

Supplementary Table S1. Selected data on ascorbic acid, phenolics, and antioxidant activity of green *Asparagus* spp. shoots

Codes/Species	Vitamin C mg/100 g fw	Main phenolics	Total phenolics ^c	Antioxidant activity	References
<i>A. acutifolius</i>					
RAC1	15.6	CfA 24.4; I 249; K 290; My 63; M3O 235.4; PrA 19.1; Q 1240; QG 186 mg/kg fw	TPA 43; TFC 2263 mg/kg fw	-	Salvatore et al., 2005
RAC2	117	CiA 0.1; Med 1.2; Sir 0.5; SA 0.6; BA 1.2; FA 0.5; CouA 0.6; SyrA 1.0; 3,4-diOMeP 1.5; <i>p</i> HBA 1.2; <i>p</i> HPAA 1.0; C 1.3; PrA 1.5 mg/100 g fw	TPC 41.97 mg/100 g fw	-	Ferrara et al., 2011
RAC3	-	Nic 2.2; R 26.3; SAP 5.3; Nar 1.6 mg/100 g fw	TPA 35.4 mg/100 g fw TFC 30.9 mg/100 g fw	-	Barros et al., 2011
RAC4	21.9	-	-	-	Martins et al., 2011
RAC5	-	BA 5; CfA 2; CiA 4; CouA 2; Ct 1; FA 3; GA 26; PrA 4; QG 25; R 28; % of TP	TPA 2289 mg GAE/100 g fw	-	Di Maro et al., 2013
RAC6 Three extraction systems	-	Bound P: Rut 0.1-3.0; Nic 0.0-0.2; Nar 0.2-2.1 g/kg dw Free P: Rut 0.1-0.9; Nic 0.0-0.1; Nar 0.1-0.8 g/kg dw	TPA 200-800 mg GAE/100 g dw; TFC 140-160 mg CE/100 g dw	ABTS 0.1-2.1 mg TE/100 g dw DPPH 0.3-1.1 mg TE/100 g dw	Poljuha et al., 2015
RAC7	-	-	TPA 620 mg GAE/100 g fw	-	Palfi et al., 2017
RAC8	-	CiA 55; CfA+CfA der 30; ChA 65; CFQA 25; Rut 299; Nic 18; Nar 215 mg/100 g dw	TPC 1200 mg CAE/100 g dw	-	Sergio et al., 2020
RAC9 var. wild green	-	CiA 66.76; ChA 82.08; Rut 80.41; Nar 95.69 mg/100 g dw	TFC 850 mg CE/100 g dw	ABTS 0.95 mg TE/100 g dw	Sergio et al., 2021
RAC9 var. wild violet	-	CiA 70.16; ChA 30.94; Rut 203.03; Nar 154.16 mg/100 g dw	TP 1000 mg CE/100 g dw	ABTS 0.75 mg TE/100 g dw	Sergio et al., 2021
RAC10	-	PrA 26; <i>p</i> HBA 15; VA 11; CfA 297; <i>p</i> HBA 10; SyrA 1; VN 12; CouA 7; FA 28; SAP 9; R 316; Nar 154; NG 61; K 5 mg/kg dw	TPA 415; TFC 537 mg/kg dw		Hamdi et al., 2021
<i>A. horridus</i>					
RAH1	-	CFGI 3.9; CFGII 1.1; FG 1.1; dFGI 7.1; dFGII 2.0; FH 1.5; IH 2.7; Nar 1.0; KH 4.9; QOD 1.2; Rut 1.1 mg/100 g dw	TPA 18.7 mg/100 g dw TFC 10.9 mg/100 g dw.		Adouni et al., 2018
<i>A. officinalis</i>					
RAO1	23 mg/g dw			ABTS 65.7 µmol/g dw	Nindo et al., 2003
RAO2		Rut 30-60 mg/100 g fw			Wang et al., 2003

