

The first ATP Sanitation Verification System to receive AOAC approval

Who is AOAC?

AOAC INTERNATIONAL is a globally recognized 501(c) (3), independent, third party, not for profit association and voluntary consensus standards developing organization founded in 1884.

What does AOAC do?

AOAC's primary activity is the development of globally accepted standards. AOAC's standards development process relies on stakeholder panels to develop consensus-based method performance requirements and volunteer expert review panels to evaluate potential methods—all based on the community's specific method needs.

AOAC's independent third party status, vast experience, and volunteer leadership all contribute to the credibility, defensibility and acceptability of standards and methods developed through their process.

Discussion of the Study

The performance validation of the AccuPoint Advanced ATP Hygiene Monitoring System produced results that support kit claims in providing a useful way to monitor the effectiveness of sanitation programs. Collectively, the results in this validation report provide evidence that the AccuPoint Advanced ATP Hygiene Monitoring System produces consistent and reliable data for evaluating sanitation program effectiveness on stainless steel surfaces in food processing and food services facilities.

How Did We Do It?

The process began in early 2015 with the submittal of a validation outline to the AOAC. This was the first time an ATP sanitation monitoring system was submitted for approval. The AccuPoint Advanced system was validated according to the AOAC Research Institute policies and procedures. The validation has two main parts: Method Developer Studies and the Independent Laboratory

Collectively, the results in this validation report provide evidence that the AccuPoint Advanced ATP Hygiene Monitoring System produces consistent and reliable data for evaluating sanitation program effectiveness on stainless steel surfaces in food processing and food services facilities.



AccuPoint
Advanced



Study. Method Developer Studies include pure analyte LOD, matrix and microbial LOD, inhibition, lot-to-lot consistency and stability, instrument variation and robustness testing. The Independent Laboratory Study includes pure analyte and matrix LOD testing.

The comprehensive study took 17 months to complete and resulted in the formal approval of the AccuPoint Advanced ATP Hygiene Monitoring System on September 9, 2016.

Why Did We Do It?

Neogen Corporation believes that it's critical for companies in the food safety industry to have accurate and unbiased information. This is especially important when it comes to claims made about products designed to protect consumers and the companies that produce food or beverage products.

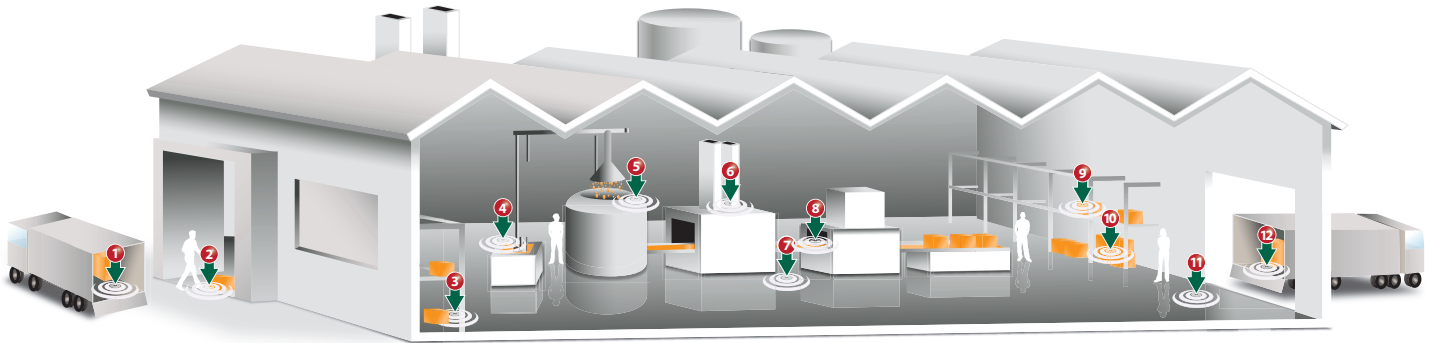
Each time we receive a validation from an independent third party on any of our tests, it provides further assurance to the food production and processing industry that our tests perform as expected. The performance of our AccuPoint Advanced system in recent independent evaluations by AOAC and NSF International validates the investment we have made in their development. We developed the product with the goal of creating a new sanitation monitoring system that is superior to anything else on the market.

