LGC AXIO PROFICIENCY TESTING

QFCS

Quality in Food Chemistry Scheme

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ISO/IEC 17043 | ISO/IEC 17025 | ISO 9001

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QFCS

Quality in Food Chemistry Scheme

The LGC AXIO Quality in Food Chemistry Scheme (QFCS) is specifically designed to promote the quality and comparability in the measurement of a range of analytes in food products.

An incredible variety of foodstuffs are available worldwide and all year round. Technology now allows suppliers to harvest, preserve and distribute within a short period of time. Consequently food quality, consumer satisfaction and government regulations are all factors that need to be considered when producing food.

The food we eat can contain potentially harmful chemicals, some naturally occurring, some as contaminants absorbed from soil and water. Testing these end-use products is fundamental for food safety and stability. Consistent good performance in a LGC AXIO Proficiency Testing scheme will allow laboratories to show, with confidence, the quality of results to third parties.

QFCS

Quality Food Chemistry Scheme

Test Material*	Analyte*
Cereal products (flour, bread, cake, biscuits)	**Nutritional analysis:** Energy; Fat; Carbohydrate; Total Sugars; Total Dietary Fibre; Protein; Salt; Sodium; Ash; Acidity; Moisture; Chloride; Calcium; Phosphate; Magnesium ; Potassium ; Zinc ; Vitamin A; B1 (Thiamine); B2 (Riboflavin); B3 (Niacin); B5 (Pantothenic Acid); B6; B9 (Folic acid); B12; C; D; Iron; Lactose (low level). **Metal, elements:** Total Arsenic; Inorganic Arsenic; Total Inorganic Arsenic; Arsenic III; Arsenic IV; Cadmium; Lead; Mercury. **Allergens:** Gluten, Egg, Almond, Soy. **Mycotoxins:** Aflatoxins B1; B2; G1; G2; Total Aflatoxins; Ochratoxin A; Zearalenone. **Pesticides:** Glyphosate, AMPA, Fungicides, Herbicides, Organochlorine, Organophosphorus, Synthetic pyrethroids, Triazines.
Coffee, Tea	**Nutritional analysis:** Energy; Fat; Carbohydrate; Total Sugars; Total Dietary Fibre; Protein; Salt; Sodium; Ash; Acidity; Moisture; Chloride; Calcium; Phosphate; Magnesium ; Potassium ; Zinc ; Vitamin A; B1 (Thiamine); B2 (Riboflavin); B3 (Niacin); B5 (Pantothenic Acid); B6; B9 (Folic acid); B12; C; D; Iron; Lactose (low level). Metal, elements: Total Arsenic; Cadmium; Lead; Mercury; Selenium.
Fruits, Vegetables	**Nutritional analysis:** Drained weight; pH; Energy; Carbohydrate; Total sugars; Glucose; Fructose; Total dietary fibre; Vitamin C (as ascorbic acid); pH; Brix; Total acidity; Total solids; Ash; Salt. Mycotoxins: Aflatoxins B1; B2; G1; G2; Total Aflatoxins; Ochratoxin A. **Pesticides:** Fungicides, Herbicides, Organochlorine, Organophosphorus, Synthetic pyrethroids, Triazines. **Process contaminants:** Nitrate, Acrylamide, Perchlorate.
Honey	**Nutritional analysis:** Moisture; Electrical conductivity; Ash; pH; Free acidity; Hydroxymethylfurfural (HMF); Diastase enzymatic activity (Diastase number); Fructose; Glucose; Sucrose; Water insoluble solids. **Authenticity, Quality:** Confirmation of authenticity.
Infant Food	**Nutritional analysis:** Energy; Fat; Saturates; Carbohydrate; Total sugars; Protein; Total dietary fibre; Salt; Sodium; Alanine (free); Arginine (free); Aspartic acid (free); Glutamic acid (free); Glycine (free); Histidine (free); Isoleucine (free); Leucine (free); Lysine (free); Phenylalanine (free); Proline (free); Serine (free); Threonine (free); Tyrosine (free); Valine (free); Cystein & Cystine (sum of); Methionine (free); Tryptophan (total). **Allergens:** Milk. **Process contaminants:** Nitrate.
Nuts, seeds, oil, fats	**Nutritional analysis**: Energy; Fat; Carbohydrate; Total Sugars; Protein; Salt; Sodium; Total Fat; Saturates; Monounsaturates; Poly-unsaturates; Total trans fatty acids; Omega 3; Omega 6; Salt; Water; pH; Vitamin A; Vitamin D. **Metal, elements:** Total Arsenic; Cadmium; Lead; Mercury. **Authenticity, Quality:** Water; Free fatty acids; Saponification value; Unsaponifiable matter; Anisidine value; Colour; Iodine value; Peroxide value; Fatty acid composition; K232; K270; Wax content; 3,5 Stigmastadienes; Ethyl esters; Total Sterols; Δ-7-stigmastenol; Insoluble Impurities; Moisture and Volatile Matter at 103°C; Total Polyphenols; ΔK; β-sitosterol (apparent); Campesterol; Erythrodiol & Uvaol; ΔECN 42; Accelerated Oxidation test (Rancimat) at 120°C; 2-glyceryl monopalmitate; cis Alpha-linolenic acid (ALA); cis Eicosapentaenoic acid (EPA); cis Docosapentaenoic (DPA); cis Docosahexaenoic (DHA); Monounsaturated fatty acids; Polyunsaturated fatty acids; Saturated fatty acids; Total EPA +DHA Omega-3 fatty acids; Total Omega-3 fatty acids; Total Omega-6 fatty acids; Total Omega-9 fatty acids; Omega-3 : Omega-6 ratio; Total trans fatty acids; Vitamin A; Vitamin D **Additives:** Sudan IV. **Mycotoxins:** Aflatoxins B1; B2; G1; G2; Total Aflatoxins. **Pesticides:** Fungicides, Herbicides, Organochlorine, Organophosphorus, Synthetic pyrethroids, Triazines. **Process contaminants:** Benzo[a]pyrene; Benz[a]anthracene; Benzo[b]fluoranthene; Chrysene; Sum of EU 4 PAHs; Total polar compounds; Free fatty acids (Acidity); Accelerated oxidation test (Rancimat) at 120°C; Morphine; Codeine.
Processed foods	**Nutritional analysis:** Energy; Fat; Saturates; Mono-unsaturates; Poly-unsaturates; Total trans fatty acids; Carbohydrate; Total Sugars; Total Dietary Fibre; Protein; Salt; Sodium; Ash; Moisture; Phosphate; Cholesterol. **Allergens:** Gluten, Egg, Soy, Milk.

