



Casein

Product Code: ESCASPRD-48

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

Intended Use

The **ELISA SYSTEMS Casein Residue** assay is an enzyme-linked immunosorbent assay (ELISA) that may be used to screen food products for Casein as an indicator of the presence of milk or milk products.

Background

Casein is the major protein in milk. It accounts for about 80% of total milk proteins. It is used widely in the food industry, along with derivatives and isolates from milk.

Casein is a source of food allergies and must be excluded from the diet of susceptible individuals.

The ELISA SYSTEMS Casein Residue ELISA is a rapid test which significantly reduces the time required to screen food products for the presence of Casein.

This assay has been shown to detect Casein from several mammalian species as well as from Bovine milk. It should not be used as an indication of specific Bovine Casein.

The assay expresses results in terms of Skim Milk Powder (non-fat) equivalents. A conversion table is supplied for expression of results in terms of other milk products.

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) Skim Milk 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:

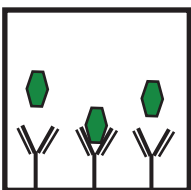
- Cross-contamination of ingredients**
- Food preparation errors**
- Improper cleaning of equipment**

Kits available:

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

How the ELISA SYSTEMS Casein Residue test works:

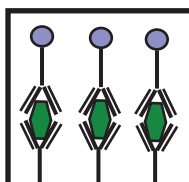
Step 1
Sample is added



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

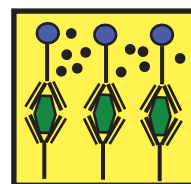
* Alpha S Casein

Step 2
Antigen-Antibody Complex



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

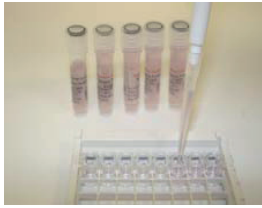
Step 3
Coloured End-Point



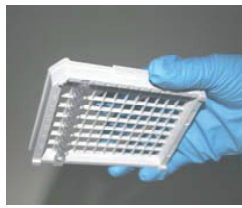
TMB Substrate is added, which is converted in the presence of the Enzyme Conjugate to form a blue colour if Casein residue is present in the sample. A yellow colour is formed once Acid is added to stop the reaction.

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

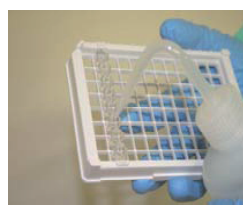
Food Allergen Residue ELISA Protocol



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.



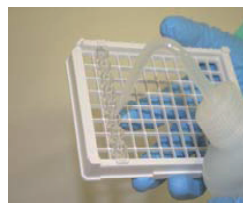
Tap wells firmly onto absorbent paper towel.



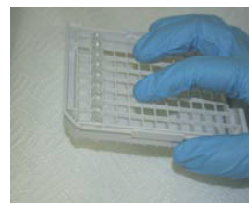
Add 100 microlitres of the Green Conjugate Solution to each well.
Mix all wells for 10 seconds by gentle shaking on a flat surface.
Incubate for 15 minutes.



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)
ESCASPRD-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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