NQAC
Nestlé Quality Assurance Center

Technical Datasheet

Analysis Name: Detection of Gluten Traces by ELISA

Method Number: LI-00.566

Scope of Application: Infant cereal, baby food puree, infant formula, tannin-containing products (i.e. coffee), spices, finished food products, beverages, nutritional products, gluten free flour, rinse water, environmental swabs

Description: Samples are homogenized and gluten is extracted with a guanidine based extraction aid in 60 % (v/v) ethanol or fish gelatin with polyvinylpyrrolidone (PVP) in 60 % (v/v) ethanol for tannin containing products. After centrifugation, gluten is detected by a sandwich ELISA, using antibodies specific to the gliadin fractions from wheat and the corresponding prolamins from rye and barley. Sample extract, reference sample extract and standard solutions are added to the antibody-coated wells. Gluten present in the sample will bind to the immobilized capture antibodies during incubation. Unbound material is washed away. An enzyme-linked detector antibody is added, which attaches to the bound gluten during incubation. After washing, the substrate is added, developing a blue coloration in the presence of the enzyme-linked detector antibody. Addition of stop solution changes the color from blue to yellow. The color intensity is measured using a spectrophotometer at 450 nm. Color development is proportional to the amount of gluten present in the sample.

Sample Weight Required: 50 g

Analytical Platform: Microplate Reader

Special information: Original container needed

Method reports a quantitative result for testing of food products as described in method scope and reports a qualitative result for environmental swabs as “detected” or “not detected” based on a LoD of 10 ng/mL.

Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Gluten	Gluten	mg/kg	5	15%
Gluten	Gluten Swabs	ng/mL	10	N/A

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