.01 (19.96-20.06)	35.55 (35.11-36.00)	23.51 (23.28-23.75)	23.12 (23.04-23.20)	30.71 (29.86-31.56)	38.95 (38.83-39.07)

UFA/SFA	3.72 (3.70-3.74)	4.57 (4.57-4.57)	4.92 (4.89-4.95)	6.36 (6.32-6.40)	6.10 (6.09-6.120	4.94 (4.92-4.96)	4.56 (4.55-4.58)	5.55 (5.54-5.57)	4.62 (4.60-4.62)	4.99 (4.99-4.99)	5.82 (5.77-5.87)	4.07 (4.06-4.07)	5.11 (5.08-5.14)	4.89 (4.87-4.91)	4.80 (4.77-4.82)	4.76 (4.76-4.77)	4.47 (4.47-4.48)
PUFA/SFA	2.79 (2.78-2.81)	3.55 (3.55-3.55)	3.76 (3.74-3.78)	5.11 (5.07-5.14)	4.92 (4.91-4.93)	4.06 (4.05-4.08)	3.58 (3.57-3.59)	4.22 (4.20-4.24)	3.70 (3.68-3.73)	4.09 (4.08-4.09)	4.65 (4.61-4.70)	3.09 (3.09-3.10)	4.01 (3.98-4.03)	3.90 (3.88-3.920	3.77 (3.74-3.79)	3.81 (3.81-3.81)	3.53 (3.53-3.53)
COX	6.26 (6.25-6.27)	6.74 (6.74-6.74)	6.82 (6.81-6.82)	7.31 (7.30-7.31)	7.23 (7.23-7.23)	7.19 (7.19-7.19)	7.67 (7.67-7.67)	6.77 (6.76-6.78)	6.87 (6.86-6.88)	7.30 (7.30-7.30)	7.13 (7.12-7.14)	6.37 (6.37-6.37)	6.85 (6.85-6.85)	6.76 (6.75-6.76)	6.65 (6.64-6.65)	6.90 (6.90-6.90)	6.80 (6.80-6.80)
AI	0.22 (0.22-0.22)	0.17 (0.17-0.17)	0.16 (0.16-0.17)	0.11 (0.11-0.11)	0.11 (0.11-0.11)	0.16 (0.16-0.16)	0.16 (0.16-0.16)	0.15 (0.15-0.15)	0.18 (0.18-0.18)	0.14 (0.14-0.14)	0.13 (0.13-0.13)	0.19 (0.19-0.19)	0.15 (0.15-0.15)	0.14 (0.14-0.14)	0.16 (0.16-0.16)	0.16 (0.16-0.16)	0.16 (0.16-0.17)
TI	0.45 (0.45-0.46)	0.38 (0.38-038)	0.35 (0.34-0.35)	0.28 (0.28-0.28)	0.30 (0.30-0.30)	0.35 (0.35-0.35)	0.38 (0.37-0.380	0.31 (0.31-0.31)	0.36 (0.36-0.36)	0.32 (0.32-0.32)	0.30 (0.30-0.31)	0.40 (0.40-0.40)	0.34 (0.34-0.35)	0.34 (0.34-0.34)	0.35 (0.34-0.35)	0.36 (0.36-0.36)	0.37 (0.37-0.37)
H/H	4.69 (4.69-4.70)	6.03 (6.02-6.04)	6.35 (6.30-6.41)	9.22 (9.17-9.27)	9.25 (9.22-9.29)	6.79 (6.76-6.82)	6.40 (6.37-6.43)	7.00 (7.00-7.01)	6.10 (6.08-6.11)	7.23 (7.21-7.24)	7.82 (7.77-7.86)	5.39 (5.38-5.40)	6.81 (6.80-6.83)	7.10 (7.10-7.110	6.36 (6.34-6.38)	6.63 (6.63-6.64)	6.33 (6.33-6.33)
%	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100

The Kruskal-Wallis test, a non-parametric alternative, was applied. Fatty acid methyl esters (FAME) (g/100 g of dried sample) data were presented as medians with interquartile ranges (25th–75th percentiles). The significance of the values was adjusted using Bonferroni correction for multiple tests. A significance level of $p < 0.05$ was considered statistically significant.

