



Enhanced Egg

Product Code: ESEGG-48

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

Intended Use

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

Background

Hen's Egg is one of the more frequent causes of food hypersensitivity in infants and young children.^{1,2}

Ovomucoid is known to be one of the main allergens in egg white and appears to be allergenic in minute quantities.³

Because of its allergenic and heat-stable properties, Ovomucoid was chosen as the indicator protein for the ELISA SYSTEMS Enhanced Egg Residue ELISA.

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

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 and 10.0 ppm (mg/kg) Egg Powder

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

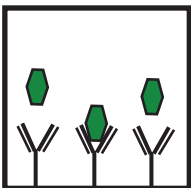
1 Sampson. H.A., McCaskill. C.C. Food hypersensitivity and atopic dermatitis: evaluation of 113 patients. J Pediatr 1985; 107:669-75.

2 Bock. S.A., Atkins.F.M. Patterns of food hypersensitivity during sixteen years of double-blind, placebo controlled food challenges. J Pediatr 1990;117:561-7.

3 Bernhisel-Broadbent J, Dintzis. H.M., Dintzis. R.Z., Sampson.H.A.. Allergenicity and antigenicity of chicken egg ovomucoid (Gal d III) compared with ovalbumin (Gal d I) in children with egg allergy and in mice. J Allergy Clin Immunol 1994;93: 1047-59.

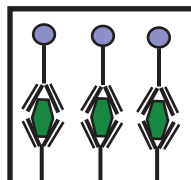
How the ELISA SYSTEMS Egg Residue test works:

Step 1
Sample is added



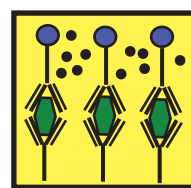
The test sample is added and if Egg residue is present, it will bind to the specific antibodies.

Step 2
Antigen-Antibody Complex



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

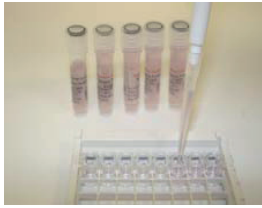
Step 3
Coloured End-Point



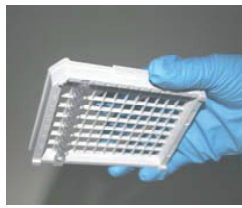
TMB Substrate is added, which is converted in the presence of the Enzyme Conjugate to form a blue colour if Egg residue is present in the sample. A yellow colour is formed once Acid is added to stop the reaction.

Total test time is approximately 45 minutes on extracted samples. (Two incubation times of 15 minutes each and one of 10 minutes.)

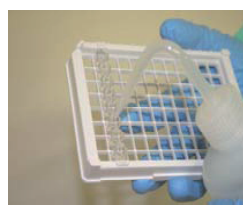
Food Allergen Residue ELISA Protocol



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 15 minutes.



Dump liquid from wells.



Wash wells thoroughly five times with wash buffer.



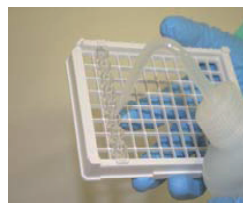
Tap wells firmly onto absorbent paper towel.



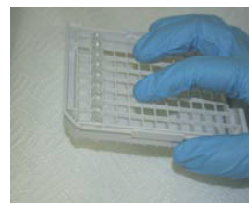
Add 100 microlitres of the Green Conjugate Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.
Incubate for 15 minutes.



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)
ESEGG-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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