Supporting Information

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Contrasting alkaloid- and polyphenol-rich plants: LC-MS/MS based characterization and bioactivity assessment of *Papaver somniferum* and *Celtis australis*

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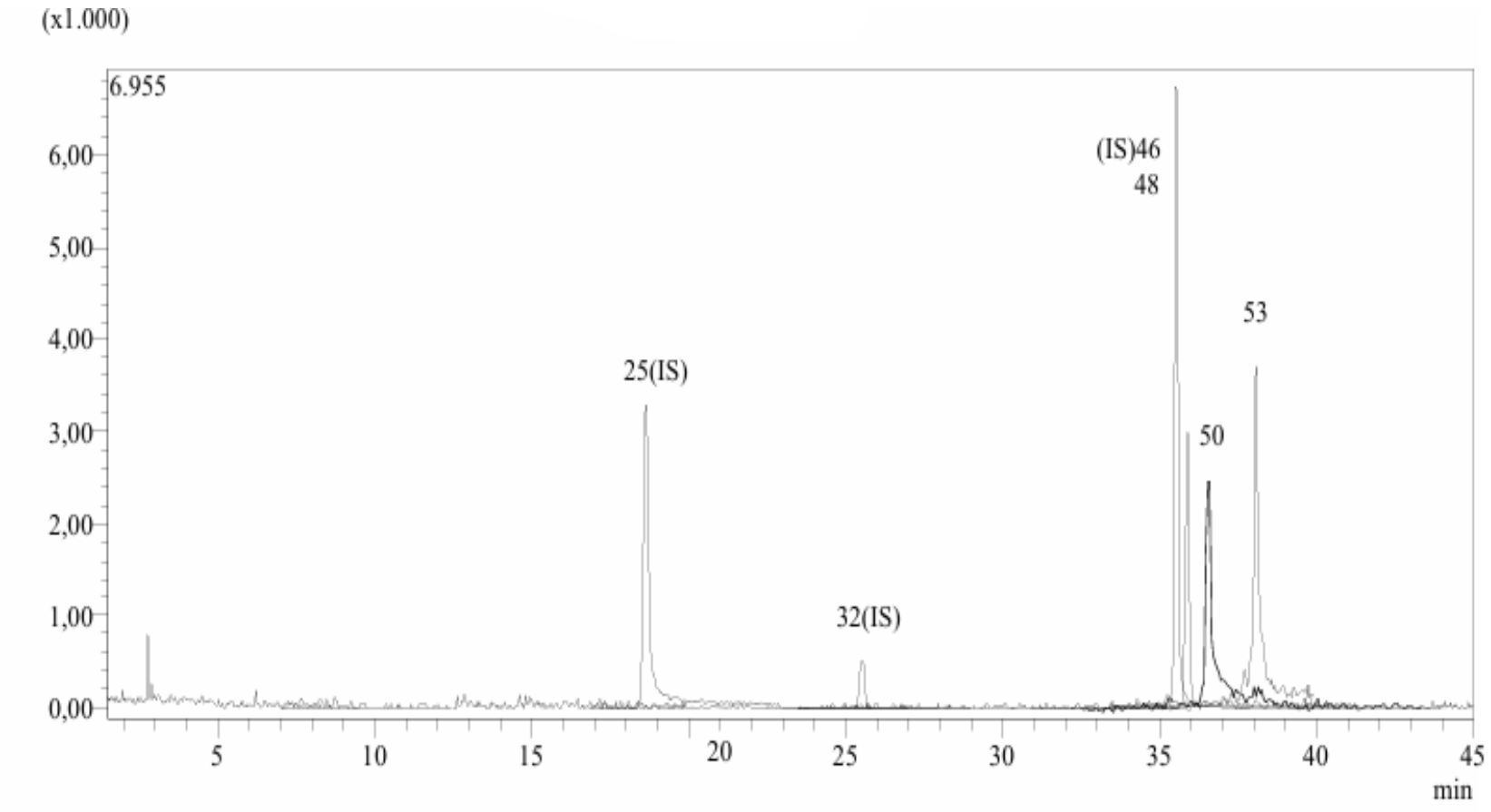