The white grape cultivars are Blasius (BL), Rhine Riesling (RR), Roze Blaj (RB), Astra (AS), Traminer roz (TR), Johaniter (JO), Neuburger (NE), Rubin (RU), Sauvignon Blanc (SB), Fetească Regală (FR), Radames (RA), Brumăriu (BR), Selena (SE) Muscat Ottonel (MO) and the red grape cultivars included Regent (RE), Shiraz (SH), and Amurg (AM).

FAME-fatty acids methyl esters, SFA-saturated fatty acids. MUFA-monounsaturated fatty acids, PUFA-polyunsaturated fatty acids,

Total SFA (total saturated fatty acids) = C14:0 + C16:0 + C17:0+C18:0; Total MUFA (total monounsaturated fatty acids) = C14:1; C16:1 + C17:1; C18:1n-9; C18:1n-11; Total PUFA (total polyunsaturated fatty acids) = C18:2n-6 + C18:3n-3 + C18:4 n-3; C20:2n-6 + CLA+ C20:4n-6 + C20:5n-3 + C22-5 n-3 + C22:6n-3; Total n-6 PUFA = C18:2n-6 + C20:2n-6, + CLA+ C20:4n-6; total n-3 PUFA = C18:3n-3 + C18:4 n-3 + C20:5n-3 + C22-5 n-3 + C22:6n-3.)

Table S5. Antiradical activity of the samples evaluated using the capacity of scavenging DPPH$^{\cdot}$ and ABTS$^{\cdot+}$, the electron donation capacity using the FRAP, RP and CUPRAC methods and the ferrous and cupric ions chelation capacity

Sample/ Antioxidant activity	DPPH μM TE / mL extract	ABTS mg GAE / mL extract	CUPRAC mg GAE / mL extract	FRAP mg GAE / mL extract	RP mg GAE/ mL extract	Ferrous ions chelation μM EE / mL extract	Cupric ions chelation μM EE / mL extract
BL	36.93 (36.40-37.18) g	1.67 (1.65-1.69)	0.42 (0.41-0.43)	1.17 (1.13-1.17)	0.42 (0.41-0.43)	0.22 (0.21-0.22)	0.41 (0.40-0.42)
RR	46.72 (46.46-46.92)	1.99 (1.96-2)	0.53 (0.52-0.54)	1.16 (1.14-1.18)	0.41 (0.41-0.41)	0.24 (0.24-0.24)	0.33 (0.33-0.33)
RB	45.69 (45.6-46.02)	1.87 (1.84-1.89)	0.51 (0.50-051)	1.21 (1.19-1.22)	0.48 (0.47-0.48)	0.26 (0.25-0.27)	0.45 (0.44-0.45)
AS	36.23 (36.08-36.33) g, j	1.49 (1.47-1.5) g, j	0.38 (0.38-0.38) e, g	0.96 (0.95-0.99) g	0.37 (0.36-0.38) g	0.09 (0.09-0.09)	0.28 (0.26-0.28)
TR	77 (76.85-77.17)	2.97 (2.95-3.02)	1.08 (1.07-1.08)	1.64 (1.63-1.68)	1.01 (1.00-1.02)	0.24 (0.24-0.24)	0.37 (0.37-0.39)
JO	80.24 (80.17-80.44)	2.98 (2.95-3)	1.05 (1.03-1.05)	1.79 (1.77-1.81)	1.13 (1.10-1.14)	0.25 (0.24-0.25)	0.41 (0.40-0.42)
NE	115.45 (114.9-115.88)	3.87 (3.85-3.91)	1.28 (1.28-1.29)	2.02 (2.00-2.07)	1.47 (1.44-1.48)	0.26 (0.26-0.27)	0.46 (0.44-0.47)
RU	43.98 (43.43-44.43)	1.54 (1.51-1.58) g	038 (0.37-0.39) e,g	0.91 (0.89-0.91) g,j	0.35 (0.32-0.37) g,j	0.08 (0.07-0.08) g	0.25 (0.23-0.25) c,g
SB	56.88 (56.59-57.17)	2.01 (1.99-2.03)	0.59 (0.58-0.60)	1.17 (1.15-1.18)	0.77 (0.76-0.78)	0.19 (0.17-0.19)	0.41 (0.39-0.42)
FR	90/76 (90.21-90.98)	3.09 (3.07-3.13)	0.99 (0.97-1.00)	1.86 (1.81-1.87)	1.26 (1.25-1.28)	0.26 (0.24-0.26)	0.39 (0.39-0.41)
RA	79.67 (79.61-79.89)	2.94 (2.93-2.97)	0.80 (0.78-0.80)	1.43 (1.41-1.43)	0.87 (0.86-0.88)	0.25 (0.24-0.26)	0.35 (0.34-0.36)
BR	51.12 (51.04-51.16)	2.32 (2.31-2.33)	0.52 (0.51-0.53)	1.09 (1.08-1.09)	0.49 (0.48-0.50)	0.22 (0.21-0.23)	0.34 (0.34-0.34)
SE	41.71 (41.51-41.91)	1.62 (1.61-1.64)	0.51 (0.50-0.51)	1.16 (1.14-1.19)	0.58 (0.57-0.60)	0.21 (0.21-0.21)	0.32 (0.31-0.32)
MO	60.42 (59.99-60.93)	2.1 (2.8-2.12)	0.55 (0.55-0.55)	1.12 (1.10-1.12)	0.73 (0.72-0.75)	0.22 (0.21-0.23)	0.36 (0.35-0.37)
RE	59.96 (59.65-60.22)	2.78 (2.78-2.79)	0.73 (0.72-0.75)	1.55 (1.52-1.56)	0.83 (0.82-0.85)	0.19 (0.19-0.20)	0.41 (0.40-0.42)

