Supplementary Material

Table S1. Qualitative and quantitative methods for the quantification of anthocyanins

Separation and detection techniques	Column*	Mobile phase		Q	V	τ	Elution gradient	Ref.
		Solvent A	Solvent B					
HPLC-PDA 1260 Infinity II model (Agilent Co., Palo Alto, CA, USA)	Zorbax Eclipse XDB-C18 (4.6×250)	1 % TFA in H_2O	1 % TFA in ACN	1.0	20	70	10 % B (0 min), 12 % B (6.5 min), 13 % B (10.5 min), 17 % B (33 min), 65 % B (60 min), 95 % B (70 min)	[77]
HPLC-PDA-ESI-MS (Shimadzu, USA)	Kinetex F_5 (50 × 2.1, 1.7)	ultrapure H_2O with 2% FA	ACN with 2% FA	NR	2 µL	2	10 % B (0 min); 0-20 % B (0–2 min); 20 - 10 % B (2-2.1 min); 10 % B (2.1-3.1 min)	[23]
HPLC-PDA (Shimadzu, Japan)	C18 (250×4.60, 5)	2% acetic acid	2% TFA in MeOH	1	10	45	2-20% B (0-10 min), 20-25% B (10-20 min), 25-35% B (20-25 min), 35-75% B (25-35 min), 75% B (35-45 min)	[57]
HPLC-ESI-MS (Agilent Technologies, USA)	Inertsil ODS3- C_{18} (50×4.0, 3)	10% FA	100% MeOH	1	5	25	95% A/5% B - 60% A/40% B, (0-20 min); 60% A/40% B -0% A/100% B (20-25 min)	[64]
HPLC-PDA-MS/MS (Shimadzu, Japan)	Waters C_{18} (250×4.6, 5)	deionized H_2O with 5% FA	ACN: H_2O (1:1) with 5% FA	0.8	5	45	20-40% B (0-30 min), 40-50% B (30- 35 min), 50% (35-45 min), 20% (45min)	[69]
UHPLC-ESI-MS/MS (Thermo Fisher Scientific, USA)	Phenomenex Kinetex C18 (2.1 x 30, 1.7)	H_2O with 1% FA	ACN cu 1% FA	0.35	1	7	10% B (0 min), 10% B (0-1 min), 50% B (1-5 min), 50- 10% (5-5.1 min), 10% B (5.1 min)	[52]
UHPLC (Milford, MA, USA)	Waters Cortecs UPLC C18 (4.6×50, 2.7)	ACN	5% MeOH and 0.1% FA	0.25	10	20	0-2% A (0-2 min), 2-7% A (2-5 min), 7-13% A (5-7 min), 13-20% A (7-9 min), 20-55% A (9-11.5 min), 55-90% A (11.5-13.5 min), 90% A (13.5-14.5 min), 90-3% A (14.5-14.95 min), 3% A (14.95-18 min), 3-0% A (18-20 min)	[21]
HPLC	Lichrospher 100 RP 18 (125×4, 5)	ultrapure H_2O with 0.1% TFA	MeOH with 0.1% TFA	1	20	25	5% - 65% B (0-25 min)	[59]