Figure S2: LC-MS/MS Chromatogram of ethanolic *C. australis* extract

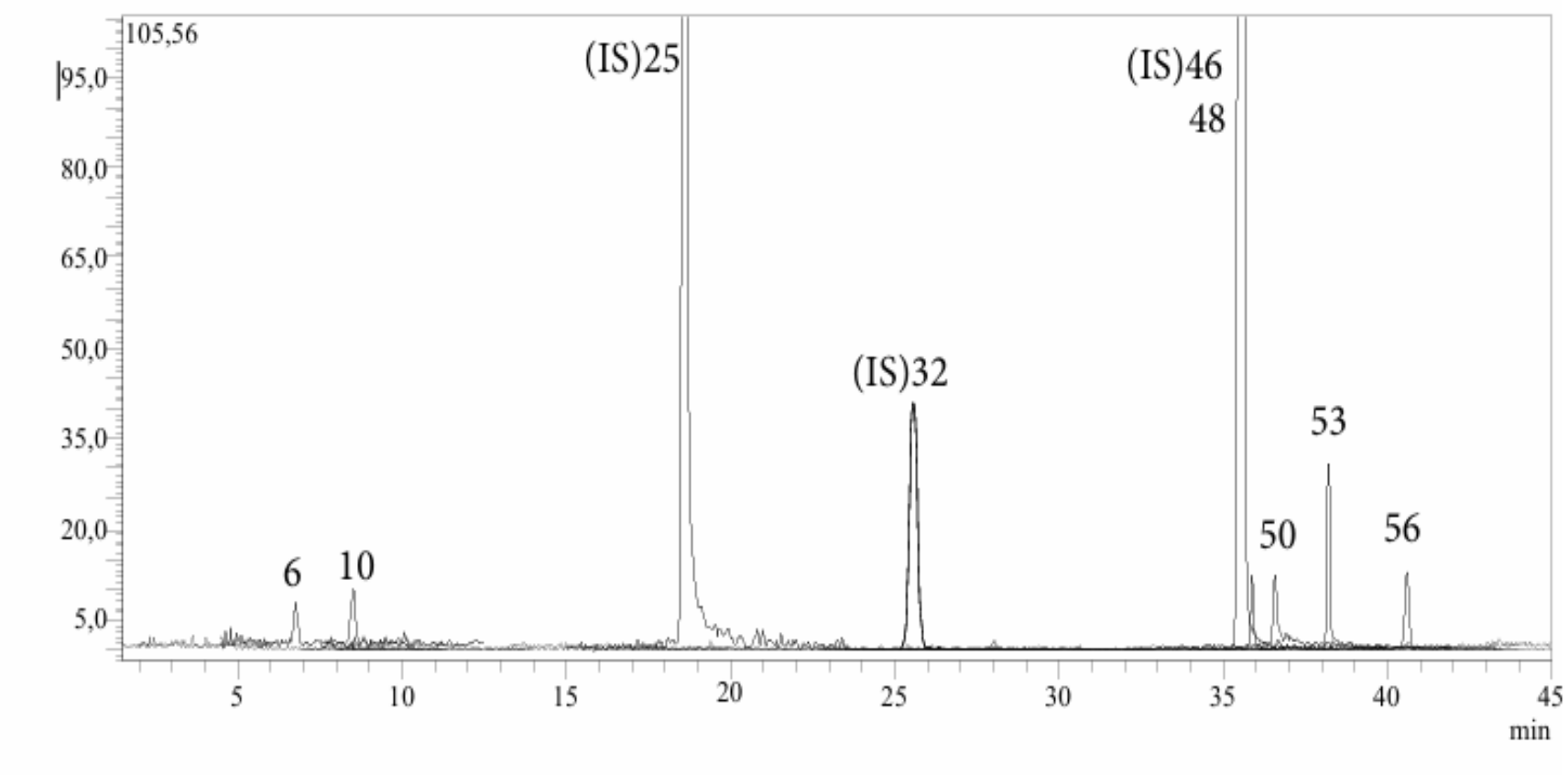

Figure S2: LC-MS/MS Chromatogram of ethanolic *P.somniferum* extract

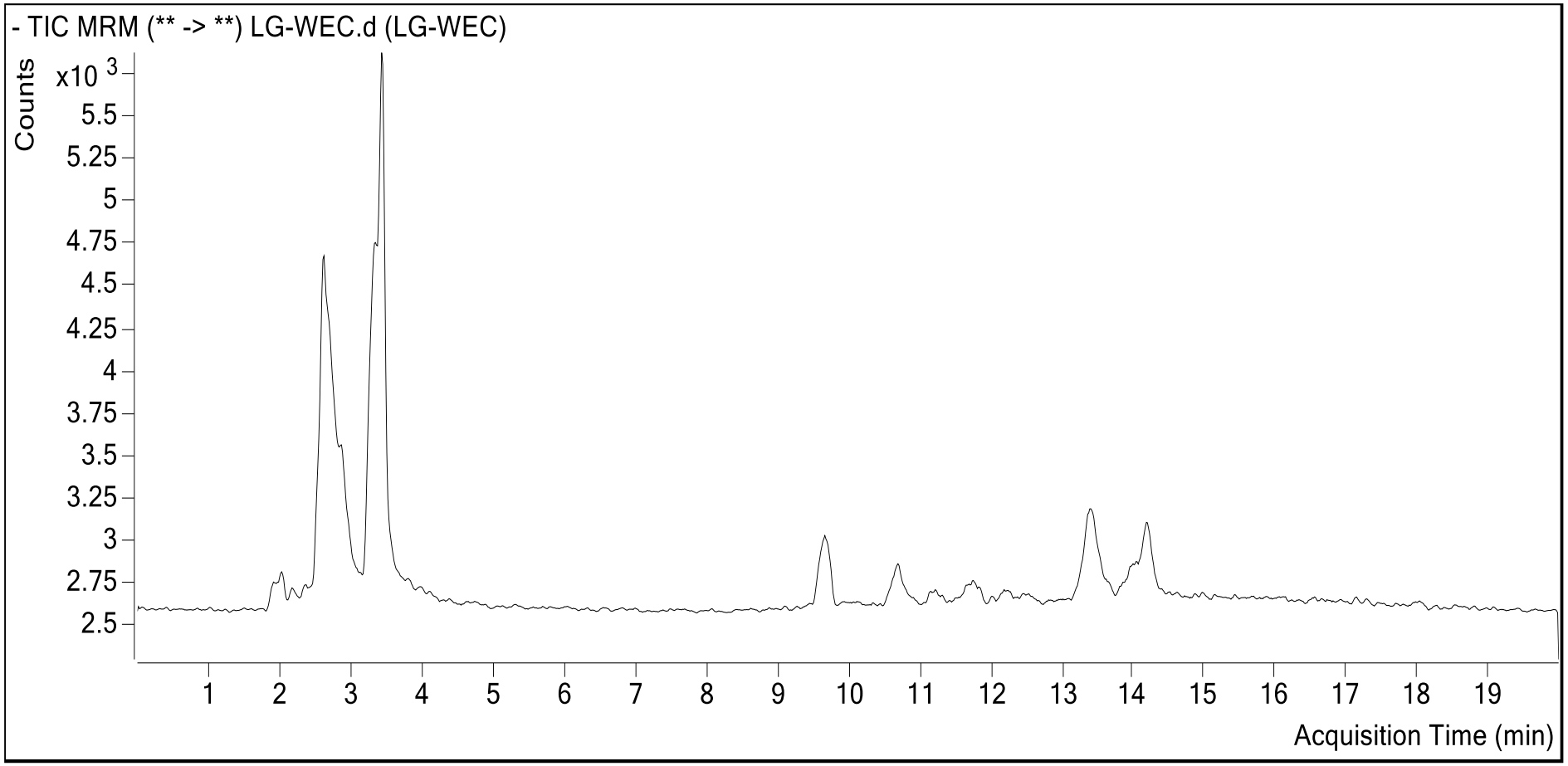

Figure S3:LC-MS/MS Chromatogram of *C. australis* water extract

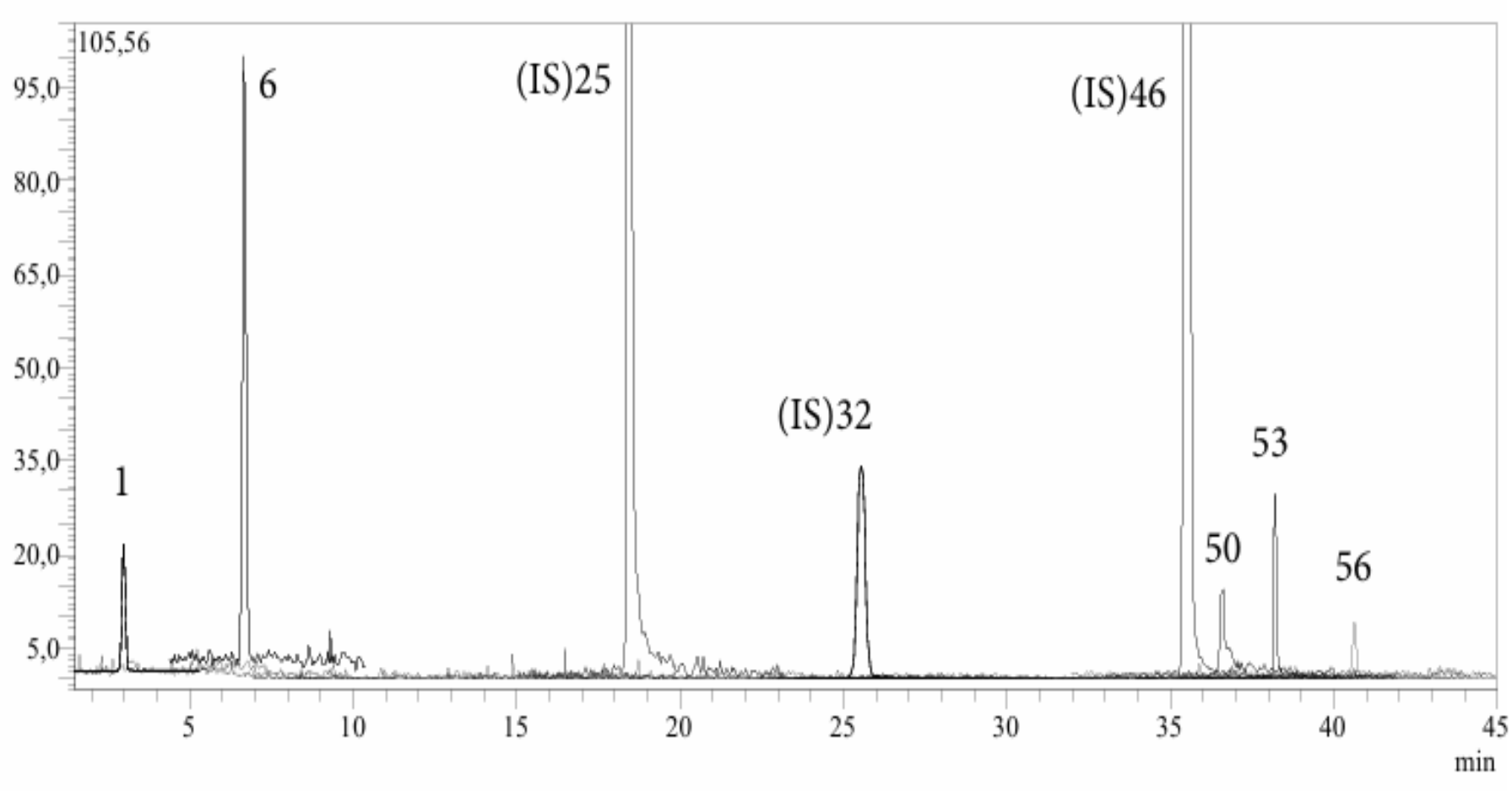

Figure S4: LC-MS/MS Chromatogram of *P. somniferum* water extract

Table S2. Validation Summart Report

No	Analyte	RT	Procursor ion	Product Ion	Ionization Mode	Calibration Equation	R^2	Interday RSD	Intraday RSD	Linaerity Range	LOD/LOQ	Intraday Recovery	Interday Recovery
1	Quinic acid	3.0	190.8	93.0	Neg	y=−0.0129989 + 2.97989×	0.996	0.69	0.51	0.1-5	25.7/33.3	1.0011	1.0083
2	Fumaric aid	3.9	115.2	40.9	Neg	y=−0.0817862 + 1.03467×	0.995	1.05	1.02	1-50	135.7/167.9	0.9963	1.0016
