



GLUTEN TESTING PRODUCT RANGE



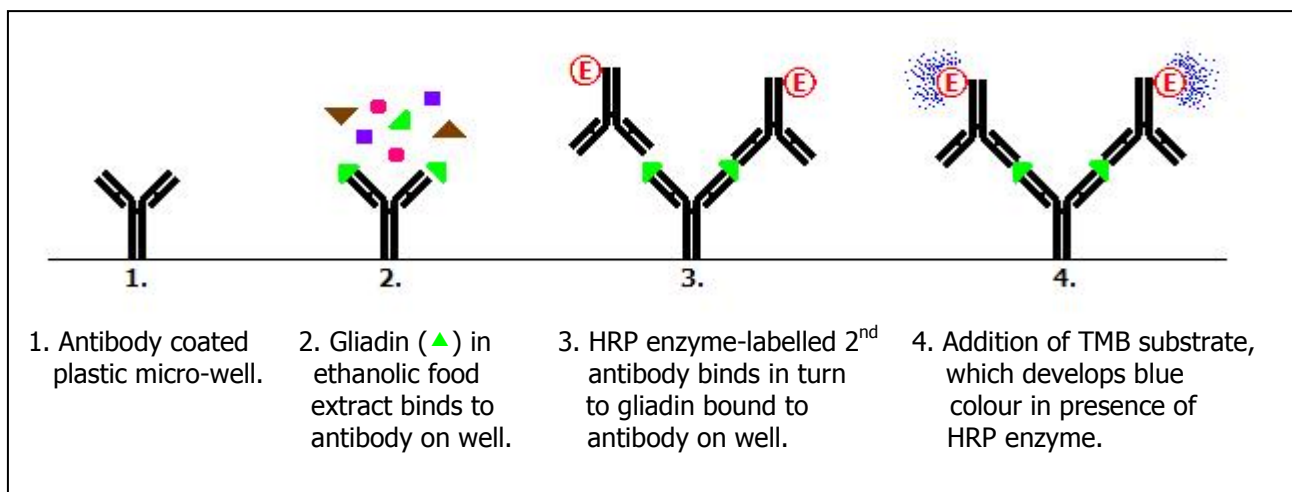
A comprehensive range of **Sample Extraction** kits, quantitative **ELISA** assays and **Assayed Quality Control** sets (Biscuit & Bread) to assist in the accurate & cost-effective determination of low levels of **GLUTEN** in raw materials, swabs, uncooked/cooked foods.

COELIAC DISEASE: True gluten intolerance or Coeliac Disease (CD) affects up to 1% of the EC & US populations; it is caused when toxic proteins in cereal gluten damage the absorptive areas of the small intestine. CD manifests itself as e.g. intestinal pain, bloating and cramps and in children, as a failure to thrive. CD can only be reversed by strict adherence to a diet low in gluten. Increasingly many people also perceive themselves to be food intolerant and avoid wheat/gluten as a result. These phenomena have led to a rise in the availability of "gluten-free" food products, defined in Codex guidelines as containing <200PPM gluten if cereal derived and (under consideration) <20PPM for non-cereal derived foods.

EXTRACTION KITS: each containing 24 pre-filled tubes of either 40% ethanol (AOAC Final Action 991.19 protocol) or HAVen's improved Tannin Binding Additive solution (High Sensitivity protocols). The solutions contain yellow dye as a pipetting aid. Homogeneous Laboratory Sample is weighed into the tube and extracted; the tubes can then be centrifuged and the extract diluted for ELISA testing; diluted extracts are pale yellow in colour.

ELISA KITS: designed for the measurement of cereal gluten nominally within ranges of 156-5,000 PPM or above (**AOAC 991.19** protocol) or 5-100/10-200 PPM or above (**High Sensitivity** assays). They detect the omega gliadin fraction of wheat (Limit Of Detection <7.5 & <0.75PPM respectively) as a marker of total gluten. Originally developed by Skerritt & Hill (JAOAC 74, 2, 1991, p.257-264) they are manufactured by Diagnostic Innovations Limited in the U.K. under license from Vital Diagnostics, NSW, Australia.

ASSAYED QC (AQC) SETS: each containing 4 x 6g pots of breadcrumbs. Two pots in each contain very low levels of gluten and are negative for other allergens; two contain assayed amounts of gluten and other allergens. These AQC sets are designed to help verify the accuracy of your gluten/allergen analysis results.

DIAGRAM OF THE ELISA METHOD:

HAVen GLUTEN TESTING by ELISA: PRODUCT INFORMATION

| Product Name | Cat. No. | Product Description |
|--|----------|---|
| HAVen Gluten Kit (AOAC; 96 wells) | R6008 | Wheat omega gliadin (Skerritt) (LOD <7.5ppm; range >156ppm gluten) AOAC Final Action 991.19 |
| HAVen Gluten Extraction Kit (24 tubes) | A6016 | 10ml/tube of 40% ethanol with yellow dye as a pipetting aid |
| HAVen Tannin Binding Additive Kit (23 tubes & one standard) | A6018 | 10ml/tube of Tannin Binding Additive Reagent plus one vial of freeze dried Gliadin Standard |
| HAVen Gluten-Check Kit (48 wells) | R6005 | Wheat omega gliadin (Skerritt) High Sensitivity (LOD <0.75ppm; range >10ppm gluten) |
| HAVen Gluten-Check Kit (96 wells) | R6007 | |
| HAVen Gluten-Check Kit (192 wells) | R6008 | |
| HAVen Gluten Improved Extraction Kit (24 tubes) | A6017 | 10ml/tube of improved extraction solution with yellow dye; suitable for all samples, including those with high tannin |
| HAVen Gluten Assayed QC Set 1 (Biscuit ; 4 x 4g pots) | FGEKIT8 | G/F Shortbread (Low x 2); G/F Chocolate biscuits (Borderline x 2) |
| HAVen Gluten Assayed QC Set 2 (Bread ; 4 x 4g pots) | FGEKIT9 | G/F Bread (Low x 2); G/F Wheat Starch Bread (Medium x 2) |