

Q&A template for food authenticity final report publication-short

1. Title of project, Defra project code, duration and cost

Development of a method to detect gelatine in vegetarian products (Defra code: FA0212, FSA code: Q0118), duration, 7 months

2. Who carried it out?

Dr Helen Grundy, FERA, Sand Hutton, York, YO41 1LZ

3. Why was it carried out?

According to food labelling guidance, foods described as suitable for vegetarians' and 'vegans' should not contain protein of animal origin. The current method used to support enforcement of this law relies on the detection of hydroxyproline, an amino acid originally believed to be only present in collagen and gelatine (animal proteins). However plant cell walls have also been shown to contain this amino acid, which means that the direct analysis for hydroxyproline in vegetarian foods is unreliable as an indicator of the presence of gelatine.

The aim of the study was to develop a more appropriate method for the detection of gelatine at low levels in vegetarian foods and beverages.

4. Headline results?

A new method for gelatine extraction from vegetarian meals based on dilute acid extraction and tannic acid precipitation of the gelatine has been developed which enables the selective detection of gelatine in the presence of plant proteoglycans containing hydroxyproline

The new procedure provides advantages over the incumbent AOAC method in terms of limit of detection and selectivity. The new procedure does not suffer from interference from hydroxyproline-containing proteoglycans from gum Arabic or from other ingredients typically found in commercial vegetarian meals.

The new procedure provides advantages over the incumbent AOAC method in terms of limit of detection and selectivity. The new procedure does not suffer from interference from hydroxyproline-containing proteoglycans from gum arabic or, when precipitated with 5% tannic acid (final concentration, w/v), from other ingredients typically found in common vegetarian meals.

5. Where will the report be published?

Defra website