Validation of a quantitative enzyme-linked immunosorbent assay method utilizing a qualitative commercially available kit for the establishment of method criteria for accurate protein quantitation.

B. Schwartz*, T. Sullivan
Syngenta Biotechnology, Inc., USA

For registration of GM crops, the level of each transgenic protein needs to be determined in different plant tissues to estimate exposure to the environment and in food and feed. Enzyme-linked immunosorbent assays (ELISAs) have been the industry standard for quantitation of transgenic proteins in GM crops. ELISAs are ideally suited for protein detection and may be used as a quantitative method. Validation of a quantitative ELISA utilizing a qualitative commercially available kit for the establishment of method criteria for accurate protein quantitation will be discussed.

References

Guidelines for the Validation and Use of Immunoassays for Determination of Introduced Proteins in Biotechnology Enhanced Crops and Derived Food Ingredients C.R. LIPTON ET AL FOOD AND AGRICULTURAL IMMUNOLOGY VOL. 12, 2000

Immunoassay as an Analytical Tool in Agricultural Biotechnology GROTHAUS ET AL JOURNAL OF AOAC INTERNATIONAL VOL. 89, NO. 4, 2006


Keywords: ELISA, validation, protein, GMO