

### Instructions for Handling Test Materials and Recording Results

#### Receipt and Storage

- On receipt of the test material, record the date and store as appropriate

Storage temperature	Sample(s)
Room temperature (20±5°C)	771, 775, 777, 779, 780, 781, 784, 786, 789, 794, 795, 799, 806, 808, 809, 810, 814, 815, 816, 819, 820, 821, 823, 824, 825, 826, 828, 829, 832, 834, 835, 818A, 852, 853, 854, 855
Refrigerated (2 to 8°C)	760, 761, 762, 763, 770, 772, 774, 776, 778, 782, 783, 785, 790, 791, 793, 796, 801, 802, 803, 805, 811, 812, 813, 817, 822, 833, 847, 849, 850
Frozen (<-20°C)	787, 788, 792, 797, 798, 800, 804, 807, 827, 830, 831, 818B, 836, 837, 838, 839, 840, 841, 842, 843, 844, 851

- The test material(s) should be analysed in accordance with the deadlines shown on the website: <https://portal.lgcstandards.com>
- Samples 790 and 791 must be analysed immediately for K<sub>232</sub>, K<sub>270</sub>, ΔK and Peroxide Value after opening.  
All the pesticide samples must be stored frozen immediately upon delivery and analysed as soon as possible once defrosted.

#### Sample Details

- The chemistry test materials provided represent commercially available food products which may or may not contain all the target analytes at quantifiable levels. All analytes will be provided at a quantifiable level during a 12 month period.
- Samples should be analysed by the routine method(s) used by your laboratory.
- Participants may submit results for some or all of the parameters requested.
- All test materials are supplied in a ready-to-use format.
- Test materials may have settled during transit. Please ensure test materials are thoroughly mixed prior to any sub-sampling or any analysis is performed.

#### Reporting Results

Full details regarding reporting units and sample format are available in the current QFCS Scheme Description.

- Unless otherwise specified all results should be reported on the test materials as it has been provided (i.e. results are not to be expressed on a dry basis).
- To ensure results are returned in a comparable format the following Test Materials must be provided as specified:

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Sample (s)	Analyte	Additional information
As applicable	Energy	<p>as either kcal/100g or kJ/100g using one of the following calculations</p> <p>kJ</p> <ul style="list-style-type: none"> <li>(17 x protein) + (37 x fat) + (17 x total carbohydrate)</li> <li>(17 x protein) + (37 x fat) + (17 x available carbohydrate*) + (8 x total dietary fibre)</li> </ul> <p>kcal</p> <ul style="list-style-type: none"> <li>(4 x protein) + (9 x fat) + (4 x total carbohydrate)</li> <li>(4 x protein) + (9 x fat) + (4 x available carbohydrate*) + (2 x total dietary fibre)</li> </ul> <p>*Total carbohydrate – total dietary fibre</p>
As applicable	Salt	<p>Salt (% NaCl) = sodium x 2.5</p> <p>Salt (% NaCl) = chloride x 1.65</p>
As applicable	Carbohydrates	<p>Total Carbohydrates = 100 - (fat + protein + moisture + ash)</p> <p>Available Carbohydrates = 100 - (fat + protein + moisture + ash + dietary fibre)</p>
As applicable	Sodium	% sodium
770, 772, 775, 793, 811, 812, 813, 828	Protein	Nitrogen x 6.25
776, 816	Protein	Nitrogen x 5.7
778, 790, 791, 796	Free fatty acids (acidity)	% oleic acid
783	Total acidity	% citric acid (monohydrate)
776, 793	Acidity	% oleic acid (in the extracted fat)
836-844, 777	Pesticides	<p>Participants are requested to assess test materials provided for the presence and quantification of pesticides within the scope provided in appendices B and C in the current QFCS Scheme Description.</p> <p>In addition:</p> <p>Aldicarb: parent plus sum of sulfoxide and sulfone</p> <p>Ethiofencarb: parent plus sum of sulfoxide and sulfone</p> <p>Fenthion: parent plus sum of sulfoxide and sulfone</p> <p>Methiocarb: parent plus sum of sulfoxide and sulfone</p> <p>Fipronil: parent plus sum of sulfone</p> <p>Endosulfan: sum of alpha and beta</p> <p>DDT: sum of pp'-DDT, op'-DDT, pp'-DDE and pp'-TDE</p> <p>As applicable: sum of E and Z isomers</p> <p><b>A blank matrix is also provided; results are <u>not</u> required to be reported.</b></p>