3	Aconitic acid	4.0	172.8	129.0	Neg	y=−0.7014530 + 32.9994×	0.971	2.07	0.93	0.1-5	16.4/31.4	0.9968	1.0068
4	Gallic acid	4.4	168.8	79.0	Neg	y = 0.0547697 + 20.8152×	0.999	1.60	0.81	0.1-5	13.2/17.0	1.0010	0.9947
5	Epigallocatechin	6.7	304.8	219.0	Neg	y=−0.00494986 + 0.0483704×	0.998	1.22	0.73	1-50	237.5/265.9	0.9969	1.0040
6	Protocatechuic acid	6.8	152.8	108.0	Neg	y = 0.211373 + 12.8622×	0.957	1.43	0.76	0.1-5	21.9/38.6	0.9972	1.0055
7	Catechin	7.4	288.8	203.1	Neg	y=−0.00370053 + 0.431369×	0.999	2.14	1.08	0.2-10	55.0/78.0	1.0024	1.0045
8	Gentisic acid	8.3	152.8	109.0	Neg	y=−0.0238983 + 12.1494×	0.997	1.81	1.22	0.1-5	18.5/28.2	0.9963	1.0077
9	Chlorogenic acid	8.4	353.0	85.0	Neg	y = 0.289983 + 36.3926×	0.995	2.15	1.52	0.1-5	13.1/17.6	1.0000	1.0023