(Hitachi Fontenay-sous-Bois, France)								
LC/DAD-MS Accela	LichroCART C18 (4×4, 5)	H_2O: FA (99:1)	FA: H_2O: ACN (1:69:30)	0.3	NR	90	20-85% B (70 min) 100% B (10 min) and stabilized with the initial conditions for another 10 minutes	[46]
UHPLC-DAD-MS/MS (Waters, Millford, US)	Agilent C18 (2.1×50, 1.7)	0.05% FA	ACN	NR	NR	14	2-11% B (0-2 min), 11-16% B (2-8 min), 16-2% B (8-9 min), 2% B (9-14 min)	[36]
HPLC-DAD-ESI-MS Agilent 1260 (Agilent Technologies, Germany)	Agilent Poroshell 120 EC-C18 (100×3.0, 2.7)	0.2% FA in ultrapure H_2O	ACN	0.6	5	26	13% B (9 min), 13% - 27% B (5 min), 27% - 40% B (5 min), 40% - 50% B (7 min)	[47]
HPLC-DAD Agilent 1100 Series (Agilent, San Jose, CA, USA)	C18 (250×4.6, 5)	H_2O: FA (95:5)	ACN: FA (95:5)	1	NR	34	10-35% B (0-25 min), 35-100% B (25-26 min), 100% B (26-28 min), 100-10% B (28 -29 min), column rebalancing (5 min)	[48]
RP-HPLC Agilent 1100 system (Agilent Technologies, Palo Alto, CA, USA)	SUPERLC-OSILTM LC-18 (4.6 ×250, 5)	0.1% FA	FA in 0.1% ACN	0.5	50	65	100% A (0 min), 90% A (5 min), 85% A (35 min), 60% A (45 min); maintain at 60% A (45 - 50 min); 60-100% A (55 min), equilibration (55 - 65 min)	[51]
HPLC-DAD (Shimadzu, Kyoto, Japan)	XBridge C18 (150×2.1, 3.5)	H_2O: FA (99.4:0.6)	ACN: FA (99.4:0.6).	0.2	NR	105	3-17% B (0-77 min), 17-80% B (77-80 min), 80-3% B (80-84 min), 3% B (84-105 min)	[66]
HPLC-DAD Agilent 1260 Infinity system (Agilent Technology Inc., Santa Clara, CA, USA)	Cortecs C18 (4.6 × 150, 2.7)	5% FA in H_2O	5% FA in MeOH	0.6	NR	59	2-20% B (0-25 min), 20-33% B (25-48 min), 33-100% B (48 - 49 min), 100% B (5 min), 100-2% B (54 -55 min), 2% B (5 min)	[67]
HPLC-ESI-MS Agilent 1200 (Agilent Technology Inc.,	Inertsil ODS-3 C18 (4.0×150, 3)	10 % FA	100 % MeOH	0.5	5	45	95 % A/5 % B la 60 % A/40 % B (0-20 min) and 60 % A/40 % B la 0 % A/100 % B (20-25 min)	[38]

Santa Clara, CA, USA)								
HPLC-ESI-MS/MS Agilent (Santa Clara, California, USA).	C18 UFLC Aqueous (2.1×150, 3).	1 % FA	MeOH	NR	NR	40	0/5, 20/55, 21/100, 26/100, 27/5 and 40/5 (min / % solvent B)	[80]
UPLC (G2-XS QTof, Waters, USA).	ACQUITY UPLC BEH C18 (2.1×100, 1.70)	0.1 % FA	ACN cu 0.1% FA	0.4	2	17.5	95% A (0-0.5 min), 95%-5% A (0.5-15.5 min), 5% A (15.5-17.5 min)	[10]
HPLC-PAD (Waters Corp, Milford, MA)	C18 (250×4.6, 5)	0.1% TFA	ACN	1.0	NR	60	4% - 7% B (0-2 min); 7% - 0% B (2-67 min); 20% - 35% B (67-79 min); 30% - 90% B (79-81 min); 90% B (81-90 min)	[84]
HPLC Agilent	A C-18 core-shell (3×150, 2.7)	FA	ACN	0.4	NR	45	90% A (0-5 min), 90-75% A (5-20 min), 75-65% A (20-25 min), 65-42% A (25-31 min), 42-40% A (31-34 min), 40-10% A (34-40 min), 10-90% A (40-50 min), 90-90% A (50-60 min)	[81,82]
HPLC Hitachi L-7250 (Hitachi High Technologies, USA)	Grace Prevail C_{18} (250x4.6, 5)	2% FA	100% ACN	1	NR	45	95% A (0 min), 70% A (25 min), 45% A (35 min), 0% A (42 min), maintaining 3 min	[79]

Flow rate (mL/min) - Q; Injection volume (μl) - V; Program duration (min) – τ; Not reported -NR; * Column (length × diameter (mm); particle size (μm)); formic acid -FA; High-Performance Liquid Chromatography - HPLC; Reverse Phase - RP; Ultra High-Performance Liquid Chromatography – UHPLC; Liquid Chromatography – LC; Pulsed Amperometric Detector - PDA; Diode-Array Detector – DAD; Photodiode-Array Detection – PDA; Electrospray Ionization – ESI; Mass Spectrometry – MS.