Why are independent evaluations and approvals important?

Independent evaluations by recognized evaluation bodies offer the best way for a prospective customer to judge an ATP system. AOAC and NSF International are well recognized, credible, independent authorities in the food safety industry. Both studies focused their validation efforts on utilizing the systems as they're used in the real world. *The results speak for themselves.*

Trust Neogen's Step-by-step Safety Solutions

Neogen has a full line of environmental validation and verification tools for monitoring your facility.



Incoming Goods and Warehouse

- 1 AUDITING SUPPLY CHAIN**
Use Neogen to verify allergen controls
- 2 INCOMING GOODS**
Use Neogen to confirm supplier specifications
- 3 WAREHOUSE**
Use Neogen to ensure robust ingredient segregation and packaging integrity

Processing and Packaging

- 4 FOOD PREPARATION SURFACE**
Use Neogen to validate cleaning and detect cross-contamination
- 5 6 PROCESS EQUIPMENT AND UTENSILS**
Use Neogen to validate cleaning and detect cross-contamination
- 7 SPILLAGES**
Use Neogen to ensure verification of cleaning
- 8 IN-PROCESS AND RE-WORK**
Use Neogen to detect potential cross-contamination

Finished Product and Warehouse

- 9 FINISHED PRODUCT**
Use Neogen to verify product labelling claims
- 10 WAREHOUSE**
Use Neogen to ensure robust final product segregation and packaging integrity
- 11 SPILLAGES**
Use Neogen to ensure verification of cleaning
- 12 FINISHED PRODUCT SUPPLY CHAIN**
Use Neogen for auditing and enforcement

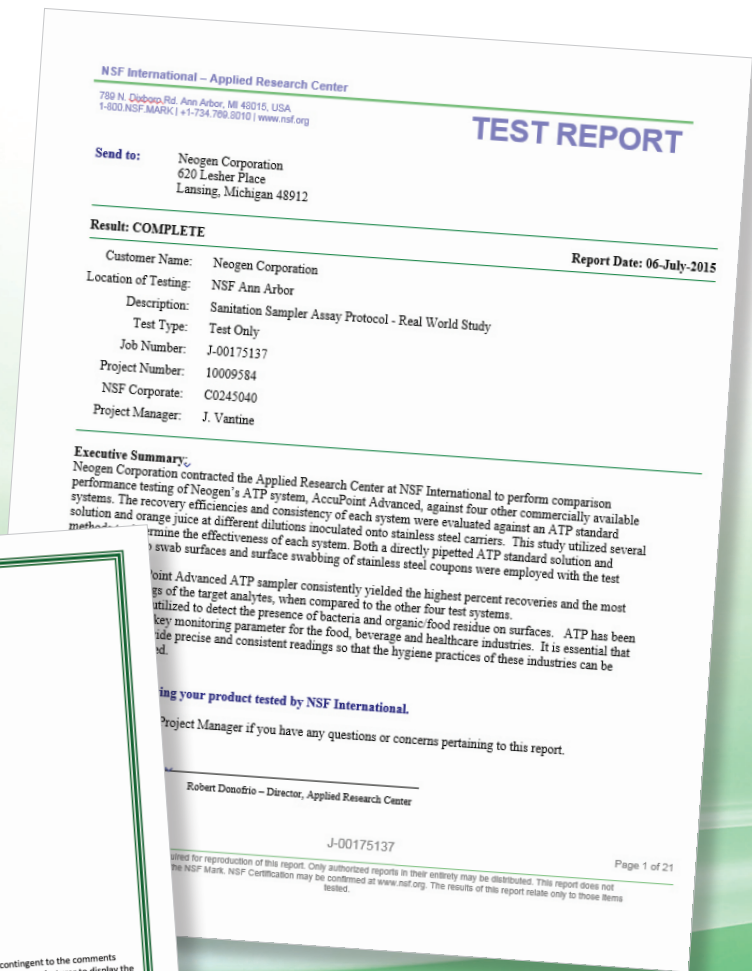
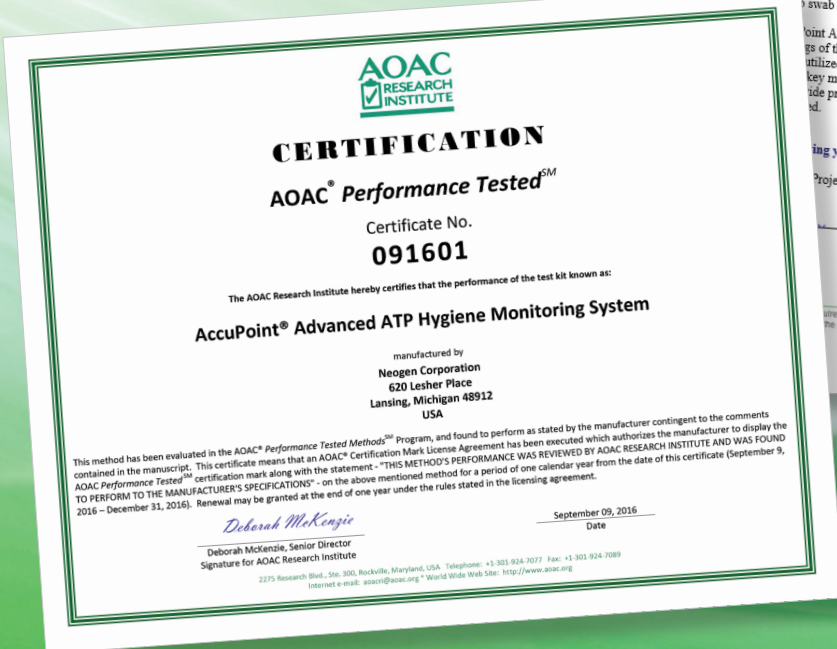


