



Scheme Description

Soft drinks and fruit juice (QBS)
Proficiency Testing Scheme

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Issue No: 31
Issued: September 2026



29821

RECORD OF ISSUE STATUS AND MODIFICATIONS

Issue	Issue Date	Details	Authorised by
23	Sept 2022	Update of acidity analyte to expressed as citric acid monohydrate. New analytes added to samples 524: total hardness and total dissolved solids. New analytes of Taurine to sample 526. Update of the Carbon Dioxide to pressure corrected. New sample added for vitamins in powdered beverages	L. Fielding S. Xystouris
24	April 2023	Change of format for 527.	S. Xystouris
25	Sept 2023	Add total acidophilic flora as an analyte to 500/501/505 Microbiology ranges updated, units changed to reporting units. Added new sample (528) polyphenols in tea Removed unpopular analytes from 516A, 517A, 524	K. Carey S. Xystouris R. Connolly
26	July 2024	Quinine sample added Sample 505 range updated	S. Xystouris K. Carey
27	July 2024	Removed samples 525 and 526 Added new samples 530 and 531 Clarified units for samples 521 and 527 Added new analytes and change sample name/format of sample 528	S. Xystouris
28	July 2025	Removed sample 531 Sample 516A Total Sulfur dioxide AV changed from Formulation to RMean Changed sample name for 517A & 517B (ready to drink) Removed '(degassed)' from sample name for 516	S. Bladowska
29	March 2026	Separated sample 516A & 516B, 517A & 517B Ranges updated for analytes in 516A and 516B	S. Bladowska
30	May 2026	New UKAS logo added	A Collins
31	July 2026	Removed sample type material information for sample 510 Added new sample BV-534A & BV-534B Improved description of sample 522 Addition of new analytes in 522 Sample 507 changed to two samples A & B Yeast and Mould Identification added to samples 500 and 501 Add new microbiology sample PT-BV-533 Split 517 into 517RD and 517DI	S. Bladowska S. Xystouris K. Carey

Notes: Where this document has been translated, the English version shall remain the definitive version

SCHEME INFORMATION

Scheme Aims and Organisation

The primary aim of the Soft drinks and fruit juice Proficiency Testing Scheme (QBS) is to enable laboratories performing the analysis of fruit juices, soft and carbonated drinks, mineral water and other beverages to monitor their performance and compare it with that of their peers. QBS also aims to provide information to participants on technical issues and methodologies relating to testing of beverages.

The QBS scheme year operates from January to December. Further information about QBS, including test material availability, round despatch dates and reporting deadlines, are available on the current QBS application form.

Test Materials

Details of test materials available in QBS are given in the 'Samples Available' section. The test parameters are continually reviewed to ensure they meet the needs of current laboratory testing and regulatory requirements.

Test material batches are tested for homogeneity for at least one test parameter where deemed appropriate. Details of homogeneity tests performed and results are given in the QBS Scheme Reports.

Some aspects of the scheme, such as test material production, homogeneity testing and stability assessment, can from time to time be subcontracted. When subcontracting occurs, it is placed with a competent subcontractor and LGC is responsible for this work. The planning of the scheme, the evaluation of performance and the authorisation of the final report will never be subcontracted.

Statistical Analysis

Information on the statistics used in QBS can be found in the General Protocol and in the Scheme Report. Methods for determining assigned values and the values for SDPA used for individual samples are given in the 'Samples Available' section.

Methods

Methods are listed in PORTAL. Please select the most appropriate method from the list. If none of the methods are appropriate, then please report your method as 'Other' and record a brief description in the Comments Section in PORTAL.

Results and Reports

QBS results are returned through our electronic reporting software, PORTAL, full instructions for which are provided by email.

QBS reports will be available on the website within 10 working days of round closure. Participants will be emailed a link to the report when it is available.

DESCRIPTION OF ABBREVIATIONS USED

Assigned Value (AV)

The assigned value may be derived in the following ways:

- From the robust mean (median) of participant results (RMean). This is the median of participant results after the removal of test results that are inappropriate for statistical evaluation, e.g. miscalculations, transpositions and other gross errors. Generally, the assigned value will be set using results from all methods, unless the measurement is considered method-dependant, in which case the assigned value will be set by method and indicated in the report tables. For some analytes, where there is a recognised reference method for that type of measurement, this may be used as the assigned value for a particular analyte i.e. it would be applied to results obtained by any method.

