QMAS

Quality in Meat and Fish Analysis Scheme

Issue: 15

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Instructions for Handling Test Materials and Recording Results

Receipt and Storage

- On receipt of all test materials (except 749 & 752), record the date and store at 2-8°C until ready to test.
- Test materials 749 & 752 must be frozen upon receipt.
- The test material should be analysed in accordance with the deadlines shown on the website: https://www.lgcpt.com/portal

Sample Details (Microbiological Test Materials)

- The microbiological test material represents a 'real' meat or fish sample, which may or may not contain the target organism(s), at a range of inoculum levels. Background flora may also be present.
- Test materials 735, 736, 737, 738 and 746 are pre-weighed according to the scheme schedule.
- Test materials 739, 740, 743, 744, 745 and 753 are provided in a vial format with a pre-weighed quantity of meat or fish/shellfish, 25g is supplied for presence/absence tests and 10g for enumeration tests.

Resuscitation (Microbiological Test Materials 735, 736, 737, 738, 746)

1. Test the entire sample; do not sub-divide prior to dilution.
2. For **enumeration tests**, dilute the sample initially by 1 in 10 using your chosen diluent i.e. by adding 90ml of diluent to the 10g sample.
3. For **presence/absence tests**, dilute the sample with your chosen diluent or enrichment broth, according to your usual laboratory procedure.
4. Mix the test material thoroughly under aseptic conditions.
5. Leave the test material to resuscitate at room temperature for a minimum of 60 minutes, but no longer than 90 minutes.

Resuscitation (Microbiological Test Materials 739, 740, 743, 744, 745)

1. Prepare diluent as stipulated by your test method in the volume appropriate for the sample size (10g or 25g sample).
2. Aseptically remove the cap and rubber stopper from the vial and add a small volume of diluent (around 2mls) to the vial. Replace the rubber stopper and mix the culture briefly by shaking or vortexing.
3. Add the reconstituted vial contents to the remaining diluent. It may be necessary to repeat step 2 a couple of times to ensure all material is transferred from the vial. Leave the test material to stand for a minimum of 60 minutes but no longer than 90 minutes.
4. Add the reconstituted test material prepared in steps 2 and 3 to the matrix, back-washing two or three times to ensure all the reconstituted test material is recovered.

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Testing (Microbiological Test Materials)

- Immediately before testing, mix the resuscitated sample thoroughly and then test for the target organism(s) using your routine laboratory methods.

Sample Details (Chemistry Test Materials)

- The chemistry test materials are samples of 'real' meat or fish based products.
- No pre-treatment (i.e. dilutions, etc) of any of the chemistry samples is required prior to analysis.
- Test materials may have settled during transit. Please ensure test materials are thoroughly mixed prior to any sub-sampling or any analysis is performed.
- To ensure the stability of sample 732 (Nitrate and Nitrite analysis) this material is provided in a lyophilised format; therefore any Weights taken must be adjusted to account for the freeze-dried format. An approximate guide is to weigh a third of a 'normal' test weight.
- All samples should be analysed by the methods routinely used in your laboratory, which are appropriate to the analyte to be determined.
- Participants may submit results for some or all of the parameters requested.

All samples should be equilibrated to room temperature 20(±5) ^{o}C before any analyses are performed.

Additional Chemical Test Material Reporting Requirements

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

Sample (s)	Chemical test	Additional information
730, 731, 734	Protein	Protein = Nitrogen x 6.25
	Salt	Expressed as %NaCl
	Sodium	Expressed as %Na
	Dietary fibre	Total Dietary Fibre values are to be reported
	Phosphate	Expressed as %PO_4
	Energy	To be expressed as either kcal/100g or kJ/100g using one of the following calculations (factors shown are for kJ): –(17 x protein) + (37 x fat) + (17 x total carbohydrate) –(17 x protein) + (37 x fat) + (17 x available carbohydrate*) + (8 x total dietary fibre) *Total carbohydrate – total dietary fibre
	Carbohydrate	To be expressed as % using one of the following calculations: –Total Carbohydrate (Type 1) = 100 - (fat + protein + moisture + ash) –Available Carbohydrate (Type 2) = 100 - (fat + protein + moisture + ash + dietary fibre)
732	Nitrite	To be expressed as mg/kg (as $NaNO_2$)
	Nitrate	To be expressed as mg/kg (as $NaNO_3$)
733	Saturates, monounsaturates, polyunsaturates & trans fatty acids	All fat parameters to be expressed as % (g/100g) of the test material as provided. –Saturates: defined as all fatty acids without double bonds. –Mono-unsaturates: defined as all fatty acids which have one cis double bond.

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		–Poly-unsaturates: defined as all fatty acids which have multiple cis, cis methylene double bonds. –Total trans fatty acids: defined as the sum of all mono and poly unsaturates where trans double bonds are present. **Note: Results must not to be expressed as a % of the fat content**
749	Meat speciation	Participants will be provided with two 'packs' of samples with each 'pack' containing 6 individual meat products. Each sample will contain a base meat material (e.g. beef) which may or may not contain alternate meats for speciation analysis. Each sample pot contains 2 grams of test material for analysis. Participants are required to analyse the entire sample provided to ensure that a valid result is obtained. **Note: Sub-sampling is not permitted as this will affect any analysis being performed.** Each sample may be contaminated with one of the following species: – Beef (bovine) – Sheep/Lamb (ovine) – Pork (porcine) – Horse (equine) – Chicken
752	Fish identification	Participants will be provided with multiple samples for identification. Each 'pack' will contain 4 individual fish products (approximately 20g per pack) with each sample containing a single fish species for identification. Each sample may be contaminated with one of the following species –Atlantic mackerel, (Scomber scombrus) –Coley, (Pollachius virens) –Haddock, (Melanogrammus aeglefinus) –Pangasius, (Pangasius bocourti) –Pangasius, (Pangasianodon hypophthalmus) –Plaice, (Pleuronectes platessa) –Pollock, (Pollachius pollachius) –Pollock, (Pollachius virens) –Pink salmon, (Oncorhynchus gorbuscha) –Rainbow trout, (Oncorhynchus mykiss) –Skipjack tuna, (Katsuwonus pelamis) –Yellowfin tuna, (Thunnus albacares) –Pacific bluefin tuna (Thunnus orientalis) –Atlantic bluefin tuna (Thunnus thynnus) –Atlantic cod (Gadus morhua) –Pacific cod (Gadus macrocephalus) –Whiting, (Merlangius merlangus)

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Recording Results

- All results should be submitted using PORTAL
- Please go to https://www.lgcpt.com/portal
- 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: support@lgcgroup.com

Precautions

- Test materials contain viable micro-organisms or chemical contaminants and 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 and disposal of the test materials.