See for yourself why the AccuPoint Advanced system is the most accurate and precise. Contact Neogen for more information.



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Independent Validation and Certification for AccuPoint Advanced

NSF International Study: A comparison of commercial ATP sanitation validation systems under real-world conditions

AOAC Approval



NSF International Study

NSF International – The Public Health and Safety Organization

NSF International, headquartered in Ann Arbor, Michigan, is an independent global organization that writes public health standards, and tests and certifies products for the food, water, health science, dietary supplements and consumer goods industries.

NSF International performed a real-world study comparing the accuracy and consistency of the top five ATP sanitation verification systems.

The focus of the study was to evaluate the systems under real-world conditions. In the real world, these systems:

- Are used to sample surfaces. Direct pipetting of samples onto swab tips, the protocol for some previous ATP system comparison studies, misrepresents the true application for and performance of these systems.
- Perform testing on production equipment, typically composed of stainless steel.
- Perform testing on a production floor, not in a commercial laboratory.
- Perform testing within a narrow window of time between production runs.

Executive summary:

“ATP devices are utilized to detect the presence of bacteria and organic / food residues on surfaces. ATP has been incorporated as a key monitoring parameter for the food, beverage and healthcare industries. It is essential that these devices provide precise and consistent readings so that the hygiene practices of these industries can be accurately evaluated.”

“Neogen’s AccuPoint Advanced ATP system consistently ***yielded the highest percent recoveries and the most consistent readings*** of the target analytes, when compared to the other four test systems.”



