Table S1 Nutritional compositions and extractions from sweet potato leaves1.

Cultivar Color	Cultivar	Parts	Phytochemical composition	Extraction solvent	Determination Methods	Reference
Purple	Fushu No. 23 and Fushu No. 317	Leaf	Anthocyanin	Methanol	UPLC-DAD, UPLC-QTOF-MS	[1]
	30 different purple variety	Apical Shoots	Anthocyanin	Ethanol and HCl	Spectrophotometer	[2]
	Shimon-1, Kyushu-119, and Elegant Summer	Apical Shoots	Anthocyanin cyanidin and peonidin derivatives	H_2SO_4	HPLC	[3]
	Balsotowac	Leaf	Acylated anthocyanins	Methanol	HPLC-DAD-ESI (+)-MS^n and HPLC-DAD-ESI (+)-QTOF-MS/MS	[4]
	Bhu Krishna, S-1467	Leaf	Anthocyanin cyanidin and peonidin derivatives	Methanol	HPLC, HR-ESI−MS	[5]
	Zhezi No.1, Purple leaf, D7∗CIP1, Zibai, Xiangshu99, Huazi, Yidianhong, XCS No.2, 19-Z1-1	Leaf	Anthocyanin, chlorogenic acids and flavonoids	-	UPLC-PDA-MS/MS	[6]
	Simon-1, Kyushu-119, Elegant Summer	Leaf	Anthocyanins and polyphenolic		NMR, FAB-MS	[7]
	Yuzi No. 7	Leaf	Anthocyanins and phenolic acids	Ethanol	HPLC	[8]
	Organic XAD 16, XAD 7HP	Leaf	Phenolic	Water	Spectrophotometry, HPLC	[9]
	Yuzi No. 7	Leaf	Polyphenol	Ethanol	HPLC	[10]
	Yuzi No. 7	Leaf	Flavonoids	UMSE, RSM	HPLC	[11]

	Koya Koso	Leaf	Minerals (Fe, Zn, Cu, Mn, K, Ca, Mg, Na, P, Vitamin C, β-carotene)	Acetone and hexane, hydrochloric acid	ICP-MS, AAS, Spectrophotometry	[12]
	Jishu No. 16	Leaf	Phenolic, caffeoylquinic acids flavonoids, and anthocyanin	Acetone	HPLC-QTOF-MS/MS	[13]
Green	Beauregard	Leaf	Flavonoids and phenolic acids	Methanol	Spectrophotometer, HPLC	[14]
	Beauregard	Leaf	Phenolic, chlorogenic acid, caffeic acid	Methanol	Spectrophotometer, HPLC	[15]
	Zhecaishu 726	Leaf and petiole	Flavonoid, phenolic, and polysaccharide	Ethanol	HPLC-ESI-MS	[16]
	Zhecaishu 726	Leaf and stem	Polysaccharide conjugates	HRE, UAE, MAE, UPE, CEE, UEE	HPLC-ESI-MS	[17]
	Beauregard, Bush Porto Rico, Centennial, Georgia Jet, Jewell and Vardaman	Leaf	Phenolic and flavonoids	Methanol	Spectrophotometer	[18]
	Suioh	Leaf	Caffeic acid and caffeoylquinic acids	Ethanol	HPLC	[19]
	Pushu 53 and 116 varieties	Leaf	Polyphenol and caffeoylquinic acids	Ethanol	HPLC-DAD, HPLC–ESI–MS	[20]
	Bat1, Boniato	Leaf	Phenolic and flavonoids	Methanol	HPLC	[21]
	Batu Kelantan, Batu Biasa, Biru Putih, Oren, Vitato, Indon	Leaf	Chlorophyll a, chlorophyll b, carotenoids and lutein	Methanol	Spectrophotometer	[22]
	Local unspecified green varieties	Leaf	Flavonoids	DHPM	Spectrophotometer	[23]