No	**Analyte**	**RT**	**Procursor ion**	**Product Ion**	**Ionization Mode**	**Calibration Equation**	**R^2**	**Interday RSD**	**Intraday RSD**	**Linaerity Range**	**LOD/LOQ**	**Intraday Recovery**	**Interday Recovery**

10	Protocatechuic aldehyde	8.5	137.2	92.0	Neg	y = 0.257085 + 25.4657×	0.996	2.08	0.57	0.1-5	15.4/22.2	1.0002	0.9988
11	Tannic acid	9.2	182.8	78.0	Neg	y = 0.0126307 + 26.9263×	0.999	2.40	1.16	0.05-2.5	15.3/22.7	0.9970	0.9950
12	Epigallocatechin gallate	9.4	457.0	305.1	Neg	y=−0.0380744 + 1.61233×	0.999	1.30	0.63	0.2-10	61.0/86.0	0.9981	1.0079
13	1,5-dicaffeoylquinic acid	9.8	515.0	191.0	Neg	y=−0.0164044 + 16.6535×	0.999	2.42	1.48	0.1-5	5.8/9.4	0.9983	0.9997
14	4-OH Benzoic acid	10.5	137,2	65.0	Neg	y=−0.0240747 + 5.06492×	0.999	1.24	0.97	0.2-10	68.4/88.1	1.0032	1.0068
15	Epicatechin	11.6	289.0	203.0	Neg	y=−0.0172078 + 0.0833424×	0.996	1.47	0.62	1-50	139.6/161.6	1.0013	1.0012
