

## Supporting Information

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### ***Alchemilla pseudocartalinica* Juz: Phytochemical Screening by UPLC-MS/MS, Molecular Docking, Anti-oxidant, Anti-diabetic, Anti-glaucoma, and Anti-Alzheimer Effects**

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**Figure S1** : *Alchemilla pseudocartalinica* Juz.

**Table S1 :** Quantitative screening of phytochemicals in methanol extracts of *A. pseudocartalinica* by UHPLC–MS/MS (mg analyte/g extract).

No	Analytes	RT <sup>a</sup>	M.I. (m/z) <sup>b</sup>	F.I. (m/z) <sup>c</sup>	Ion. mode	Equation	r <sup>2d</sup>	RSD% <sup>e</sup>		Linearity Range (mg/L)	LOD/LOQ (µg/L) <sup>f</sup>	Recovery (%)		U <sup>g</sup>	MEAP <sup>i</sup>
								Interday	Intraday			Interday	Intraday		
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	0.0372	17.054
2	Fumaric acid	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	0.0091	N.D.
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	0.0247	N.D.
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	0.0112	0.553
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	0.0184	N.D.
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	0.0350	0.171
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	0.0221	0.282
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	0.0167	0.479
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	0.0213	0.421
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	0.0396	0.013
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	0.0190	0.772
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	0.0147	N.D.
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	0.0306	N.D.
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	0.0237	N.D.
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	0.0221	N.D.
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	0.0145	N.D.
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	0.0152	0.067
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	0.0129	N.D.
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	0.0122	N.D.
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	0.0215	N.D.
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	0.0202	N.D.
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	0.0229	N.D.
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	0.0199	N.D.
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	0.0194	0.378
25	Ferulic acid-D3-IS <sup>h</sup>	18.8	196.2	152.1	Neg	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.0170	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	0.0181	N.D.
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	0.0317	N.D.
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	0.0383	N.D.
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	0.0158	0.012
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	0.0366	0.538