Traceability: Assigned values which are derived from the participant results, or a sub-set of the results are not traceable to an international measurement standard. The uncertainty of assigned values derived in this way is estimated from the participant results, according to ISO 13528.

- From a formulation value (Form). This denotes the use of an assigned value derived from sample preparation details, where known and exact quantities of analyte have been used to prepare the sample.

Traceability: Assigned values calculated from the formulation of the test sample are traceable, via an unbroken metrological traceability chain, to an international measurement standard. The measurement uncertainty of the assigned value is calculated using the contributions from each calibration in the traceability chain.

- From a qualitative formulation (Qual Form). This applies to qualitative tests where the assigned value is simply based on the presence/absence of the analyte in the test material.

Traceability: Assigned values calculated from the qualitative formulation of the test sample are traceable to a certified reference standard or a microbiological reference strain.

- From expert labs (Expert). The assigned value for the analyte is provided by an 'expert' laboratory.

Traceability: Assigned values provided by an 'expert' laboratory may be traceable to an international measurement standard, according to the laboratory and the method used. The uncertainty of measurement for an assigned value produced in this way will be provided by the laboratory undertaking the analysis. Details of traceability and the associated uncertainty will be provided in the report for the scheme/round.

Range

This indicates the concentration range at which the analyte may be present in the test material.

SDPA

The SDPA represents the 'standard deviation for proficiency assessment' which is used to assess participant performance for the measurement of each analyte. This may be a fixed value (as stated), a percentage (%) of the assigned value or based on the robust standard deviation of the participant measurement results, either across all methods or by method depending on whether the measurement made is method dependent (see assigned value).

Units

This indicates the units used for the assessment of data and in which participants should report their results. For some analytes in some schemes participants may have a choice of which units to report their results, however, the units stipulated in this scheme description are the default units to which any results reported using allowable alternative results will be converted to.

DP

This indicates the number of decimal places to which participants should report their measurement results.

SAMPLES AVAILABLE

MICROBIOLOGY

Sample PT-BV-500/01

Supplied as:

Microorganisms in fruit juice (500) or soft drink (501)

1 x vial of lyophilised material

1 x 10mL primary diluent

1 x 90ml secondary diluent

Analyte	Method	AV	Range cfu/mL	SDPA	Reporting units	DP
Total aerobic mesophilic count	All	RMean	0 to 100,000	log ₁₀ 0.35	cfu/mL	0
Enumeration of yeast	All	RMean	0 to 100,000	log ₁₀ 0.35	cfu/mL	0
Enumeration of mould		RMean	0 to 100,000	log ₁₀ 0.35	cfu/mL	0
Enumeration of lactic acid bacteria	All	RMean	0 to 100,000	log ₁₀ 0.35	cfu/mL	0
Enumeration of total acidophilic flora	All	RMean	0 to 100,000	log ₁₀ 0.35	cfu/mL	0
Detection of <i>Escherichia coli</i>	All	Qual Form	0 to 10,000	N/A	Detected/Not detected mL	N/A
Identification of yeast [‡] and mould to genus and/or species level	All	Qual Form	N/A	N/A	N/A	N/A

[‡] Accredited within the boundaries of LGC flexible scope of UKAS accreditation

Sample PT-BV-505

Supplied as:

Microbiology Filtration Test (final volume 1L)

1 x vial of lyophilised material (diluent not supplied)

Analyte	Method	AV	Range cfu/100mL	SDPA	Reporting units	DP
Total aerobic mesophilic count	All	RMean	0 to 1,000	log ₁₀ 0.35	cfu/100mL	0
Enumeration of yeast	All	RMean	0 to 1,000	log ₁₀ 0.35	cfu/100mL	0
Enumeration of mould		RMean	0 to 1,000	log ₁₀ 0.35	cfu/100mL	0
Enumeration of lactic acid bacteria	All	RMean	0 to 1,000	log ₁₀ 0.35	cfu/100mL	0
Enumeration of total acidophilic flora	All	RMean	0 to 1,000	log ₁₀ 0.35	cfu/100mL	0
Detection of <i>Escherichia coli</i>	All	Qual Form	0 to 1,000	N/A	Detected/ Not detected 100mL	N/A