SH	50.82 (50.44-51.19)	2.31 (2.3-2.32)	0.53 (0.53-0.54)	1.19 (1.17-1.22)	0.61 (0.58-0.61)	0.17 (0.16-0.17)	0.31 (0.29-0.31)
AM	37.35 (37.04-37.58)	1.51 (1.50-1.53) g	0.46 (0.46-0.46)	1.14 (1.11-1.56)	0.51 (0.50-0.51)	0.18 (0.17-0.18)	0.35 (0.34-0.36)

[†] Values represent medians with interquartile ranges (25th–75th percentiles). The Kruskal-Wallis test, a non-parametric alternative, was applied. The significance of the values was adjusted using Bonferroni correction for multiple tests. A significance level of $p < 0.05$ was considered statistically significant.

Where: [c] represents statistically significant compared with RB; [e] represents statistically significant compared with TR; [g] represents statistically significant compared with NE; [j] represents statistically significant compared with FR.

The white grape cultivars are Blasius (BL), Rhine Riesling (RR), Roze Blaj (RB), Astra (AS), Traminer roz (TR), Johaniter (JO), Neuburger (NE), Rubin (RU), Sauvignon Blanc (SB), Fetească Regală (FR), Radames (RA), Brumăriu (BR), Selena (SE) Muscat Ottonel (MO) and the red grape cultivars included Regent (RE), Shiraz (SH), and Amurg (AM).

TE—Trolox equivalent, GAE—gallic acid equivalent, EE—EDTA equivalent; DPPH—2,2-diphenyl-1-picrylhydrazyl assay; ABTS—2,2′-azinobis-(3-ethylbenzthiazolin-6-sulfonic acid) radical-scavenging assay; CUPRAC—Cupric Reducing Antioxidant Capacity; FRAP—Ferric Reducing Antioxidant Potential; RP—Reducing Power

The analyzed solutions were obtained from 0.1 g of grape pomace (GP) powder which were extracted in a 3 mL solvent mixture of water : ethanol (30:70, v/v).