



Peanut

Product Code: ESPRDT-48

For the detection of Peanut Protein Residues in Food Products and Environmental samples.

Intended Use

The **ELISA SYSTEMS Peanut Residue** assay is an enzyme-linked immunosorbent assay (ELISA) that may be used to screen food products for the presence of peanut material.

Background

Peanuts are a major cause of food allergies both in children and in adults and can induce anaphylactic shock. In recent years, peanut allergens have been identified and characterized. The proteins *Ara h 1* and *Ara h 2* have been the focus of much attention.

Ara h 1 and *Ara h 2* were chosen as the peanut protein indicators for the ELISA SYSTEMS Peanut Residue ELISA.

This assay is a rapid and reliable test that significantly reduces the time required to screen food products for the presence of peanut residues.

Results are expressed as ppm (mg/kg) Peanut Protein.

Please note: A special extraction solution is required for samples containing Polyphenols, including Dark Chocolate, Wine, Fruit Juices, Herbs, and Tannins. (Product code: ESADDSOL)

Controls Supplied

0, 1.0, 2.5, 5.0, 10.0 and 15.0 ppm (mg/kg) Peanut Protein.

Why test for Food Allergens?

- ✓ **Brand Name Protection**
- ✓ **Prevent Costly Product Recalls**
- ✓ **Ensure Consumer Confidence**
- ✓ **Duty of Care**
- ✓ **Comply with Product Labelling Requirements.**

Allergens may occur unintentionally in foods for several reasons including:

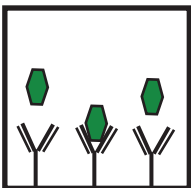
- Cross-contamination of ingredients**
- Food preparation errors**
- Improper cleaning of equipment**

Kits available:

Almond, Buckwheat, Beta-Lactoglobulin, Casein, Crustacean, Egg, Gliadin, Hazelnut, Lupin, Mustard, Peanut, Sesame, Soy

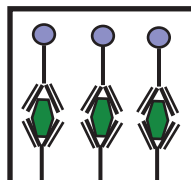
How the ELISA SYSTEMS Peanut Residue test works:

Step 1
Sample is added



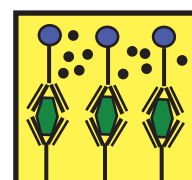
The test sample is added and if Peanut residue is present, it will bind to the specific antibodies.

Step 2
Antigen-Antibody Complex



Enzyme-labelled Conjugate is added and binds to the captured Peanut residue to form a "Sandwich".

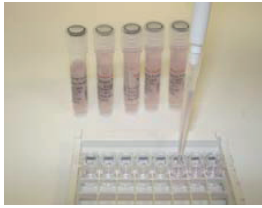
Step 3
Coloured End-Point



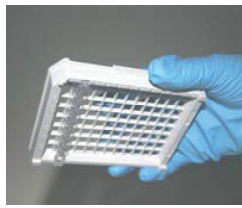
TMB Substrate is added, which is converted in the presence of the Enzyme Conjugate to form a blue colour if Peanut residue is present in the sample. A yellow colour is formed once Acid is added to stop the reaction.

Total test time is approximately 35 minutes on extracted samples. (Three incubation times of 10 minutes each.)

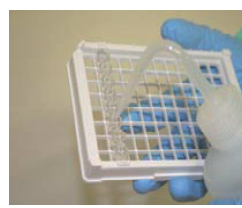
Food Allergen Residue ELISA Protocol



Add 100 microlitres of Standards and Samples to their allocated Antibody-coated wells.
Mix all wells for 10 seconds by gentle shaking on a flat surface.
Incubate for 10 minutes.



Dump liquid from wells.



Wash wells thoroughly five times with wash buffer.



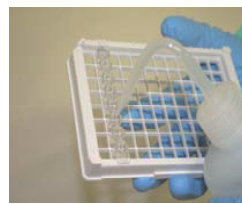
Tap wells firmly onto absorbent paper towel.



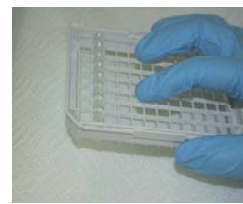
Add 100 microlitres of the Green Conjugate Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.
Incubate for 10 minutes.



Dump liquid from wells.



Wash wells thoroughly five times with wash buffer.



Tap wells firmly onto absorbent paper towel.



Add 100 microlitres of the Substrate Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.
Incubate for 10 minutes.

DO NOT WASH



Add 100 microlitres of the Stop Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.



Read results visually, comparing with the colour of the Standards.
The results can be read on a microplate/strip reader.
Results must be read within 30 minutes.

Interpretation of Results

Interpretation is based on the suggested extraction/dilution protocol. Results are for screening purposes. All results should be interpreted as part of a HACCP plan for Food Allergens. Any sample returning a positive result should be regarded as a presumptive result and confirmation or further testing should be performed.



Product Code	No. of Wells	Max No. of Tests	(Depending on the number of samples and controls per run)
ESPRDT-48	48	46	as a screening test (a multichannel pipette must be used to achieve maximum sample numbers)
		30+	as Quantitative test

Manufactured by ELISA SYSTEMS Pty Ltd.
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