16	Vanilic acid	11.8	166.8	108.0	Neg	y=−0.0480183 + 0.779564×	0.999	1.92	0.76	1-50	141.9/164.9	1.0022	0.9998
17	Caffeic acid	12.1	179.0	134.0	Neg	y = 0.120319 + 95.4610×	0.999	1.11	1.25	0.05-2.5	7.7/9.5	1.0015	1.0042
18	Syringic acid	12.6	196.8	166.9	Neg	y=−0.0458599 + 0.663948×	0.998	1.18	1.09	1-50	82.3/104.5	1.0006	1.0072
19	Vanillin	13.9	153.1	125.0	Poz	y = 0.00185898 + 20.7382×	0.996	1.10	0.85	0.1-5	24.5/30.4	1.0009	0.9967
No	**Analyte**	**RT**	**Procursor ion**	**Product Ion**	**Ionization Mode**	**Calibration Equation**	**R2**	**Interday RSD**	**Intraday RSD**	**Linaerity Range**	**LOD/LOQ**	**Intraday Recovery**	**Interday Recovery**
20	Syringic aldehyde	14.6	181.0	151.1	Neg	y=−0.0128684 + 7.90153×	0.999	2.51	0.77	0.4-20	19.7/28.0	1.0001	0.9964
21	Daidzin	15.2	417.1	199.0	Poz	y = 9.45747 + 152.338×	0.996	2.25	1.32	0.05-2.5	7.0/9.5	0.9955	1.0017