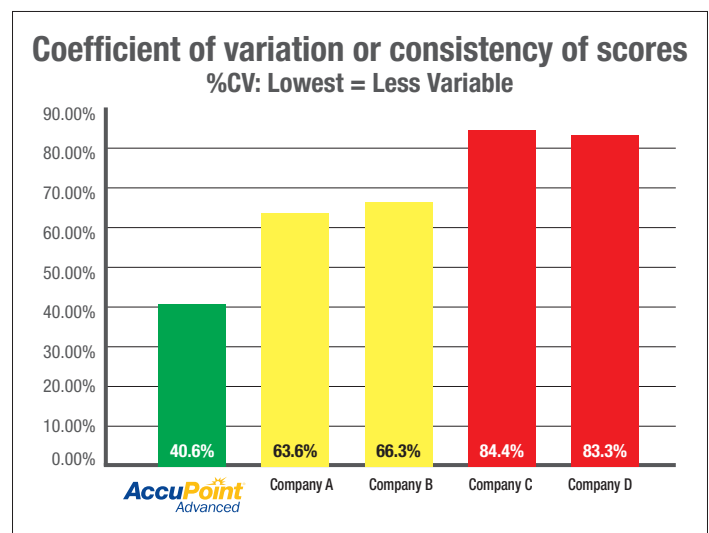
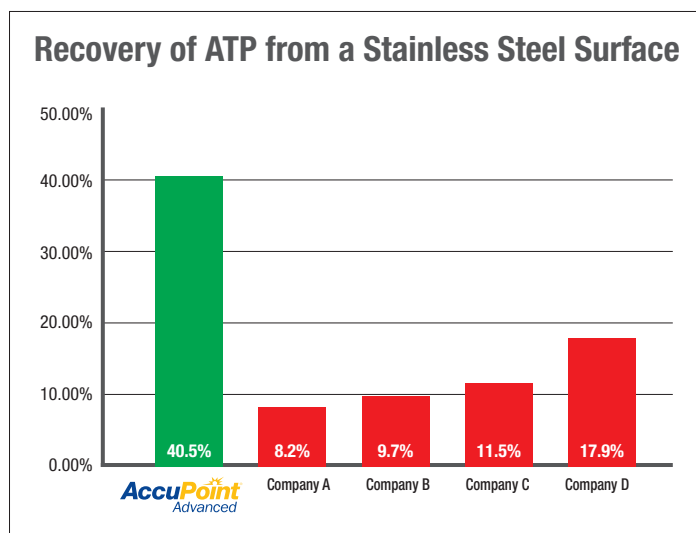
NSF International Study

Accuracy – represented by % recovery of ATP from the sampled surface. How much of the organic material from the surface does the system actually detect? Higher recovery = truer representation of surface cleanliness.

Consistency – represented by coefficient of variation (%CV). Represents the range of score values. Lower = **less variation** = **more consistent**. Example: With a mean of 300 and a 20%CV, expected scores would range from 240–360. With a mean of 300 and a 50%CV, expected scores would range from 150–450.

Test Section 1: The detection of randomly deposited ATP

How **accurately** and **consistently** does each system find a randomly placed dot of ATP on a 4"X4" stainless steel surface?



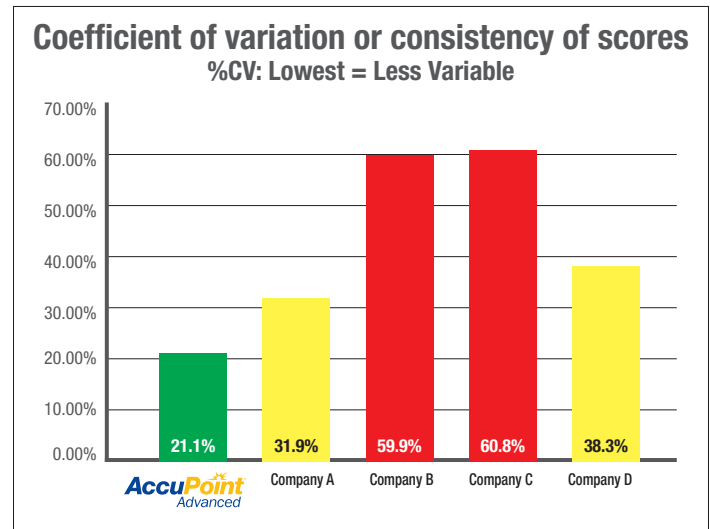
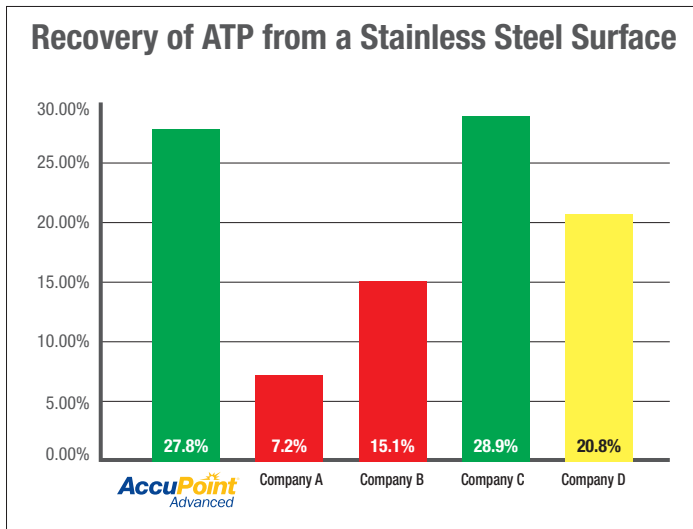
In the real world, dirt is NOT homogenously distributed on surfaces after cleaning. Dirt is invisible and randomly distributed in small spots on surfaces. Will the ATP system find it?



