

**Dr. Duke's Phytochemical and Ethnobotanical Database**

**Chemicals Found in *Asparagus officinalis***

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	22-SPIROSTAN-3BETA-OL	Shoot	--	--		
4	4-VINYLGUAIACOL	Shoot	--	--		
0	4-VINYLPHENOL	Shoot	--	--		
3	ALANINE	Seed	1440	18581	1.7909389852517676	
0	ALPHA-AMINODIMETHYLGAMMA-BUTYROTHETIN	Rhizome	--	--		
7	ALPHACAROTENE	Plant	--	--		
15	ALPHALINOLENICACID	Shoot	50	645	-1.414213562373095	
5	ALUMINUM	Shoot	13	700	-1.6477130198375833	
14	ARGININE	Shoot	1430	18452	-1	
2	ARSENIC	Shoot	0.005	0.006		
112	ASCORBICACID	Root	398	3976	1.6268848975635133	
112	ASCORBICACID	Shoot	100	5714	-0.09444764278082439	
0	ASH	Root	2900	29000	-1.101065098830239	
0	ASH	Shoot	6000	171000	1.5844820733270641	
2	ASPARAGINE	Shoot	--	--		
0	ASPARAGOSIDES	Shoot	--	--		
4	ASPARAGUSICACID	Shoot	--	--		
0	ASPARASAPONINS	Plant	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
3	ASPARTIC-ACID	Shoot	3550	45805	0.7703735908865186	
0	BARIUM	Shoot	2	70	-1.0441007999682068	
53	BETA-CAROTENE	Root	6.5	65	-0.020796675608213463	
53	BETA-CAROTENE	Shoot	0.3	120	-0.17690767722048123	
4	BORON	Shoot	6	104	1.4929660518315542	
3	CADMIUM	Shoot	0.018	0.07	-1.322252128482115	
28	CALCIUM	Shoot	160	3840	-0.7954997991511278	
28	CALCIUM	Root	265	2650	-0.5205178359322618	
0	CARBOHYDRATES	Shoot	36000	602000	0.05567966631725951	
20	CHOLINE	Rhizome	--	--		
24	CHROMIUM	Shoot	0.135	0.7	-1.118810401335657	
24	CHROMIUM	Root	0.2	1.5	-0.26097057892644915	
2	COBALT	Shoot	0.09	0.12	-0.9190459396863638	
2	COBALT	Root	--	--		
2	CONIFERIN	Shoot	--	--		
12	COPPER	Shoot	1	24	-0.185788465315953	
0	CYANIDIN-3,5-DIGLUCOSIDE	Shoot	--	--		
0	CYANIDIN-3-MONOGLUCOSIDE	Shoot	--	--		
0	CYANIDIN-3-RHAMNOSYLGLUCOSIDE	Shoot	--	--		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
0	CYANIDIN-3-RHAMNOSYLGLUCOSYLGLUCOSIDE	Shoot	--	--		
2	CYSTINE	Shoot	360	4645	-1	
7	DIOSGENIN	Shoot	--	--		
0	FAT	Root	2400	24000	0.03735642814941123	
0	FAT	Shoot	2000	41000	-0.10454720394850912	
15	FIBER	Shoot	7000	141000	-0.4134652874693027	
0	FIBER(CRUDE)	Root	--	141000	0.8791598692846496	
0	FIBER(DIETARY)	Root	--	390000	-0.0920488345347022	
15	FOLACIN	Shoot	1	18		
8	FRUCTOSE	Rhizome	--	--		
7	GLUCOSE	Shoot	--	--		
8	GLUTAMIC-ACID	Shoot	5010	64645	0.9806017011914672	
12	GLYCINE	Shoot	990	12774	-1	
18	GUAIACOL	Shoot	--	--		
0	GUM	Root	11000	110000	0.15011732500816016	
7	HISTIDINE	Shoot	470	6065	-1	
8	INOSITOL	Shoot	--	--		
19	INULIN	Root	--	--		
6	IRON	Shoot	6	240	-0.3469217555094921	

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6	IRON	Root	1.2	12	-0.42421971919788043	
3	ISOLEUCINE	Shoot	1120	14452	-0.111550627214569	
0	JAMOGENIN	Shoot	--	--		
75	KAEMPFEROL	Root	--	--		
0	KILOCALORIES	Shoot	210	3130	0.40017105290867505	
7	LAURIC-ACID	Shoot	10	129	1.414213562373095	
0	LEAD	Shoot	1.5	30	-1.1936866543211802	
2	LEUCINE	Shoot	1330	17161	0.09014535160843963	
27	LINOLEIC-ACID	Shoot	910	11742	1.4142135623730951	
11	LITHIUM	Shoot	0.36	0.6	-0.7321272076061756	
15	LUTEIN	Plant	--	--		
4	LYSINE	Shoot	1450	18710	0.3111156963571142	
8	M-CRESOL	Shoot	--	--		
65	MAGNESIUM	Shoot	120	7000	-0.06862350654174332	
65	MAGNESIUM	Root	240	2400	-0.08595931629302281	
14	MANGANESE	Root	0.2	2	-0.5219915069975595	
14	MANGANESE	Shoot	2	100	-0.975011478628626	
0	MANNAN	Rhizome	--	--		
1	MERCURY	Shoot	0.001	0.001	-1.4142135623730954	