RAO3		FA 40-182; FAd 0-580; CouA 92-439; <i>p</i> HBA 1-2; VA 1-5; <i>p</i> HBD 1-7; VN 5-41 mg/kg fw			Rodríguez et al., 2005
RAO4			TPC 4.9-5.0 mg CE/g dw TFC 1.5-4.7 mg RE/g dw	DPPH 10.9-17.4 mM TE/kg dw ABTS 26.2-27.1 mM TE/kg dw	Sun et al., 2007
RAO5	23	CiA 0.1; Med 0.5; Sir 0.1; SA 0.2; BA 0.2; FA 0.1; CouA 0.4; SyrA 0.6; 3,4-diOMeP 0.4; <i>p</i> HBA 0.6; <i>p</i> HPAA 0.3; C 0.6; PrA 0.3 mg/100 g fw	27.62 mg/100 g fw		Ferrara et al., 2011
RAO6	12		TPA 1.9-2.8 mg GAE/100 g fw TFC 0.7-2.2 RE/100 g fw	DPPH 0.63-2.04 µmol TE/kg fw	Wei et al., 2011
RAO7	-	Rut 1900-6700 mg/100 dw	-	-	Motoki et al., 2012
RAO8		Rut 67; QG 10; 3FerQA 9; Nar 5; Nic 2; CfAH 2;	TPC 280 mg/100 g dw		Solana et al., 2015
CO ₂ -SFE extract	-	CIA 2; Q 1 % of TPC		-	
RAO9	-	-	TPA 452 mg GAE/100 g fw	-	Palfi et al., 2017
RAO10 (5 cultivars)	2.4-5.9	CfA 0.0-1.3; CIA 0.0-9.3; CouA 0.0-2.3; FA 0.0-5.8; Ki 1.5-2.2; <i>p</i> HBA 0.2-0.3; Q 1.3-2.3; R 2.9-23.8 mg/kg fw	TPA 12-43 mg GAE/kg fw TF7-28 mg RE/kg fw		Chen et al., 2017
RAO11 (8 cultivars)		<i>p</i> CouH 1.5-5.2; oCouQA 1.6-7.0; 3FerQA 1.8-7.1; 4FerQA 2.0-3.6; CFQA 33.0-57.2; QRH 7.2-96.4; Rut 94.0-129.3; QG 1.8-6.8; Nar 2.4-7.1; KH 1.2-16.8; Nic 2.0-7.5; IH 2.4-3.4; AR 1.0-10.4; CyRH 0.1-7; CyRut 1.1-58.5; PRut 0.1-1.0 mg/kg dw	TPA 445-685 mg GAE/kg fw		Slatnar et al., 2017
RAO12 (MeOH extract), several agronomic conditions	7.14-20.40 mg/g dw		TPA 11.22-387 mg GAE/g dw TFC ~5-9 mg CE/g dw	ABTS 3.14-10.77 mM TE/kg dw	Ku et al., 2018
RAO13 (4 drying methods)		Free P: GA 46.4-151.4; Rut 101.4-117.9; CiA 44.3-159.4; FA 160.9-244.8; Q 75.4-118.7 µg/g dw Bound P: GA 18.2-19.9; Rut 23.1-39.3; CiA 52.9-154.9; FA 20.6-66.3; Q 0.0-34.3; K 21.1-23.1 µg/g dw	TPC free: 605.6-791.8 TPC bound: 527.4-631.3 µg GAE/g dw TFC: 592.7-837.6 µg CE/g dw		Yu et al., 2019
RAO14 (5 cultivars)	-	Rut 550-1200 mg/100 g dw	TPA: 936-720 CAE/100 g dw	ABTS 53.7-93.2 mg TE/100 g dw	Sergio et al., 2019
RAO15 (three genotypes and 5 growing conditions)	-	GA 30.06-341.79; PrA 0.00-22.19; <i>p</i> HBA 0.00-64.32; VA 0.00- 179.72; CfA 0.00- 32.50; CouA 0.00-178.17; FA 56.13-153.41; SNA 16.32-85.81; Rut 31.85- 16318.67; Q3G 0.00- 97.08; Hy 0.00-197.73; K3OG 0.00-57.96; Q 0.00-57.96 µg/100 g dw			Kobus-Cisowska et al., 2019

