



Sesame

Product Code: ESSESRD-48

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

Intended Use

The **ELISA SYSTEMS Sesame Seed Protein Residue** assay is an enzyme-linked immunosorbent assay (ELISA) that may be used to screen food products for the presence of sesame seed protein material.

Background

An increase in sesame seed (*Sesamum indicum*) allergy in children and adults has been reported in recent years. A study in Israel found sesame to be a major cause of food allergy, second only to cow's milk as a cause of anaphylaxis.¹

An ELISA SYSTEMS-sponsored survey of commercially available cooked and processed sesame products identified the presence of heat-stable 2S-albumin proteins, previously reported as major sesame seed allergens.

Because of its allergenic and heat-stable properties, a 2S-albumin sesame seed protein was chosen as the sesame seed protein indicator for the ELISA SYSTEMS Sesame Seed 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, and 5.0 ppm (mg/kg) Sesame Seed Protein.

¹ Dalal, I., Binson, I., Reifen, R., Amitai, Z., Shohat, T., Rahmani, S., Levine, A., Ballin, A., Somekh, E. "Food allergy is a matter of geography after all: sesame as a major cause of IgE-mediated food allergic reactions among infants and young children in Israel. *Allergy* 2002; 57 (4):362-5.

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:

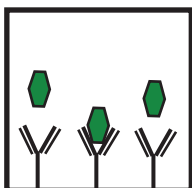
Cross-contamination of ingredients
Food preparation errors
Improper cleaning of equipment

Kits available:

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

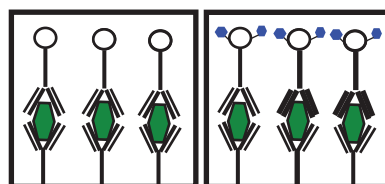
How the **ELISA SYSTEMS** Sesame Seed Protein Residue test works:

Step 1
Sample is added



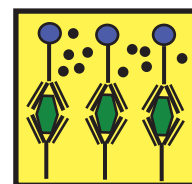
The test sample is added and if Sesame Seed residue (2S-albumin) is present, it will bind to the specific antibodies.

Steps 2 and 3
Antigen-Antibody Complex



Biotin-labelled conjugate is added and binds to the captured sesame seed residue. Enzyme-labelled Streptavidin then completes the "Sandwich".

Step 4
Coloured End-Point



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

Total test time is approximately 65 minutes on extracted samples. (Incubation times of 15, 15, 15 and 15 minutes each.)

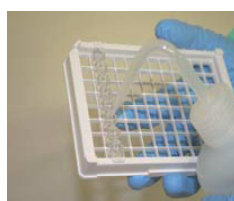
Sesame Seed Residue ELISA Protocol



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.



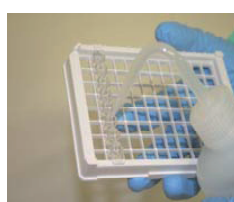
Tap wells firmly onto absorbent paper towel.



Add 100 microlitres of the Red 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.



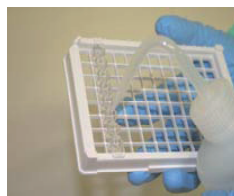
Tap wells firmly onto absorbent paper towel.



Add 100 microlitres of the 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 15 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)
ESSESRD-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.

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