Sample PT-BV-506

Microbiology Filtration Test for Thermophilic Acidophilic Bacteria (final volume 1L)

Supplied as:

1 x vial of lyophilised material (diluent not supplied)

Analyte	Method	AV	Range cfu/100mL	SDPA	Reporting units	DP
Enumeration of thermophilic acidophilic bacteria	BAT agar	RMean	0 to 1000	log ₁₀ 0.35	cfu/100mL	0
Detection of guaiacol producing thermophilic acidophilic bacteria	BAT agar	Qual Form	0 to 1000	N/A	Detected/Not detected 100mL	N/A

Sample PT-BV-507(A & B) Pathogen detection in fruit juice (Salmonella species, Listeria monocytogenes, E.coli O157

NOTE: Samples A & B represent two different samples

Supplied as:

2 x vial of lyophilised material
2 x 100ml simulated fruit juice

Analyte	Method	AV	Range cfu/mL	SDPA	Reporting units	DP
Detection of <i>Salmonella</i> species	All	Qual Form	0 to 1000	N/A	Detected/Not detected 25mL	N/A
Detection of <i>Listeria monocytogenes</i>	All	Qual Form	0 to 1000	N/A	Detected/Not detected 25mL	N/A
Detection of <i>Escherichia coli</i> O157	All	Qual Form	0 to 1000	N/A	Detected/Not detected 25mL	N/A

Sample PT-BV-533***

Microorganisms in simulated beverage for direct plating

Supplied as:

1 x vial of lyophilised material
1 x 100ml simulated beverage

Analyte	Method	AV	Range cfu/mL	SDPA	Reporting units	DP
Total aerobic mesophilic count	All	RMean	0 to 100	log ₁₀ 0.35	cfu/mL	0
Enumeration of yeast	All	RMean	0 to 100	log ₁₀ 0.35	cfu/mL	0
Enumeration of mould		RMean	0 to 100	log ₁₀ 0.35	cfu/mL	0
Enumeration of lactic acid bacteria	All	RMean	0 to 100	log ₁₀ 0.35	cfu/mL	0
Enumeration of total acidophilic flora	All	RMean	0 to 100	log ₁₀ 0.35	cfu/mL	0
Detection of <i>Escherichia coli</i>	All	Qual Form	0 to 100	N/A	Detected/Not detected mL	N/A

***Sample not currently included in LGC's UKAS Scope of Accreditation

CHEMISTRY

Sample PT-BV-510

Supplied as:

Fruit juice

1 x 125ml fruit juice test material

Analyte	Method	Range	AV	SDPA	Units	DP
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2
Acidity (as citric acid monohydrate)	Potentiometric Titration Colorimetric Titration	All	RMean	0.03	%w/w	3
pH	pH Meter	All	RMean	0.10	-	2
Fructose	HPLC Enzymatic	All	RMean	5% of AV	g/L	1
Glucose	HPLC Enzymatic	All	RMean	5% of AV	g/L	1
Calcium	AAS Flame Photometry GF-AAS ICP-MS ICP-OES IC	All	RMean	10% of AV	mg/L	2
Phosphorus		All	RMean	10% of AV	mg/L	2
Potassium		All	RMean	10% of AV	mg/L	2
Magnesium		All	RMean	10% of AV	mg/L	2
Sodium		All	RMean	10% of AV	mg/L	2

Sample PT-BV-514

Supplied as:

Vitamin C

1 x 100ml liquid test material

Analyte	Method	Range	AV	SDPA	Units	DP
Ascorbic Acid (Vitamin C)	HPLC Titration Enzymatic Test Strip	0-300	RMean	5% of AV (min 5ppm)	mg/L	0

Sample PT-BV-515

Supplied as:

Carbonated drinks

2 x 330ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2
Acidity (expressed as citric acid monohydrate)	Potentiometric Titration Colorimetric Titration	All	RMean	0.03	%w/v	3
pH	pH Meter	All	RMean	0.10	-	2

Analyte	Method	Range	AV	SDPA	Units	DP
Carbon dioxide (Pressure Corrected)	Zahm & Nagel Mechanical shaker Carbo QC C-Box Carbo QC	All	RMean	0.20	vol/vol @ 20°C	2
Fructose	HPLC Enzymatic	All	RMean	5% of AV	g/L	1
Glucose	HPLC Enzymatic	All	RMean	5% of AV	g/L	1
Sucrose	HPLC Enzymatic	All	RMean	5% of AV	g/L	1

Sample PT-BV-516 A

Additives in simulated soft drink

Supplied as:

1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Benzoic Acid	HPLC Spectrophotometric UPLC NMR	70 – 350	Formulation	5% of AV (min 5ppm)	mg/L	1
Caffeine	HPLC Spectrophotometric LC-MS/MS UPLC	50 – 250	Formulation	5% of AV (min 5ppm)	mg/L	1
Sorbic Acid (as free acid)	HPLC UPLC Spectrophotometric NMR	70 – 350	RMean	5% of AV (min 5ppm)	mg/L	1
Total Sulfur dioxide	Distillation Volumetric Titration	0 – 115	RMean	20% of AV	mg/L	2
Phosphoric Acid	Vanadomolybdate method (UV/Visible) Ion Chromatography ICP-MS Other	350 – 550	RMean	5% of AV	mg/L	1

Sample PT-BV-516B

Supplied as:

Sweeteners in simulated soft drink

1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Acesulfame K	HPLC UPLC LC-MS/MS	40 – 200	Formulation	5% of AV (min 5ppm)	mg/L	1
Aspartame	HPLC UPLC LC-MS/MS	120 – 600	Formulation	5% of AV (min 5ppm)	mg/L	1
Cyclamic acid (as free acid)	HPLC Ion chromatography LC-MS/MS	0 – 400	Formulation	5% of AV (min 5ppm)	mg/L	1
Saccharin (as free imide)	HPLC UPLC LC-MS/MS	50 – 250	Formulation	15% of AV	mg/L	1
Sucralose	HPLC UPLC LC-MS/MS	0 – 300	Formulation	5% of AV (min 5ppm)	mg/L	1

Sample PT-BV-517RD-A

Supplied as:

Additives in soft drinks (ready to drink)

1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Acidity (expressed as citric acid monohydrate)	Potentiometric Titration Colorimetric Titration	All	RMean	0.03	%w/v	3
Benzoic Acid	HPLC Spectrophotometric UPLC NMR	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2
Caffeine	HPLC Spectrophotometric LC-MS/MS UPLC	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
pH	pH Meter	All	RMean	0.10	-	2
Sorbic Acid (as free acid)	HPLC UPLC Spectrophotometric NMR	All	RMean	5% of AV (min 5ppm)	mg/L	1

Analyte	Method	Range	AV	SDPA	Units	DP
Total Sulfur dioxide	Distillation Volumetric Potentiometric	All	RMean or Formulation*	20% of AV	mg/L	2

Sample PT-BV-517RD-B Sweeteners in soft drinks (ready to drink)

Supplied as: 1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Acesulfame K	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Aspartame	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Cyclamic acid (as free acid)	HPLC Ion chromatography LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Fructose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Glucose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Saccharin (as free imide)	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	15% of AV	mg/L	1
Sucrose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Sucralose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean or Formulation*	Robust SD	mg/L	1

*RMean is used when analyte is naturally present in the test material. Formulation is used when analyte is added to the test material during production process.