	Shangshu No. 19	Leaf	Protein, vitamin C, vitamin E, phenolic	Ethanol	HPLC	[24]
	Shinmi, Hayanmi	Leaf	Lutein, β-carotene	Methanol	UPLC	[25]
	Suioh	Leaf	Calcium, iron, VC, carotene, vitamin K, VE, oxalic acid	-	-	[26]
	Beauregard	Leaf	Proteins	PEG	-	[27]
	King J (UMUSPO1), Mother's Delight (UMUSPO2)	Leaf	Proximate composition, mineral content, and anti-nutrient composition.	Aqueous methanol	HPLC	[28]
	Taoyuan 2, Local unspecified yellow and purple variety	Leaf	Anthocyanins, chlorophylls and carotenoids	Acetone, HCl in methanol	Spectrophotometer	[29]
	P40, Bonita, Beauregard	Leaf	Anthocyanins and phenolic	Acidified water	HPLC-MS/MS	[30]
Purple and green	Local unspecified green, yellow and purple variety	Leaf	Flavonoids and anthocyanins	Ethanol	HPLC	[31]
	Okinava, Carmen Rubin, Radiosa, White Triumph, Molokai, Purple, Beauregard, Jewel, and Satsumo Imo	Leaf	Polyphenolic, chlorogenic acids and flavonoids	Methanol with acetic acid	UPLC-PDA-MS/MS	[32]
	GSC-2, GCS-5, Ziyang, GS-15-28, GS-16-11, GS-17-3, GS-17-5, GS-17-10, GS-17-21, GS-17-22, and GS-17-23	Leaf, bud, petiole, stem	Phenolics, anthocyanins	Methanol with acetic acid	Spectrophotometry	[33]
	purple (CYY 98-59), green (Taoyuan 2), and yellow (CN 1927-16)	Leaf	Chlorogenic Acid	Methanol	UPLC-MS/MS	[34]

	Meiguoheizi, Zhezi, Nanshu 008, Xuzi L-7, 5-16-5, Guangshucai 1, Guangshucai 2, 5-18-6, CS, Nanshu 88, E5012, Xinxiang, Xiangshu, Wanzishu 56, Su 8, Chuanshu 20, Xichengshu 007, Nan 009, Chuan 34 and Nan 007	Leaf	Phenolic compounds, specifically phenolic acids and flavonoids.	Water, acidic and hydrolysis	HPLC-DAD, HPLC-ESI-MS/MS	[35]
	27 cultivars	Leaf	Phenolic and carotenoids	Methanol-chloroform extraction	UPLC-GC-MS	[36]
	200 accessionsfrom various regions in Mexico	Leaf	Phenol, flavonoid, anthocyanin, caffeoylquinic acid	Mixture of acetone, water, and lactic acid, followed by sonication.	HPLC	[37]
	60 genotypes	Leaf	Phenols, flavonoids, anthocyanins, caffeoylquinic acid	Chemical extraction	HPLC	[38]
	Simon No. 1, Yuzi No. 7, Shangshu 19, and Pushu 32	Leaf, stalk, stem	Phenolic, flavonoid, anthocyanin	Ethanol	HPLC	[39]
	Guangcai2, Guangcai5, Ecai1, Ecai10, Zhecai1, Zhecai726, Fu18, Fu22, Fu23, Tainong71, Shulv1, Pushu53, and Ningcai	Leaf, stalk, stem	Phenolic, flavonoid, anthocyanin	Ethanol	HPLC	[40]
	Beauregard, Hernandez, Covington	Leaf	Phenolics，phenolic acids	Ethanol	RP-HPLC	[41]
	Local unspecified green varieties	Leaf	Phenolics	Methanol	Spectrophotometer	[42]
	Local unspecified green varieties	Leaf	Flavonoids, specifically quercetin, kaempferol,	Aqueous methanol and subjected to acidic	HPLC	[43]

			myricetin, luteolin, and apigenin.	hydrolysis with HCl.		
	Kabode, Vitaa, Kenspot 5, Kenspot 4, SPK031, SPK4, Whitesp, Yellowsp, and K/KA/2004/215	Leaf	VC, flavonoids, phenolic, carotenoids	-	HPLC, spectrophotometer	[44]
	Kabode, SPK031, Yellowsp, Whitesp	Leaf	VC, phenolics, flavonoids, carotenoids, antioxidant activity, phytates, tannins, and soluble oxalates.	-	HPLC, spectrophotometer	[45]
	Suioh, Elegant Summer, Simon No. 1, and Konasenri	Leaf and petiole	Calcium, total carotene, VC, VE, Vitamins K1, polyphenol	Chemical extraction	Spectrophotometer	[46]
	Local unspecified green and purple varieties	Leaf	Carbohydrates, starches, β-carotene, anthocyanins, phenolics, vitamins and minerals	Freeze-drying, blanching, and chemical extraction.	HPLC	[47]
	Nongda No. 6-2, Miyuan No. 6, Jishu No. 04150, Yuzi No. 7	Leaf	Crude protein, crude fat, crude fiber, carbohydrate, mineral content, and total polyphenols	Ethanol	Automated photochemiluminescent system	[48]
	Orange-fleshed, yellow-fleshed, and white-fleshed cultivars	Leaf	β-carotene, vitamins (A, C, B6), carbohydrates, and fiber	-	Liquid chromatography	[49]
	Local unspecified green and purple varieties	Leaf	Minerals (Ca, Fe, Zn, K, P), crude fat, crude	Acetone and hexane, hydrochloric acid	AAS, Spectrophotometry	[50]

			protein, crude fiber, total ash, potassium, β-carotene and vitamin C			

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