NSF International Study

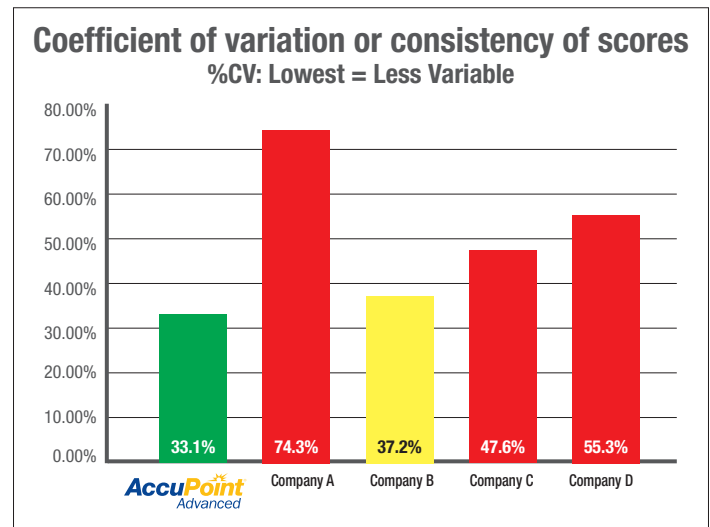
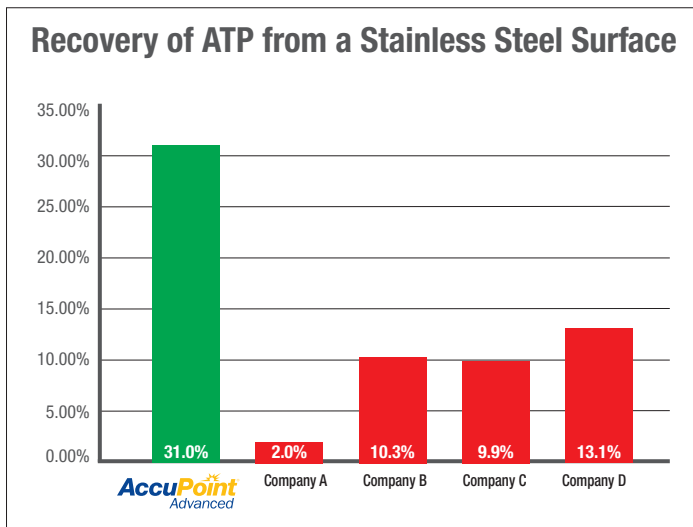
Test Section 2: ATP detection

How **accurately** and **consistently** does each system report the amount of homogenously distributed ATP on a 4"X4" stainless steel surface?



Test Section 3: Commodity detection

How **accurately** and **consistently** does each system report the presence of a commodity, orange juice, on a 4"X4" stainless steel surface?



■ Best ■ Good ■ Poor