

# Raw Meat FlowThrough™

## VALIDATION REPORT



Applicable to Product Numbers:

R6056 (Cow)

R6051 (Horse)

R6053 (Pig)

R6058 (Poultry)

R6060 (Sheep)

### 1. SPECIFICITY:

The antibodies used in the relevant tests react to:

| Raw meat / Serum  | FlowThrough™ |       |     |         |       |
|-------------------|--------------|-------|-----|---------|-------|
|                   | Cow          | Horse | Pig | Poultry | Sheep |
| Cow               | +            | -     | -   | -       | -     |
| Buffalo           | +            | -     | -   | -       | -     |
| Bison             | +            | -     | -   | -       | -     |
| Venison           | (+)          | -     | -   | -       | +     |
| Horse             | -            | +     | -   | -       | -     |
| Horse (serum)     | -            | +     | -   | -       | -     |
| Donkey (serum)    | -            | +     | -   | -       | -     |
| Mouse (serum)     | -            | +     | -   | -       | -     |
| Rat (serum)       | -            | +     | -   | -       | -     |
| Pig               | -            | -     | +   | -       | -     |
| Chicken           | -            | -     | -   | +       | -     |
| Chicken egg white | -            | -     | -   | +       | -     |
| Chicken egg yolk  | -            | -     | -   | +       | -     |
| Duck              | -            | -     | -   | +       | -     |
| Goose             | -            | -     | -   | +       | -     |
| Ostrich           | -            | -     | -   | +       | -     |
| Partridge         | -            | -     | -   | +       | -     |
| Pheasant          | -            | -     | -   | +       | -     |
| Quail             | -            | -     | -   | +       | -     |
| Turkey            | -            | -     | -   | +       | -     |
| Sheep             | -            | -     | -   | -       | +     |
| Goat              | -            | -     | -   | -       | +     |
| Kangaroo          | -            | -     | -   | -       | -     |
| Rabbit (serum)    | -            | -     | -   | -       | -     |

positive '+'    weak positive '(+)'    '-' negative

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Antibody reactivity reflects the closeness in relationships between species (Note: when tested using serum, a potency significantly higher than found in meat was used). Anti-poultry antibody detects a broad range of avian species. In contrast, whilst sheep, goat, cow, buffalo and bison are all ruminants, the sheep and cow antibodies have been purified to remove their reactivity to cow/buffalo/bison and sheep/goat respectively but not to the family e.g. deer.

## 2. CROSS REACTIVITY:

The following food-related materials DO NOT react in the tests:

| Commodities, Ingredients & Retail samples |                    |               |                  |                |
|---|--------------------|---------------|------------------|----------------|
| Alfalfa                                   | Casein, bovine     | Gluten powder | Oat flour        | Sage           |
| Almond                                    | Celery salt        | Lentil, red   | Parsley          | Salt           |
| Apricot kernels                           | Coconut milk       | Lentil, green | Pea protein, dry | Skim milk, dry |
| Barley flour                              | Cod                | Linseed       | Peanut butter    | Soya flour     |
| Barley malt                               | Cornflour          | Lupin flour   | Potato flour     | Spelt flour    |
| Beef protein, dry                         | Fennel powder      | Macadamia nut | Prawn            | Sugar          |
| Buckwheat                                 | Gelatin, fish skin | Malt extract  | Rice flour       | Walnut         |
| Butter bean                               | Gelatin, pig skin  | Mustard       | Salmon           | Wheat flour    |

