# Detecting Chicken GAMMA-globulin in Vegan Products Utilizing Immunoassay, ELISA, Techniques

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One of the greatest struggles of someone living a particular diet or lifestyle is the difficulty of finding foods which align with it. The question of whether or not specialty foods -- specifically vegetarian substitutes -- stems from recent scandals of vegan manufacturers whose products actually contained chicken products. The chicken in foods can be found and assessed through biochemical tests run to detect meat specific proteins within the samples. The goal of this experiment is to test locally available vegan chicken samples for chicken immunoglobulins which can only be effectively produced in the bones and internal organs of the animals. Detection of chicken within the samples could potentially influence consumers away from them due to their dietary and ethical restrictions. The experiment was performed using an ELISA antigen kit which contained a positive and negative control for chicken gamma-globulins, a specific immunoglobulin. Of the 12 columns on the assay, number 12 would be reserved for the positive control. The rest of the assay would be split into their respective rows, with rows A through G being 7 different products, and row H being the negative control. Of the 11 samples from each product, each would be pulverized and mixed with distilled water. Following this, pipettes would distribute the sample, primary and secondary antigens, and the detecting chromogen into their respective wells. After 63 of the 64 wells were filled, the study was concluded and the data collected. The data extrapolated was analyzed by product and brand, which concluded that 5 out of 7 products continuously exhibited positive confirmations for the presence of the globulins.

**Awards Won:**