

\$490,000 saved on testing

In-house testing saves 6 days from time-to-result

Customer Overview

The customer is a large international producer of soy-based products and specializes in nutritious soy-foods. It offers a wide range of products that are specifically designed to meet customer application needs.

With about 3,500 employees worldwide, the company has manufacturing operations in the United States, European Union and Brazil.

The Situation

The company wanted to reduce the cost of testing technology and undertook a Six Sigma project to control costs in Protein Isolates testing. Regulatory and product purity needs required adherence to a 0.9% GMO threshold. Stricter internal control measures lowered that to 0.7% GMO. The company screened incoming trucks using SDI's TraitChek® lateral flow test strips. However, the company's final products such as Protein Isolates were being tested with the aid of a genetic based PCR method.

Expensive, Outsourced Testing

Protein isolate samples were being shipped to commercial labs. A high volume sample producer, the company's production facility produced about 3,600 samples per year. An outsourced PCR test cost the company \$150 per sample with a turnaround time of 5 to 7 days.

The Solution

GMOChek™ is a simple ELISA test format that provides quantitative results in less than 3 hours. The ELISA microtiter plate testing method detects as little as 0.1% GMO and can process 43 samples at one time.

The company tested protein isolates on both GMOChek™ and the current PCR method. Tests revealed a sample correlation of 97% at the 0.7% threshold level. The study also showed a 100% sample correlation of blind duplicates at the 0.7% threshold level. Since test accuracy of both methods was essentially equal, the decision to switch to the much less expensive GMOChek™ product was simple.

Same accuracy at a much reduced cost

The company incurred up front costs of \$10,000 to set up an in-house testing facility to train employees. Additional SDI training added another \$5,500. GMOChek™ ELISA based testing averages \$14 per sample, compared to \$150 per sample for the PCR methodology. Annual savings—\$850,000



PCR vs GMOChek® microwell plate test

| Cost Item | PCR | GMOChek® | Savings |
|-------------------|---------|----------|---------|
| 3,600 Samples/yr. | 540,000 | 50,000 | 490,000 |
| Lab Setup | 0 | 15,500 | |

Total Savings/Year \$ 490,000

Percent Return on Investment (ROI)

ROI = (Savings–Investment/Investment) x 100

$$\frac{(490,000-15,500) \times 100}{15,500}$$

ROI = 3,060%



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