Sample PT-BV-517DI-A* Additives in soft drinks (dilutable)**

Supplied as: 1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Acidity (expressed as citric acid monohydrate)	Potentiometric Titration Colorimetric Titration	All	RMean	0.03	%w/v	3
Benzoic Acid	HPLC Spectrophotometric UPLC NMR	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2
Caffeine	HPLC Spectrophotometric LC-MS/MS UPLC	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
pH	pH Meter	All	RMean	0.10	-	2
Sorbic Acid (as free acid)	HPLC UPLC Spectrophotometric NMR	All	RMean	5% of AV (min 5ppm)	mg/L	1
Total Sulfur dioxide	Distillation Volumetric Potentiometric	All	RMean or Formulation*	20% of AV	mg/L	2

Sample PT-BV-517DI-B* Sweeteners in soft drinks (dilutable)**

Supplied as: 1 x 250ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Acesulfame K	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Aspartame	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1
Cyclamic acid (as free acid)	HPLC Ion chromatography LC-MS/MS	All	RMean or Formulation*	5% of AV (min 5ppm)	mg/L	1

Analyte	Method	Range	AV	SDPA	Units	DP
Fructose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Glucose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Saccharin (as free imide)	HPLC UPLC LC-MS/MS	All	RMean or Formulation*	15% of AV	mg/L	1
Sucrose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean	5% of AV (min 0.1)	g/L	2
Sucralose	HPLC Enzymatic Ion chromatography Volumetric	All	RMean or Formulation*	Robust SD	mg/L	1

***Sample not currently included in LGC's UKAS Scope of Accreditation

*RMean is used when analyte is naturally present in the test material. Formulation is used when analyte is added to the test material during production process.

Sample PT-BV-518

Supplied as:

Heavy Metals (fruit juice)

1 x 100ml fruit juice test material (type varies by round, see application form)

Analyte	Method	Range	AV	SDPA	Units	DP
Antimony	AAS Flame Photometry GF-AAS ICP-MS ICP-OES	All	RMean	15% of AV	µg/L	2
Arsenic		All	RMean	15% of AV	µg/L	2
Cadmium		All	RMean	15% of AV	µg/L	2
Iron		All	RMean	15% of AV	mg/L	2
Lead		All	RMean	15% of AV	µg/L	2
Tin		All	RMean	15% of AV	mg/L	2
Zinc		All	RMean	15% of AV	mg/L	2

Sample PT-BV-519

Supplied as:

Elements & Minerals (soft drink)

1 x 100ml soft drink test material

Analyte	Method	Range	AV	SDPA	Units	DP
Antimony	AAS Flame Photometry GF-AAS	All	RMean	15% of AV	µg/L	2
Arsenic		All	RMean	15% of AV	µg/L	2
Cadmium		All	RMean	15% of AV	µg/L	2

Analyte	Method	Range	AV	SDPA	Units	DP
Iron	ICP-MS ICP-OES IC	All	RMean	15% of AV	mg/L	2
Lead		All	RMean	15% of AV	µg/L	2
Tin		All	RMean	15% of AV	mg/L	2
Zinc		All	RMean	15% of AV	mg/L	2
Calcium		All	RMean	10% of AV	mg/L	1
Phosphorus		All	RMean	10% of AV	mg/L	1
Potassium		All	RMean	10% of AV	mg/L	1
Magnesium		All	RMean	10% of AV	mg/L	1
Sodium		All	RMean	10% of AV	mg/L	1
Aluminium**		All	RMean	Robust SD	mg/L	2
Manganese**		All	RMean	Robust SD	mg/L	2
Copper**		All	RMean	Robust SD	mg/L	2
Selenium**		All	RMean	Robust SD	mg/L	2

**Analyte not currently included in LGC's UKAS Scope of Accreditation

Sample PT-BV-520

Supplied as:

Patulin (apple juice)

1 x 60ml liquid test material

Analyte	Method	Range	AV	SDPA	Units	DP
Patulin (corrected for recovery)	HPLC	All	RMean	Robust SD	µg/L	2

Sample PT-BV-521

Supplied as:

Vitamins (soft drink)

1 x 250ml liquid test material

Analyte	Method	Range	AV	SDPA	Units	DP
Riboflavin (Vitamin B2)**	HPLC LC-MS LC-MS/MS ELISA	All	RMean	Robust SD	mg/L as riboflavin	2
Nicotinamide (Vitamin B3)		All	RMean	Robust SD	mg/L as nicotinamide	2
Pantothenic acid (Vitamin B5)		All	RMean	Robust SD	mg/L as pantothenic acid	2
Pyridoxine (Vitamin B6)		All	RMean	Robust SD	mg/L as pyridoxine HCl	2
Cyanocobalamin (Vitamin B12)		All	RMean	Robust SD	µg/L as cyanocobalamin	2
Ascorbic acid (Vitamin C)		All	RMean	Robust SD	mg/L as ascorbic acid	0

