

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: 50 g

Analytical Platform: Microplate Reader

Special information: Original container needed.

Method is qualitative and results are reported as “detected” or “not detected” based on an LoD of 1 mg/kg.

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