



Almond

Product Code: ESARD-48

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

Intended Use

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

Background

The almond (*Prunus dulcis L.*) belongs to a group of foods, commonly referred to as "tree nuts". This group of foods is a significant source of allergens and almonds are a common cause of food allergy. Consequently, there is a need for a sensitive and reliable test for the detection of almond in foods. Any such test must be able to detect a heat-stable protein component, otherwise false negative results could occur with samples that have been highly heat treated. A specific heat-stable almond protein was identified and is used as the almond protein indicator for the ELISA SYSTEMS Almond Residue ELISA. Results are expressed as ppm (mg/kg) Almond 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)

Control Standards Supplied

0, 0.5, 1.0, 2.5, 5.0 ppm (mg/kg) Almond 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:

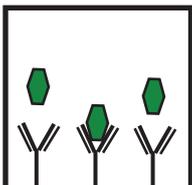
- Cross-contamination of ingredients**
- Food preparation errors**
- Improper cleaning of equipment**

Kits available:

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

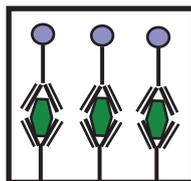
How the ELISA SYSTEMS Almond Residue test works:

Step 1
Sample is added



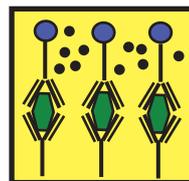
The test sample is added and if almond residue is present, it will bind to the specific antibodies.

Step 2
Antigen-Antibody Complex



Enzyme-labelled Conjugate is added and binds to the captured almond 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 almond residue is present in the sample. A yellow colour is formed once Acid is added to stop the reaction.

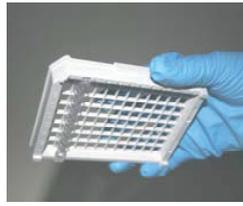
Total test time is approximately 35 minutes on extracted samples. (Three incubation times of 10 minutes each.)

Food Allergen Residue ELISA Protocol

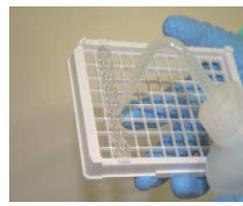


Add 100 microlitres of Standards and Samples to their allocated Antibody-coated wells.
Mix all wells for 10 seconds by gentle shaking on a flat surface.

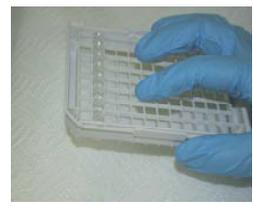
Incubate for 10 minutes.



Dump liquid from wells.



Wash wells thoroughly five times with wash buffer.

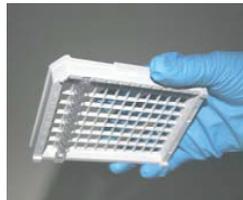


Tap wells firmly onto absorbent paper towel.

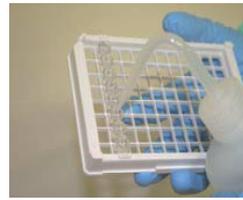


Add 100 microlitres of the Green Conjugate Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.

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)
ESARD-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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