22	Epicatechin gallate	15.5	441.0	289.0	Neg	y=−0.0142216 + 1.06768×	0.997	1.63	1.28	0.1-5	19.5/28.5	0.9984	0.9946
23	Piceid	17.2	391.0	135/106.9	Poz	y = 0.00772525 + 25.4181×	0.999	1.94	1.16	0.05-2.5	13.8/17.8	1.0042	0.9979
24	p-Coumaric acid	17.8	163.0	93.0	Neg	y = 0.0249034 + 18.5180×	0.999	1.92	1.43	0.1-5	25.9/34.9	1.0049	1.0001
25	Ferulic acid-D3 ISh	18.8	196.2	152.1	Neg	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
26	Ferulic acid	18.8	192.8	149.0	Neg	y=−0.0735254 + 1.34476×	0.999	1.44	0.53	1-50	11.8/15.6	0.9951	0.9976
27	Sinapic acid	18.9	222.8	193.0	Neg	y=−0.0929932 + 0.836324×	0.999	1.45	0.52	0.2-10	65.2/82.3	1.0031	1.0037
28	Coumarin	20.9	146.9	103.1	Poz	y = 0.0633397 + 136.508×	0.999	2.11	1.54	0.05-2.5	214.2/247.3	0.9950	0.9958
No	**Analyte**	**RT**	**Procursor ion**	**Product Ion**	**Ionization Mode**	**Calibration Equation**	**R2**	**Interday RSD**	**Intraday RSD**	**Linaerity Range**	**LOD/LOQ**	**Intraday Recovery**	**Interday Recovery**
29	Salicylic acid	21.8	137.2	65.0	Neg	y = 0.239287 + 153.659×	0.999	1.48	1.18	0.05-2.5	6.0/8.3	0.9950	0.9998
30	Cynaroside	23.7	447.0	284.0	Neg	y = 0.280246 + 6.13360×	0.997	1.56	1.12	0.05-2.5	12.1/16.0	1.0072	1.0002
31	Miquelianin	24.1	477.0	150.9	Neg	y=-0.00991585 + 5.50334×	0.999	1.31	0.95	0.1-5	10.6/14.7	0.9934	0.9965
32	Rutin-D3-ISh	25.5	612.2	304.1	Neg	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
33	Rutin	25.6	608.9	301.0	Neg	y=-0.0771907 + 2.89868×	0.999	1.38	1.09	0.1-5	15.7/22.7	0.9977	1.0033