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772, 778, 782, 806	Saturates, monounsaturates, polyunsaturates trans fatty acids, ALA, EPA, DHA	<p>All fat parameters to be expressed as % (g/100g) of the whole product.</p> <ul style="list-style-type: none"> <li>Saturates: defined as all fatty acids without double bonds.</li> <li>Mono-unsaturates: defined as all fatty acids which have one cis double bond.</li> <li>Poly-unsaturates: defined as all fatty acids which have multiple cis, cis methylene double bonds.</li> <li>Total trans fatty acids: "Total trans fatty acids (g / 100 g sample) = (g t-MUFA + g t-PUFA) in 100 g of sample</li> </ul> <p><b>Results must <u>not</u> to be expressed as a % of the total fat content</b></p>
771, 776, 782*, 806, 830	Vitamin A	as retinol
	Vitamin C	as ascorbic acid
	Vitamin D	as total D <sub>3</sub>
	Vitamin B <sub>3</sub>	as the sum of nicotinamide and nicotinic acid
778, 790, 791	Fatty acid composition	as % total fatty acids determined
814	All nutritional analysis	analysis to be conducted on the net content (i.e. solid and the liquid combined)
782, 806	Omega-3 and Omega-6 fatty acids	as g/100g
779 (blank)	Total aflatoxins	Results are <u>not</u> required to be returned for the blank material provided and any blank values must <u>not</u> to be taken into account when reporting results.
802, 817	Total acidity	as % anhydrous citric acid
822	Total acidity	as % acetic acid
824	Solubility in cold water at 16±2°C	Solubility reported after moderate stirring for 3 minutes
825	Confirmation of authenticity	<p>Would you consider this sample [oregano/black pepper] to satisfy your specification for authenticity?</p> <p>If you consider this sample as not authentic, what adulterant have you detected?</p> <p>What is the specification assessment based on?</p> <p>You are invited to examine and analyse the sample by the method or methods you usually apply for culinary spices authentication and give an opinion on whether or not you would regard the sample as 'genuine black pepper'. In assessing whether or not the sample is genuine it may help to know that the sample has been assessed by a micro-ATR-FT-MIR method that differentiates between 'genuine' and 'not-genuine' with a limit of detection of 0.65 % for residue, starch, cellulose and piperine and you may wish to bear this in mind, when providing your results and interpretation.</p>
826	Heat unit (Scoville)	<p>Type 1: SHV=C+D+N Type 2: SHV=C</p> <p>where: C=mg capsaicin/kg x 16.1 D=mg dihydrocapsaicin/kg x 16.1 N=mg nordihydrocapsaicin/kg x 9.3</p>
790 B	Insoluble impurities	Bring the oil to the liquid state and mix very well before conducting the test by using vortex or other suitable method.

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<p>781, 799, 808, 809, 810, 851, 852, 853, 854, 855</p>	<p>Allergen testing</p>	<p>781, 851, 852, 854 and 855: Gluten in mg/kg r (ppm). Please follow the ELISA kit dilution and/or conversion factors to report the correct result.</p> <p>799, 852 and 854: Egg white in mg of protein per kg of test material (ppm)</p> <p>808: Almond in mg of protein per kg of test material (ppm)</p> <p>809 and 853: Soy in mg of soy protein per kg of test material (ppm)</p> <p>810: <math>\beta</math>-lactoglobulin in <math>\mu</math>g of <math>\beta</math>-lactoglobulin per kg of test material (ppb)</p> <p>853 and 854: Milk in mg of milk protein per kg of test material (ppm)</p>
<p>818 A 818 B</p>	<p>Foreign bodies</p>	<p>The sample is composed of 2 parts.</p> <p>Both parts, Sample A (biscuit) &amp; Sample B (muffin), may or may not be contaminated with 1 or more of polycarbonate plastic (3-10mm), glass fragment (3-10mm) and/or metal (size 3-10mm).</p> <p>You would need to indicate whether the foreign object has been:</p> <ol style="list-style-type: none"> <li>1. Detected or not detected</li> <li>2. Identify the foreign object</li> <li>3. <b>State whether the foreign body was added before, or after baking.</b></li> </ol> <p><b>Any other foreign bodies detected are not part of this exercise.</b></p>
<p>830</p>	<p>Vitamin C</p>	<ol style="list-style-type: none"> <li>1. Add the 25ml volume of distilled / deionised water in 10g of fruit powder</li> <li>2. Mix well by using the appropriate blender</li> <li>3. If any solid fragments remain, repeat step 2 until all fragments are dissolved.</li> <li>4. Analyse immediately after re-constitution</li> </ol>
<p>831</p>	<p>Morphine/Codeine</p>	<p>The sample must be stored frozen and analysed within 3 days from receipt.</p>

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847	Confirmation of authenticity	<p>Would you consider this honey to satisfy your specification for authenticity?</p> <p>Which compounds have you quantified by 1H-NMR?</p>
849	Cannabidiol	<p>The sample will be provided as 3 gummies. The participants would need to use 1 gummy to do the testing. If testing needs to be repeated, another gummy may be used.</p> <p>The ingredients of the gummies include sugar, glucose, water, pectin, carrot juice concentrate, black carrot juice concentrate, natural orange flavour, natural strawberry flavour, citric acid, anti-caking agent.</p>

\*Where available

#### Recording Results

- All results should be submitted using PORTAL
- Please go to <https://portal.lgcstandards.com>
- Login using your Lab ID, username and password.
- A PORTAL user guide can be downloaded from the help section.

If you need any help at all please do not hesitate to contact our support team using the details below or your local LGC representative.

Tel: +44(0)161 762 2500

Email: [ptcustomerservices@lgcgroup.com](mailto:ptcustomerservices@lgcgroup.com)

#### Precautions

- All test materials are supplied on the understanding that the purchaser has suitably competent and qualified personnel to handle them safely.
- Test materials must only be opened in a laboratory by qualified personnel.
- Refer to the Safety Data Sheet for information on the safe handling of the test material.