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Confectionary	**Nutritional analysis:** Energy; Fat; Carbohydrate; Protein; Total sugars; Fructose; Glucose; Soluble solids; pH; Moisture; Ash; Total acidity; Brix.
Condiment, herbs and spices	**Nutritional analysis:** Energy; Fat; Saturates; Carbohydrate; Total sugars; Protein; Salt; Total dietary fibre; Soluble solids; pH; Total acidity; Density; Total dry extract; Volatile acidity; Citric acid; Formol number; Total trans fatty acids; Sodium; pH; Cholesterol; Moisture; Total ash; Crude fibre, insoluble index; Volatile oil; Piperine content; Acid insoluble ash; Purity; Sulfate; Iodine; Calcium; Magnesium; Total Arsenic; Lead; Cadmium; Mercury; Copper; Ferrocyanide; Capsaicin; Dihydrocapsaicin; Nordihydrocapsaicin; Heat unit. **Authenticity, Quality:** Confirmation of authenticity, Vanillin. **Mycotoxins:** Aflatoxins B1; B2; G1; G2; Total Aflatoxins.
Non dairy cheese	**Authenticity, Quality:** Total fat; Saturates; Mono-unsaturates; Poly-unsaturates; Total trans fatty acids; Total omega 3; Total omega 6; Total omega 3:Total omega 6 ratio; 4:0 Butyric acid; 12:0 Lauric acid.
Miscellaneous foods	**Additives:** Ponceau 4R; Carmoisine; Sunset Yellow; Indigo Carmine; Allura Red; Tartrazine; Quinoline Yellow; Brilliant Blue; Sulfur dioxide. Sorbic Acid; Benzoic Acid; Sulfur Dioxide; Acesulfame K; Aspartame; Saccharin; Sucralose. Water activity Foreign bodies Cannabidiol (CBD)
Vegan food	**Authenticity, Quality:** Presence of animal origin DNA.
Swabs	**Allergens:** Gluten.
Paper exercise	Food labelling, declaration of nutritional value.

* The full range and availability of test materials and analytes is determined on an annual basis and may be added or removed. For accredited and non-accredited status please see current application form/scheme description.