RAO16	-	CFQA 0.68; CafAH 0.35; VC 2.05; Rut 15.01; Nic 0.36; Nar 0.53 mg/kg dw	TPC 5.57-6.69 mg/g dw	Noperi-Mosqueda et al., 2020
RAO17	-	Rut 33.8-1624.8; Nic 17.3-214.7 mg/kg dw	TPC 873.7-2,043.8 mg GAE/g dw	Eum et al., 2020
23 varieties checked	-		TFC 18.5-190.1 mg QE/ g dw	
RAO18	-	CIA 1.21-5.51; FA 1.25-4.81; Rut 30.74-92.63; EA 1.36-4.74 µg/g fw		Ayhan & Rosenberg, 2021
3 extracting solvents checked	-			
RAO19	-	CfA 4.0-7.1; CouA 0.65-0.81; FA 1.5-2.4; Q 3.5-6.6; SNA 11.3-14.4; Rut 234.6-442.9 mg/100 g dw	TPA 37-40 mg GAE/g dw TFC 27-29 mg QE/g dw	Cao et al., 2022
2 cultivation systems at 2 stages of development	-			
RAO20	-	QG 0.36; IH 0.27; Rut 8.10; Nic 0.07; Nar 0.06 mg/100 g dw	TFC 8.87 mg/100 g dw	Redondo-Cuenca et al., 2023

Abbreviations: CAE: caffeic acid equivalents; CE: catechin equivalents; GAE: gallic acid equivalents; dw: dry weight; fw: fresh weight; RE: rutin equivalents; TE: trolox equivalent; TFC: total flavonoids content; TPC: total phenolics content; TPA: total phenolic acids.

Phenolics: AR: Apigenin rhamnoside; BA: benzoic acid; C: catechol; Ct: catechin; ChA: chicoric acid; CiA: cinnamic acid; CIA: Chlorogenic acid; CouA: coumaric acid; CfA: Caffeic acid; CFQA: Caffeoyl-quinic acid; CafAH: Caffeic acid hexose; CFGI: Coumaroylferuloyl glycerol I; CFGII: Coumaroylferuloyl glycerol II; CyRH: Cyanidin rhamnosyl hexosides; CyRut: Cyanidin rutinoside; 3,4-diOMeP: 3,4-dimethoxyphenol; EA: ellagic acid; FA: ferulic acid; FAd: ferulic acid dimers; FG: Feruloyl glycerol; dFGI: Diferuloyl glycerol I; dFGII Diferuloyl glycerol II; 3FerQA: 3-Feruloylquinic acid; 4FerQA: 4-Feruloylquinic acid; FH: Feruloylhexoside; GA: gallic acid; Hy: Hyperoside (quercetin 3-*O*-galactoside); I: Isorhamnetin; IH: Isorhamnetin hexosides; K: Kaempferol; Ki: Kaemferide; KH: Kaempferol hexosides; K3OG: Kaempferol 3-*O*-glucoside (astragalin); Nar: narcissin (isorhamnetin-3-*O*-rutinoside); Nic: nicotiflorin (kaempferol 3-*O*-rutinoside); Med: mediaresinol; My: myricetin; M3O: myricetin-3-*O*-glucoside; NG: naringenin; oCouQA: *o*-Coumaroylquinic acid; PRut: Peonidin rutinoside; *p*HBA: *p*-hydroxybenzaldehyde; *p*CouH: *p*-Coumaric acid hexoside; *p*HBA: *p*-hydroxybenzoic acid; *p*HBD: *p*-hydroxybenzaldehyde; *p*HPAA: *p*-hydroxyphenyl acetic acid; PrA: prothocathecuic acid; Q: quercetin; QG: quercetin glycosides; Q3G: Quercetin-3-glucoside (Isoquercetin); QOD: quercetin-*O*-dideoxyhexosylhexoside; QRH: Quercetin rhamnosyl hexosides; Rut: rutin (quercetin 3-*O*-rutinoside); SA: salicylic acid; SNA: sinapic acid; SNAP: sinapic acid pentoside; Sir: siringaresinol; SyrA: syringic acid; VA: vanillic acid; VC: vicenin 2; VN: vanillin.

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