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
15	METHIONINE	Shoot	290	3742	-1	
2	MOLYBDENUM	Shoot	0.63	1.8	-0.9425822429466852	
13	MUFA	Shoot	70	903	-1.4142135623730951	
6	MYRISTIC-ACID	Shoot	10	129	1.4142135623730954	
39	NIACIN	Shoot	11	366	3.2237146691656355	
39	NIACIN	Root	18	181	3.7897570948362946	
3	NICKEL	Shoot	0.9	1.8	-1.0503042882524072	
6	O-CRESOL	Shoot	--	--		
0	OFFICINALISIN-II	Root	--	--		
18	OLEIC-ACID	Shoot	60	774	-1.4142135623730956	
8	P-CRESOL	Shoot	--	--		
0	PAEONIDIN-3-GLUCOSYL RHAMNOSYLGLUCOSIDE	Shoot	--	--		
0	PAEONIDIN RHAMNOSYLGLUCOSIDE	Shoot	--	--		
13	PALMITIC-ACID	Shoot	450	5806	1.4142135623730951	
2	PALMITOLEIC-ACID	Shoot	10	129	1.4142135623730954	
11	PANTOTHENIC-ACID	Shoot	2	22.4		
0	PENTOSANS	Shoot	70000	70000		
26	PHENOL	Shoot	--	--		
7	PHENYLALANINE	Shoot	720	9290	-1	

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0	PHILOTHION	Shoot	--	--		
4	PHOSPHORUS	Shoot	390	10244	3.108349356664769	
4	PHOSPHORUS	Root	746	7460	0.6926912968369884	
5	PHYLLOQUINONE	Plant	--	0.6	0.4577903165311008	Booth, S. L., Suttie, J. W. 1998. Dietary intake and adequacy of vitamin K. J. Nutrition, 128(5): 785-788.
2	PHYTOSTEROLS	Shoot	246	3097		
14	POTASSIUM	Shoot	1870	55200	2.2005736210856637	
14	POTASSIUM	Root	3350	33500	1.2976082956719406	
0	PROLINE	Shoot	1620	20903	1.4024674410990334	
0	PROTEIN	Shoot	22000	394840	1.6568117461224718	
0	PROTEIN	Root	30000	300000	2.039131193336885	
0	PSEUDOASPARAGOSE	Rhizome	--	--		
4	PUFA	Shoot	960	12387	1.4142135623730958	
176	QUERCETIN	Root	--	--		
0	RHAMNOSE	Shoot	--	--		
15	RIBOFLAVIN	Root	2.4	24	4.360530503608677	
15	RIBOFLAVIN	Shoot	1	36	1.7066843792550757	
87	RUTIN	Root	--	--		
2	SARSAPOGENIN	Shoot	--	--		

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60	SELENIUM	Root	0.1	1	-0.29131634494743897	
60	SELENIUM	Shoot	0.041	0.078	-0.4102298070132233	
1	SERINE	Shoot	1160	14968	-1	
0	SFA	Shoot	500	6452	-1.414213562373095	
4	SILICON	Root	--	--		
3	SILVER	Shoot	0.09	0.12	-0.7169197678305071	
1	SODIUM	Shoot	18	685	1.246977776398358	
1	SODIUM	Root	24	239	-0.4014905019735126	
8	STEARIC-ACID	Shoot	30	387	-1.4142135623730951	
0	STRONTIUM	Shoot	19	200	-0.873636463236932	
7	SUCCINIC-ACID	Shoot	--	--		
14	SUCROSE	Rhizome	--	--		
0	SUGAR	Shoot	15000	15000		
14	SULFUR	Shoot	56	864	-0.721231049722943	
31	THIAMIN	Shoot	1	26	1.1875606145407158	
0	THIAMINE	Root	2	22	3.605177535715055	
4	THREONINE	Shoot	850	10968	-0.13544765054428673	
0	TITANIUM	Shoot	0.45	180	1.569028364276006	
93	TOCOPHEROL	Shoot	19.8	256		

Activity Count	Chemical	Plant Part	Low PPM	High PPM	StdDev	Reference Citation
29	TRYPTOPHAN	Shoot	300	3871	-0.6503748891557393	
8	TYROSINE	Shoot	480	6194	-1	
3	VALINE	Shoot	1180	15226	0.1421680361092609	
16	VANADIUM	Shoot	0.3	2	0.4059276058571796	
0	WATER	Plant	914000	950000	0.7666043229601914	
0	WATER	Root	--	900000	0.8558256771386106	
5	ZEAXANTHIN	Plant	--	--		
77	ZINC	Root	0.2	2.3	-0.9582114576426829	
77	ZINC	Shoot	12	124	-0.49520977085345347	
0	ZIRCONIUM	Shoot	1.8	2.4	-0.9985790401347907	