



# Hazelnut



**Product Code: ESHRD-48**

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

### Intended Use

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

### Background

The Hazelnut (*Corylus avellana*) belongs to a group of foods, commonly referred to as “tree nuts”. This group of foods is a significant source of allergens and hazelnuts are a common cause of food allergy. Consequently, there is a need for a sensitive and reliable test for the detection of hazelnut 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 hazelnut protein was identified and is used as the hazelnut protein indicator for the ELISA SYSTEMS Hazelnut Residue ELISA.

**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, 0.50, 1.0, 2.5, 5.0 ppm (mg/kg) Hazelnut 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:

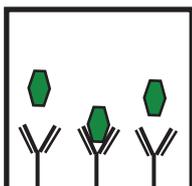
- Cross-contamination of ingredients**
- Food preparation errors**
- Improper cleaning of equipment**

### Kits available:

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

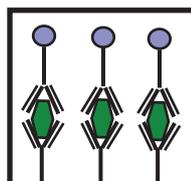
## How the ELISA SYSTEMS Hazelnut Residue test works:

**Step 1**  
Sample is added



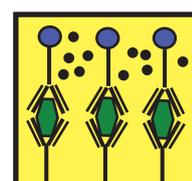
The test sample is added and if Hazelnut residue is present, it will bind to the specific antibodies.

**Step 2**  
Antigen-Antibody Complex



Enzyme-labelled Conjugate is added and binds to the captured Hazelnut residue to form a “Sandwich”.

**Step 3**  
Coloured End-Point



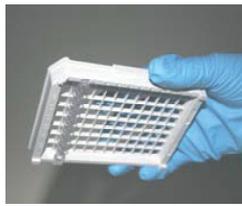
TMB Substrate is added, which is converted in the presence of the Enzyme Conjugate to form a blue colour if Hazelnut residue is present in the sample. A yellow colour is formed once Acid is added to stop the reaction.

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

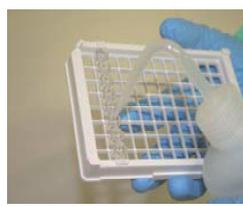
# Food Allergen Residue ELISA Protocol



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.



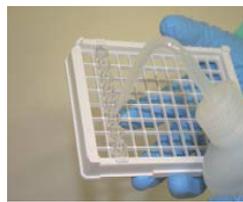
Tap wells firmly onto absorbent paper towel.



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)                                             |
|-----------------|--------------|------------------|-------------------------------------------------------------------------------------------------------|
| <b>ESHRD-48</b> | <b>48</b>    | <b>46</b>        | <b>as a screening test</b><br>(a multichannel pipette must be used to achieve maximum sample numbers) |
|                 |              | <b>30+</b>       | <b>as Quantitative test</b>                                                                           |

**Manufactured by ELISA SYSTEMS Pty Ltd.**  
**For all enquiries contact:**  
**Oxoid Ltd, Wade Road, Basingstoke, Hampshire, RG24 8PW, UK.**  
**Tel: +44 (0) 1256 841144    Fax: +44 (0) 1256 463388    Email: [oxoid@oxoid.com](mailto:oxoid@oxoid.com)**