



Not All Hygiene Monitoring Systems are Equal

Quality and Efficiency Improved Using the Powerful 3M™ Clean-Trace™ Hygiene Monitoring System

Gold'n Plump Poultry is the largest, fully integrated producer of chicken products in the upper Midwest region of the United States. With distribution to grocery stores, delis and restaurants as well as international exports, maintaining high quality standards is essential to protecting their reputation and remaining successful in a competitive global marketplace. Routine sanitation verification using an ATP testing system has been a key component in Gold'n Plump's quality assurance program over the last six years.

“Sanitation is a key part of our total system. It affects product shelf life and performance,” says Renju Simon, Quality Services Manager at the Gold'n Plump Poultry facility in Cold Spring, MN. “Approximately 500 pieces of manufacturing equipment are utilized in our three plants. It is critical for us to have real-time data about equipment cleanliness before we begin daily manufacturing. Previously, when we sampled for microorganisms, we had to wait 24 to 48 hours for test results. We need responses in real time so we switched to surface ATP testing to obtain immediate feedback.”

Despite the satisfaction that Gold'n Plump had with ATP as a method for sanitation verification, there were some drawbacks to the ATP testing system they were using.

“The first ATP luminometer we used required manual calibration. We wanted a more convenient instrument that could perform a self-check and quickly be ready for use,” said Simon. “Our original ATP system also categorized results as pass, caution or fail. We needed numerical values for surface cleanliness to improve our sanitation effectiveness.”

The Gold'n Plump Poultry team conducted background research on three systems and viewed presentations and demonstrations by each manufacturer.

“We focused on features that went beyond numerical results,” said Simon. “After narrowing our search to one system, we tested it in our facilities. We evaluated the system for repeatability of measurements as well as software compatibility with other Gold'n Plump Poultry systems. Ultimately, we chose the 3M™ Clean-Trace™ Surface ATP System because it met the greatest number of our requirements and preferences.”

“The driving factor in our decision to choose the Clean-Trace system was the 3M™ Clean-Trace™ Data Trending Software,” explained Simon. “Our quality engineer found it was easy to use and offered the most flexibility. He liked the open architecture that enabled us to generate statistically sound sampling plans, randomly generate testing sites and add extra sites on a daily basis that are not on the random schedule. It gave us

The Gold'n Plump Poultry team began searching for a new surface ATP testing system by establishing the following selection criteria:

- Software with open architecture that allows customization and add-on features
- Ruggedness
- User-friendliness of the unit and swabs
- Quantifiable results
- Sensitivity
- Repeatability of results
- Self-calibration
- Multiple security features
- Affordability
- Cost per test equivalent or less than traditional swabs



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the advantage of collecting fewer samples while maintaining acceptable confidence in our sanitation process. This flexibility is also compatible with our Six Sigma program. The software in the other ATP systems we considered was more limited.”

In comparative laboratory studies with other ATP surface testing systems, the 3M™ Clean-Trace™ ATP System demonstrated superior repeatability and high sensitivity of results.^{1,2} The repeatability of the Clean-Trace ATP system was particularly important to Gold’n Plump.

“We need accurate, repeatable results from a surface ATP testing system to make good decisions about proceeding to manufacturing line or taking the time to re-clean equipment. If the results we obtain are unreliable, we could give false information to departments, telling them to make unneeded changes in sanitizers, chemicals or labor. We could also lose valuable time and spend additional money doing unnecessary re-cleaning or fail to clean equipment properly based upon a false result, which could affect product quality.” explained Simon.

Within Gold’n Plump Poultry, the results from the Clean-Trace ATP testing system are used for more than just immediate clean vs. not clean decisions. The report generated from the 3M Data Trending Software is sent nightly to Kaiser Sanitation, the contract cleaning company used by Gold’n Plump. Kaiser managers meet with their personnel to analyze any

failures and make adjustments to the cleaning process, such as re-cleaning certain areas or adding more cleaning solution, etc.

The Clean-Trace ATP system also allows Gold’n Plump to emphasize the importance of quality in their operations. Over time, the results of the testing are compiled and used as part of a bonus structure in what Gold’n Plump calls their “Gold’n Reward Bonus Program”. Within this program, employees are awarded bonuses for their part in maintaining the quality and safety standards that Gold’n Plump has put in place. “It’s another reason that having an ATP testing system which provides accurate and repeatable results is very important,” said Simon. “Our employees are relying on the data we provide and other measurements to make sure they receive bonuses.”

Linking incentives to measurable results are a clear, unmistakable message from management about the importance of sanitation and the participation of employees and contractors in the cleaning and testing program. The results of the Clean-Trace ATP system are critical to maintaining the high standards of safety and product quality at Gold’n Plump.

Gold’n Plump also uses the data to identify equipment that is becoming difficult to clean. If a piece of Gold’n Plump Poultry equipment fails five times, it is tagged for investigation to determine why the equipment is not able to be cleaned effectively.

“We compare swabbing results from multiple days and weeks with our process limits,” explained Simon. “If we see data approaching upper control limits, we will investigate the situation, do additional surface ATP testing or take other preventive or corrective actions. These activities correlate with our Six Sigma initiatives. In addition, maintaining records helps us comply with HACCP requirements.”

Simon and his team also use the trended data from the Clean-Trace ATP system to track long-term equipment performance and provide information for purchasing new equipment. “We have identified the material, such as plastic or stainless steel, in every piece of equipment in our three facilities. When we consistently see failures in ATP results, we use that data to convince our managers not to purchase a particular material”

Gold’n Plump Poultry is a shining example of ATP testing done right. They have utilized both the reliability of the Clean-Trace ATP testing results as well as the power of the 3M Clean-Trace Data Trending software to impact both immediate and long-term decision making. With these prerequisites, Gold’n Plump Poultry has extracted great value out of their ATP testing dollars.

References

1. Simpson, WJ, Archibald, JL, Giles, C.J. Protocol for assessing the sensitivity of hygiene test systems for live microorganisms and food residue. Cara Technology Limited, Report 120906, October 2006.
2. Simpson, WJ, Files CJ, Flockhart, HA. Repeatability of hygiene test systems in measurement of low levels of ATP. Cara Technology Limited, Report 30606, July 27, 2006

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Microbiology
3M Center
Bldg 275-5W-05
St. Paul, MN 55144-1000
USA
1-800-328-6553

3M Canada
Post Office Box 5757
London, Ontario N6A 4T1
Canada
1-800-563-2921

3M Europe & MEA
3M Deutschland GmbH
Carl-Shurz - Strasse 1
D41453 Neuss/Germany
+49-2131-14300

3M Latin America
3M Center
Bldg 275-5W-05
St. Paul, MN 55144-1000
1-651-737-2239

3M AsiaPacific
9 Tagore Lane
Singapore 787472
65-6458611

3M Japan
31-1, Tamagaradai,
2-Chome
Setagaya-Ku, Tokyo
158-8583, Japan
81-3-3709-8289

**3M Australia Pty
Limited**
13 Rodborough Road
Frenchs Forest, NSW
2086
Australia
61-2-8977-3000

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