31	Miquelianin	24.1	477.0	150.9	Neg	$y=-0.00991585+5.50334 \times$	0.999	1.31	0.95	0.1-5	10.6/14.7	0.9934	0.9965	0.0220	44.095
32	Rutin-D3-IS <sup>h</sup>	25.5	612.2	304.1	Neg	N.A.	N.A.	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	$y=-0.0771907+2.89868 \times$	0.999	1.38	1.09	0.1-5	15.7/22.7	0.9977	1.0033	0.0247	0.455
34	isoquercitrin	25.6	463.0	271.0	Neg	$y=-0.111120+4.10546 \times$	0.998	2.13	0.78	0.1-5	8.7/13.5	1.0057	0.9963	0.0220	2.026
35	Hesperidin	25.8	611.2	449.0	Poz	$y=0.139055+13.2785 \times$	0.999	1.84	1.35	0.1-5	19.0/26.0	0.9967	1.0043	0.0335	0.151
36	<i>o</i> -Coumaric acid	26.1	162.8	93.0	Neg	$y=0.00837193+11.2147 \times$	0.999	2.11	1.46	0.1-5	31.8/40.4	1.0044	0.9986	0.0147	N.D.
37	Genistin	26.3	431.0	239.0	Neg	$y=1.65808+7.57459 \times$	0.991	2.01	1.28	0.1-5	14.9/21.7	1.0062	1.0047	0.0083	N.D.
38	Rosmarinic acid	26.6	359.0	197.0	Neg	$y=-0.0117238+8.04377 \times$	0.999	1.24	0.86	0.1-5	16.2/21.2	1.0056	1.0002	0.0130	N.D.
39	Ellagic acid	27.6	301.0	284.0	Neg	$y=0.00877034+0.663741 \times$	0.999	1.57	1.23	0.4-20	56.9/71.0	1.0005	1.0048	0.0364	6.492
40	Cosmosiin	28.2	431.0	269.0	Neg	$y=-0.708662+8.62498 \times$	0.998	1.65	1.30	0.1-5	6.3/9.2	0.9940	0.9973	0.0083	0.145
41	Quercitrin	29.8	447.0	301.0	Neg	$y=-0.00153274+3.20368 \times$	0.999	2.24	1.16	0.1-5	4.8/6.4	0.9960	0.9978	0.0268	0.036
42	Astragalin	30.4	447.0	255.0	Neg	$y=0.00825333+3.51189 \times$	0.999	2.08	1.72	0.1-5	6.6/8.2	0.9968	0.9957	0.0114	0.772
43	Nicotiflorin	30.6	592.9	255.0/284.0	Neg	$y=0.00499333+2.62351 \times$	0.999	1.48	1.23	0.05-2.5	11.9/16.7	0.9954	1.0044	0.0108	0.241
44	Fisetin	30.6	285.0	163.0	Neg	$y=0.0365705+8.09472 \times$	0.999	1.75	1.19	0.1-5	10.1/12.7	0.9980	1.0042	0.0231	N.D.
45	Daidzein	34.0	253.0	223.0	Neg	$y=-0.0329252+6.23004 \times$	0.999	2.18	1.73	0.1-5	9.8/11.6	0.9926	0.9963	0.0370	N.D.
46	Quercetin-D3-IS <sup>h</sup>	35.6	304.0	275.9	Neg	N.A.	N.A.	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	$y=+0.00597342+3.39417 \times$	0.999	1.89	1.38	0.1-5	15.5/19.0	0.9967	0.9971	0.0175	0.111
48	Naringenin	35.9	270.9	119.0	Neg	$y=-0.00393403+14.6424 \times$	0.999	2.34	1.69	0.1-5	2.6/3.9	1.0062	1.0020	0.0392	0.02
49	Hesperetin	36.7	301.0	136.0/286.0	Neg	$y=+0.0442350+6.07160 \times$	0.999	2.47	2.13	0.1-5	7.1/9.1	0.9998	0.9963	0.0321	0.008
50	Luteolin	36.7	284.8	151.0/175.0	Neg	$y=-0.0541723+30.7422 \times$	0.999	1.67	1.28	0.05-2.5	2.6/4.1	0.9952	1.0029	0.0313	0.016
51	Genistein	36.9	269.0	135.0	Neg	$y=-0.00507501+12.1933 \times$	0.999	1.48	1.19	0.05-2.5	3.7/5.3	1.0069	1.0012	0.0337	N.D.
52	Kaempferol	37.9	285.0	239.0	Neg	$y=-0.00459557+3.13754 \times$	0.999	1.49	1.26	0.05-2.5	10.2/15.4	0.9992	0.9990	0.0212	0.014
53	Apigenin	38.2	268.8	151.0/149.0	Neg	$y=0.119018+34.8730 \times$	0.998	1.17	0.96	0.05-2.5	1.3/2.0	0.9985	1.0003	0.0178	0.013
54	Amentoflavone	39.7	537.0	417.0	Neg	$y=0.727280+33.3658 \times$	0.992	1.35	1.12	0.05-2.5	2.8/5.1	0.9991	1.0044	0.0340	N.D.
55	Chrysin	40.5	252.8	145.0/119.0	Neg	$y=-0.0777300+18.8873 \times$	0.999	1.46	1.21	0.05-2.5	1.5/2.8	0.9922	1.0050	0.0323	0.064
56	Acacetin	40.7	283.0	239.0	Neg	$y=-0.559818+163.062 \times$	0.997	1.67	1.28	0.02-1	1.5/2.5	0.9949	1.0011	0.0363	0.174

<sup>a</sup>R.T.: Retention time, <sup>b</sup>MI (*m/z*): Molecular ions of the standard analytes (*m/z* ratio), <sup>c</sup>FI (*m/z*): Fragment ions <sup>d</sup>*r*<sup>2</sup>: Coefficient of determination, <sup>e</sup>RSD: Relative standard deviation, <sup>f</sup>LOD/LOQ ( $\mu\text{g/L}$ ): Limit of detection/quantification, <sup>g</sup>U (%): percent relative uncertainty at 95% confidence level ( $k = 2$ ), <sup>h</sup>IS: Internal standard, <sup>i</sup>MEAP: Methanol extract of *A. pseudocartalinica* (mg analyte/g extract).