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Method Uncertainty Data

Procedure	Determinant	Applicable Sample Types	Accredited Site (Technique)	Range	Precision (Repeatability, 95% CI)	Expanded Uncertainty (95%CI, k=2)
VLM1	Acetic Acid	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, NSW (UV-vis spectrophotometric)	0.10 - 1.0 g/L	0.07 g/L	±0.16 g/L
		Beer; Carbonated Alcoholic beverages; Fortifieds; Liqueurs; Sparkling Wine; Spirits; Wine	WA (Classical)	>0.10 g/L	0.07 g/L	±0.03 g/L
VLM3 (Vic, WA), VLM Part A (NSW)	Sugars	Beer; Fortifieds; Fruit Juice Concentrates; Liqueurs; Must; Spirits; Wine	WA (Autoenzymatic analyser; Classical)	>0.10 g/L	0.24 g/L	±0.17 g/L
	Fructose; Glucose	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic (UV-vis), NSW (UV-vis spectrophotometric)	0.10 - 0.99 g/L	0.05 g/L	±0.04 g/L
				1.0 - 4.9 g/L	0.18 g/L	±0.13 g/L
				5.0 - 9.9 g/L	0.34 g/L	±0.24 g/L
10 - 150 g/L	0.7 g/L	±0.5 g/L				
VLM4	Malic Acid	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, NSW (UV-vis spectrophotometric)	>0.05 g/L	0.03 + 0.034x, where x is the sample concentration of malic acid in g/L	±(0.05 + 0.071x), where x is the sample concentration of malic acid in g/L
		Beer; Carbonated Alcoholic beverages; Fortifieds; Liqueurs; Sparkling Wine; Spirits; Wine	WA (Autoenzymatic analyser; Classical)	>0.05 g/L	0.09 g/L	±0.06 g/L
VLM5	pH	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, WA, NSW (Classical)	All	0.02 pH units	±0.02 pH units
VLM6	Sugars - Reducing	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, NSW (Classical)	2.0 - 26.2 g/L	0.6 g/L	(±0.6) + 2 g/L
VLM7	Solids - Soluble	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA (Classical)	Baume Hydrometer	0.1 Baume	±0.1 Baume
				Brix Hydrometer	0.2 Brix	±0.22 Brix
				SG Hydrometer	0.001 SG Units	±0.0014 SG Units
				Refractometer	ND*	ND*
VLM8	Sulphur Dioxide	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA, NSW (Classical)	3.0 - 50 mg/L	4.0 mg/L	±2.8 mg/L
				51 - 100 mg/L	4.8 mg/L	±3.4 mg/L
				101 - 300 mg/L	6.9 mg/L	±4.9 mg/L
VLM9	Titrateable Acidity	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA (Classical)	All	0.10 g/L	±0.07 g/L
VLM9 Part A		Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	NSW (Classical)	All	0.14 g/L	±0.10 g/L
VLM10	Acidity - Volatile	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (Classical)	0.10 - 0.99 g/L 1.0 - 1.99 g/L	0.06 g/L 0.10 g/L	ND* ND*
VLM11	Specific Gravity	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	NSW (Hydrometer)	0.9900 - 0.9999 1.000 - 1.100	0.0005 SG Units 0.001 SG Units	±0.0003 SG Units ±0.001 SG Units
	Specific Gravity & Density	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA (Classical)	0.9900 - 1.0000	0.0002 SG Units	±0.0001 SG Units
VLM12	Malvidin diglucoside	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (Classical)	>5 mg/L (Presence/Absence)	ND*	ND*
VLM15	Alcohol	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (Classical)	All	0.15 % v/v	±0.10 % v/v
VLM16	Sucrose	Alcoholic Beverages; Fruit and Fruit Products; Fruit juice concentrates	Vic (UV-vis)	>0.10 g/L	As per VLM3	As per VLM3
VLM17	Citric Acid	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, NSW (UV-vis spectrophotometric), WA (Autoenzymatic analyser; Classical)	0.10 - 0.40 g/L	0.014 g/L	±(0.09*0.07x), where x is the sample concentration of citric acid in g/L
				>0.40 g/L	0.028 g/L	±(0.09*0.07x), where x is the sample concentration of citric acid in g/L
VLM22	Heat Stability	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA, NSW (Classical)	All	ND*	ND*
VLM23	Cold Stability	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, WA, NSW (Classical)	All	ND*	ND*
VLM25	Alcohol - Total Strength	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, WA, NSW (Classical)	10 - 20 % v/v	ND*	±0.1 % v/v (est)
	Calorific Value	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (Classical)	50 - 150 kCal/100mL	ND*	±1.5 % v/v (est)
VLM26	Total Dry Extract	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, WA, NSW (Classical)	Nomograph (SG < 1.025)	1 g/L	±2 g/L
				Densitometer (20 - 40 g/L)	0.18 g/L	±0.36 g/L
				10 - 70 mg/L	ND*	ND*
VLM27	Sorbic Acid	Alcoholic Beverages; Fruit Juice Concentrates; Fruit Juices	Vic, NSW (UV-vis spectrophotometric), WA (Classical)	70 - 300 mg/L	10 mg/L	±0.1x, where x is the sample concentration of sorbic acid in mg/L
VLM33	Alcohol	Alcoholic Beverages; Beer; Fortifieds; Fruit Juice Concentrates; Fruit Juices; Liqueurs; Must; Spirits; Wine	Vic, NSW (NIR), WA (Classical)	0 - 20 % v/v	0.06 % v/v	±0.12 % v/v
VLM36	Ethylacetate	Alcoholic Beverages; Fruit juices	Vic (GC-FID)	20 - 260 mg/L	14 mg/L	±10 mg/L
	Methanol	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (GC-FID)	20 - 730 mg/L	13 mg/L	±9 mg/L
	Acetaldehyde (ethanal)	Alcoholic Beverages; Fruit juice concentrates; Fruit Juices	Vic (GC-FID)	20 - 360 mg/L	8 mg/L	±6 mg/L
VLM40	Calcium; Copper; Iron; Potassium; Sodium	Alcoholic Beverages	Vic (ICP-AES)	Calcium (34 - 118 mg/L)	3 mg/L	±2 mg/L
				Copper (0.1 - 3.3 mg/L)	0.04 mg/L	±0.04 mg/L
				Iron (0.3 - 1.4 mg/L)	0.1 mg/L	±0.08x, where x is the sample concentration of iron in mg/L
				Potassium (256-1546 mg/L)	44 mg/L	±31 mg/L
				Sodium (16 - 105 mg/L)	3 mg/L	±2 mg/L