

Technical Datasheet

Analysis Name: Crustacean Traces by ELISA

Method Number: NQA-00.8331

Scope of Application: Finished food products, Dairy products, Cereal grains, Environmental swabs

Description: Samples are homogenized and crustacean proteins are extracted at 30 °C with buffered salt solution (PBS) that contains an extraction additive. After centrifugation, crustacean proteins are detected by a sandwich ELISA, using antibodies specific to crustacean proteins. Sample extract, reference sample extract and standard solutions are added to the antibody-coated wells. The crustacean proteins 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 crustacean protein residue 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 light pink when the crustacean antigen concentration is low, to purple/blue when there are detectable antigen amounts and remains dark blue if the antigen concentration falls outside the calibration curve. The color intensity is measured using a spectrophotometer at 650 nm. Color development is proportional to the amount of crustacean proteins in the sample. Crustacean traces measured by this method are expressed as their total crustacean equivalence in milligram per kilogram of product.

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 100 ng/mL.



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Analyte Reported	Alias	Unit of Measure	Limit of Quantification	Reproducibility
Crustaceans	Crustacean	mg/kg	2.5	20%
Crustaceans	Crustacean Swabs	ng/mL	100	N/A

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