34	isoquercitrin	25.6	463.0	271.0	Neg	y=-0.111120 + 4.10546×	0.998	2.13	0.78	0.1-5	8.7/13.5	1.0057	0.9963
35	Hesperidin	25.8	611.2	449.0	Poz	y = 0.139055 + 13.2785×	0.999	1.84	1.35	0.1-5	19.0/26.0	0.9967	1.0043
36	o-Coumaric acid	26.1	162.8	93.0	Neg	y = 0.00837193 + 11.2147×	0.999	2.11	1.46	0.1-5	31.8/40.4	1.0044	0.9986
37	Genistin	26.3	431.0	239.0	Neg	y = 1.65808 + 7.57459×	0.991	2.01	1.28	0.1-5	14.9/21.7	1.0062	1.0047
38	Rosmarinic acid	26.6	359.0	197.0	Neg	y=-0.0117238 + 8.04377×	0.999	1.24	0.86	0.1-5	16.2/21.2	1.0056	1.0002
No	**Analyte**	**RT**	**Procursor ion**	**Product Ion**	**Ionization Mode**	**Calibration Equation**	**R2**	**Interday RSD**	**Intraday RSD**	**Linaerity Range**	**LOD/LOQ**	**Intraday Recovery**	**Interday Recovery**
39	Ellagic acid	27.6	301.0	284.0	Neg	y = 0.00877034 + 0.663741×	0.999	1.57	1.23	0.4-20	56.9/71.0	1.0005	1.0048
40	Cosmosiin	28.2	431.0	269.0	Neg	y=-0.708662 + 8.62498×	0.998	1.65	1.30	0.1-5	6.3/9.2	0.9940	0.9973
41	Quercitrin	29.8	447.0	301.0	Neg	y=-0.00153274 + 3.20368×	0.999	2.24	1.16	0.1-5	4.8/6.4	0.9960	0.9978
42	Astragalin	30.4	447.0	255.0	Neg	y = 0.00825333 + 3.51189×	0.999	2.08	1.72	0.1-5	6.6/8.2	0.9968	0.9957
43	Nicotiflorin	30.6	592.9	255.0/284.0	Neg	y = 0.00499333 + 2.62351×	0.999	1.48	1.23	0.05-2.5	11.9/16.7	0.9954	1.0044
44	Fisetin	30.6	285.0	163.0	Neg	y = 0.0365705 + 8.09472×	0.999	1.75	1.19	0.1-5	10.1/12.7	0.9980	1.0042
45	Daidzein	34.0	253.0	223.0	Neg	y=-0.0329252 + 6.23004×	0.999	2.18	1.73	0.1-5	9.8/11.6	0.9926	0.9963

46	Quercetin-D3-ISh	35.6	304.0	275.9	Neg	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
47	Quercetin	35.7	301.0	272.9	Neg	y=+0.00597342 + 3.39417×	0.999	1.89	1.38	0.1-5	15.5/19.0	0.9967	0.9971
48	Naringenin	35.9	270.9	119.0	Neg	y=-0.00393403 + 14.6424×	0.999	2.34	1.69	0.1-5	2.6/3.9	1.0062	1.0020
No	**Analyte**	**RT**	**Procursor ion**	**Product Ion**	**Ionization Mode**	**Calibration Equation**	**R2**	**Interday RSD**	**Intraday RSD**	**Linaerity Range**	**LOD/LOQ**	**Intraday Recovery**	**Interday Recovery**
49	Hesperetin	36.7	301.0	136.0/286.0	Neg	y=+0.0442350 + 6.07160×	0.999	2.47	2.13	0.1-5	7.1/9.1	0.9998	0.9963
50	Luteolin	36.7	284.8	151.0/175.0	Neg	y=-0.0541723 + 30.7422×	0.999	1.67	1.28	0.05-2.5	2.6/4.1	0.9952	1.0029
51	Genistein	36.9	269.0	135.0	Neg	y=-0.00507501 + 12.1933×	0.999	1.48	1.19	0.05-2.5	3.7/5.3	1.0069	1.0012
52	Kaempferol	37.9	285.0	239.0	Neg	y=-0.00459557 + 3.13754×	0.999	1.49	1.26	0.05-2.5	10.2/15.4	0.9992	0.9990
53	Apigenin	38.2	268.8	151.0/149.0	Neg	y = 0.119018 + 34.8730×	0.998	1.17	0.96	0.05-2.5	1.3/2.0	0.9985	1.0003
54	Amentoflavone	39.7	537.0	417.0	Neg	y = 0.727280 + 33.3658×	0.992	1.35	1.12	0.05-2.5	2.8/5.1	0.9991	1.0044
55	Chrysin	40.5	252.8	145.0/119.0	Neg	y=-0.0777300 + 18.8873×	0.999	1.46	1.21	0.05-2.5	1.5/2.8	0.9922	1.0050

56	Acacetin	40.7	283.0	239.0	Neg	y=-0.559818 + 163.062×	0.997	1.67	1.28	0.02-1	1.5/2.5	0.9949	1.0011

References

[1] M.A. Yılmaz (2020). Simultaneous quantitative screening of 53 phytochemicals in 33 species of medicinal and aromatic plants: A detailed, robust and comprehensive LC–MS/MS method validation. *Ind. Crops Prod.* **149**, 112347.