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Investigating Genetically Modified Foods

A genetically modified organism, or GMO, is a plant or animal whose DNA has been altered. GMOs may seem like science fiction, but they are actually a prominent part of the food industry today. The purpose of my experiment is to educate the public about the food that they eat. I decided to test processed corn products for the *Bacillus thuringiensis* (Bt) endotoxin, which is a bacteria inserted into a plant's DNA to create a biological herbicide.

To carry out my experiment, I used Polymerase chain reaction and gel electrophoresis techniques. I tested how the labeling of a product affected its contents. I used corn flakes, tortilla chips, and corn meal, and investigated sub-types of these with labeling "organic", "natural", and unlabeled. First, I separated the DNA from the corn product and then isolated the Bt gene.

My hypothesis was that I would find "natural" and unlabeled products to contain Bt endotoxin, while "organic" products would not. My results did not support my hypothesis, because both the unlabeled tortilla chips and corn meal did not contain the Bt gene. However my hypothesis that organic products would not contain *Bacillus thuringiensis* was supported by evidence from the organic tortilla chips. My research is beneficial to those concerned about possible dangerous effects of GMOs. My results can assure the public that even products which are unlabeled probably do not contain *Bacillus thuringiensis* endotoxin. By knowing which products contain GMOs, the public can make educated decisions about their health.