## 3. SENSITIVITY:

| Raw Meats        | Value* (%) | FlowThrough™ |       |     |         |       | ELISA |
|------------------|------------|--------------|-------|-----|---------|-------|-------|
|                  |            | Cow          | Horse | Pig | Poultry | Sheep |       |
| Horse in beef    | 1.00       | -            | +     | -   | -       | -     | +     |
|                  | 0.25       | -            | +     | -   | -       | -     | +     |
|                  | 0.10       | -            | -     | -   | -       | -     | -     |
| Pork in beef     | 1.00       | -            | -     | +   | -       | -     | +     |
|                  | 0.25       | -            | -     | +   | -       | -     | +     |
|                  | 0.10       | -            | -     | -   | -       | -     | -     |
| Poultry in pork  | 1.00       | -            | -     | -   | +       | -     | +     |
| Sheep in chicken | 1.00       | -            | -     | -   | -       | +     | +     |
| Cow in chicken   | 1.00       | +            | -     | -   | -       | -     | +     |

\*Dilutions of Raw meat extracts; only lowest levels tested are reported.

#### 4. REFERENCE MATERIALS & INTERNAL CONTROLS (mixed species):

|          | Content               | FlowThrough™ |       |     |         |       |
|----------|-----------------------|--------------|-------|-----|---------|-------|
|          |                       | Cow          | Horse | Pig | Poultry | Sheep |
| LGC7249  | Beef (5%) in sheep    | +            | -     | -   | -       | -     |
| LGC7248  | Beef (1%) in sheep    | +            | -     | -   | -       | -     |
| LGC7241  | Horse (10%) in beef   | -            | +     | -   | -       | -     |
| LGC7240  | Horse (1%) in beef    | -            | +     | -   | -       | -     |
| LGC7243  | Pork (10%) in beef    | -            | -     | +   | -       | -     |
| LGC7242  | Pork (1%) in beef     | -            | -     | +   | -       | -     |
| In-house | Chicken (5%) in sheep | -            | -     | -   | +       | -     |
| In-house | Chicken (1%) in sheep | -            | -     | -   | +       | -     |
| In-house | Turkey (5%) in sheep  | -            | -     | -   | +       | -     |
| In-house | Turkey (1%) in sheep  | -            | -     | -   | +       | -     |

Reference Materials supplied by LGC Standards; assessed value is a mass fraction (% w/w).

#### 4. ROBUSTNESS:

| Step * | Procedural step description *                      | Acceptable range  |
|--------|--|-------------------|
| 1      | 0.5g sample into scoop; add to Extraction solution | 0.50g (+/- 0.05g) |
| 2      | Shake tube vigorously for 1 minute                 | >1mins.           |
| 4      | Fill the self-measuring pipette                    | Pipette tube full |
| 5      | Add to Diluent Liquid; mix gently                  | >10 sec.          |
| 8      | Add to test unit; allow to absorb into the unit    | 5 – 10mins.       |
| 11     | Add Colour Reagent to unit                         | Within 1 hour     |
| 11     | Add Colour Reagent to unit; allow to absorb        | 3 - 6mins.        |
| 12     | Read the RMFT test result                          | Within 1 hour     |

\* Refers to Raw Meat FlowThrough™ Instructions for Use (CP002 IFU RMFT A2069 rev01)

#### 6. STABILITY:

| Storage conditions | Timed                    | FlowThrough™ |           |           |           |           |
|--------------------|--------------------------|--------------|-----------|-----------|-----------|-----------|
|                    |                          | Cow          | Horse     | Pig       | Poultry   | Sheep     |
| Refrigerated 2-8°C | From date of manufacture | 12 months    | 12 months | 12 months | 12 months | 12 months |

## 7. REPEATABILITY /REPRODUCIBILITY:

| Conditions                            | n = | N = | Level | FlowThrough™ |       |      |         |       |
|---------------------------------------|-----|-----|-------|--------------|-------|------|---------|-------|
|                                       |     |     |       | Cow          | Horse | Pig  | Poultry | Sheep |
| Same operator,<br>same day            | 2   | >20 | 1%    | 100%         | 100%  | 100% | 100%    | 100%  |
| Different operator,<br>different days | 2   | >20 | 1%    | 100%         | 100%  | 100% | 100%    | 100%  |

n = number of replicates; N = number of repetitions

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