Analyte	Method	Range	AV	SDPA	Units	DP
DL- α -Tocopherol (Vitamin E)		All	RMean	Robust SD	mg/L as α -tocopherol	2

Sample PT-BV-522

Supplied as:

Steviol glycosides in soft drink

1 x 125ml liquid test material

Analyte	Method	Range	AV	SDPA	Units	DP
Total steviol glycosides (as steviol equivalents)	JECFA 2010 HPLC USP-Food Chemicals Codex, UHPLC-UV/PDA, LC-MS/MS	All	RMean	Robust SD	mg/L	2
Rebaudioside A (as steviol equivalents)		All	RMean	Robust SD	mg/L	2
Rebaudioside M (as steviol equivalents)		All	RMean	Robust SD	mg/L	2
Stevioside (as steviol equivalents)		All	RMean	Robust SD	mg/L	2

Sample PT-BV-524***

Supplied as:

Carbonated water

2 x 500ml test material

Analyte	Method	Range	AV	SDPA	Units	DP
Carbon dioxide (Pressure Corrected)	Zahm & Nagel Mechanical shaker Carbo QC C-Box Carbo QC	All	RMean	0.20	vol/vol @ 20°C	2
Conductivity (20°)	Conductivity meter	All	RMean	7.5%	μ S/cm	0
pH	pH Meter	All	RMean	0.10	-	2
Calcium	AAS Flame Photometry GF-AAS ICP-MS ICP-OES IC	All	RMean	10% of AV	mg/L	1
Magnesium		All	RMean	10% of AV	mg/L	1
Potassium		All	RMean	10% of AV	mg/L	2
Sodium		All	RMean	10% of AV	mg/L	1
Bicarbonate		All	RMean	10% of AV	mg(HCO ₃)/L mgCa/L	0
Chloride		All	RMean	10% of AV	mg/L	1
Total Dissolved solids	TDS meter, Other (please specify)	All	RMean	10% of AV	mg/L	1

Sample PT-BV-527***
Vitamins A & E in beverages

Supplied as:

250ml of ready to drink beverage test material

Analyte	Method	Range	AV	SDPA	Units	DP
Vitamin E	HPLC LC-MS LC-MS/MS ELISA Other (please specify)	All	RMean	Robust SD	mg/100g as α-tocopherol	2
Vitamin A	HPLC, Spectrophotometry Other (please specify)	All	RMean	Robust SD	mg/100g as retinol	2

Sample PT-BV-528***
Tea beverage physicochemical testing

Supplied as:

100ml of kombucha tea

Analyte	Method	Range	AV	SDPA	Units	DP
Total polyphenols	GB/T 21733-2008 Spectrophotometry, Folin Ciocalteau, Other (please specify)	All	RMean	Robust SD	mg/kg	0
pH	pH Meter	All	RMean	0.10	-	2
Electrical conductivity	Conductivity meter	All	RMean	Robust SD	mS/cm	3
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2

Sample PT-BV-529***
Quinine in beverage

Supplied as:

50ml of beverage e.g. tonic water

Analyte	Method	Range	AV	SDPA	Units	DP
Quinine	HPLC-UV, HPLC Fluorescence, UV-Vis Spectrophotometry	All	RMean	Robust SD	mg/L	2

Sample PT-BV-530***
Analysis of fruit concentrate

Supplied as:

100ml of fruit concentrate

Analyte	Method	Range	AV	SDPA	Units	DP
Brix	Density Meter Refractometer	All	RMean	0.06	° Brix	2
Acidity (expressed as citric acid monohydrate)	Potentiometric Titration Colorimetric Titration	All	RMean	0.03	%w/v	3
pH	pH Meter	All	RMean	0.10	-	2

***Sample not currently included in LGC's UKAS Scope of Accreditation