



NQAC

Nestlé Quality Assurance Center
Dublin

Technical Datasheet

Analysis Name: Detection of Pecan Traces by ELISA

Method Number: NQA-00.8332

Scope of Application: Cake, cookies, chocolate, ice cream, and environmental swabs

Description: Samples are homogenized and pecan proteins are extracted at 60 °C with extraction solution provided with the ELISA kit. After centrifugation, pecan proteins are detected by a sandwich ELISA, using antibodies specific to pecan proteins. Sample extract, reference sample extract and standard solutions are added to the antibody-coated wells. The pecan 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 pecan 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 yellow. The color intensity is measured using a spectrophotometer at 450 nm. Color development is proportional to the amount of pecan proteins in the sample. Pecan traces measured by this method are expressed as their total pecan nut equivalence in milligram per kilogram of product.

Sample Weight Required: 50g

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 pecan nut. To express results as protein, multiply the total pecan nut result by 0.1. Pecan Nut contains approximately 10% protein. *

Kit used, BioFront MonoTrace Pecan ELISA (PC4-EK), has identified cross-reactivity and/or interference as Walnut and Adzuki Bean (Red Bean/English Red Mung Bean).



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*Source: USDA National Nutrient Database for Standard Reference
#12142 – Nuts, pecans, halves, raw.

Analyte Reported	Alias	Unit of Measure	Limit of Quantification/ Theoretical Limit of Detection	Reproducibility
Pecan Nut	Pecan	mg/kg	1	25%
Pecan Nut	Pecan Swabs	mg/kg	1	N/A