



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Hazelnut Traces by ELISA

Method Number: NQA-00.8329

Scope of Application: Cookies, Chocolate bars, Ice Cream, Cereals, Environmental Swabs

Description: Samples are homogenized and hazelnut proteins are extracted at 60 °C with buffered salt solution (PBS) that contains an extraction additive. After centrifugation, hazelnut proteins are detected by a sandwich ELISA, using antibodies specific to hazelnut proteins. Sample extract, reference sample extract and standard solutions are added to the antibody-coated wells. The hazelnut 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 hazelnut 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 hazelnut 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 hazelnut proteins in the sample. Hazelnut traces measured by this method are expressed as their total hazelnut 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".

Results are expressed as total hazelnut. To express results as protein, multiply the total hazelnut result by 0.15. On average, hazelnut contains 15% protein. *



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Kit used, Neogen Veratox Hazelnut (700002564), has identified cross-reactivity or interference: pecan and walnut.

*Source: USDA National Nutrient Database for Standard Reference Release 28, #12120 - Nuts, hazelnut or filberts.

Analyte Reported	Alias	Unit of Measure	Limit of Quantification/ Theoretical Limit of Detection	Reproducibility
Hazelnut	Hazelnut	mg/kg	2.5	15%
Hazelnut	Hazelnut Swabs	µg	0.5	N/A