

ATP Testing vs Visual Inspection

How to Know a Surface is Clean



Overview

At the heart of food safety is prevention. This means that food production facilities must implement a robust program for identifying and correcting potential safety issues. As part of the preventative approach, food manufacturers must use additional monitoring methods to determine the general hygiene of food processing areas. They must avoid potential delays, recalls, and lost revenue by maintaining strict cleaning and sanitation processes. If production commences on a surface that hasn't been adequately cleaned and/or sanitized, the risk of contamination increases dramatically, potentially decreasing the business's ROI and bottom line.

Healthcare organizations have similar challenges. They must clean and disinfect to maximize patient safety and to reduce the risk of transmission of antibiotic-resistant pathogens. Recently, the COVID-19 pandemic has raised public awareness of the need to control the spread of infectious diseases, making it even more important that healthcare professionals monitor the effectiveness of cleaning and disinfection procedures. As a result, monitoring has expanded beyond hospitals and medical establishments and now impacts any high touch point surfaces in public places, such as airports, hotels, schools, and large businesses. These public places also need verified and validated methods to ensure areas are clean and sanitized to remove the risk of infection transfer to their employees, staff, customers, and students.

Importance of Cleaning

For cleaning and sanitizing to work, it is vital that it is performed properly. Though we might have thought otherwise, disinfectants are not designed to remove organic material, whether bacterial, viral, or leftover food and other debris. Instead, disinfectants are made to ensure that clean surfaces stay microbe-free. Disinfectant application needs to follow a good cleaning of the surfaces with enough force to thoroughly remove the majority of unwanted material. Even after cleaning, surfaces can have gaps that might harbor potential pathogens. Therefore, it is critical to not only clean but also to disinfect and test areas to confirm they are free of contaminants.

Food manufacturers and healthcare facilities have traditionally performed either visual inspections (relying on the naked eye) or microbial tests (swabbing surfaces and then testing for growth in a lab) to help evaluate whether environments are safe and free of any potential pathogens. While inexpensive and fast, visual inspections are imprecise, subjective, and unacceptable in many facilities, especially healthcare. On the other hand, microbial tests are a time-consuming process, taking days to get results. Facilities have increasingly turned to new technologies that can provide objective and reliable measures of cleanliness. To bridge this gap, many have turned to a rapid, reliable, easy-to-use solution, adenosine triphosphate monitoring (ATP testing).

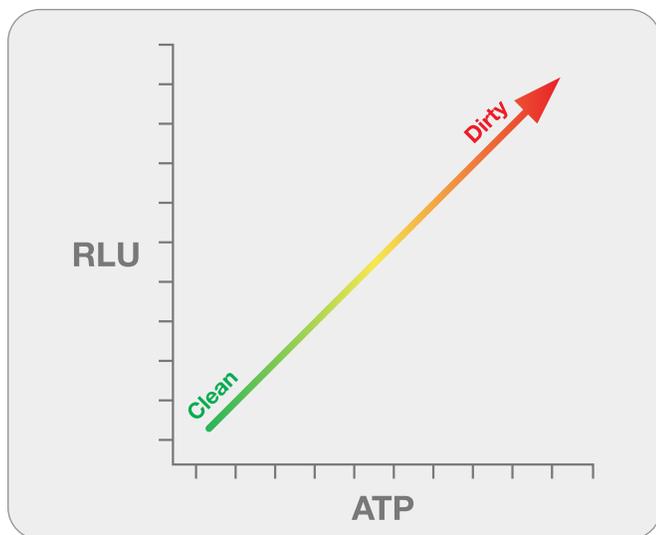
ATP Inspection **VS** Visual Inspection

Catches breeding ground environment for bacteria and viruses		 Only detects debris visible to naked eye
Results protected from manipulation		 May result in biased results
Meets HACCP guidelines		 Unacceptable across businesses (e.g. healthcare)
Quantitative results measured in software		 Results not measurable

What is ATP Testing?

Unlike other methods, ATP testing provides results in seconds and is sensitive, quantitative, effective, and straightforward. Microbes and product residue contain ATP, an indicator of biological residues that can be easily detected to measure cleanliness because effective cleaning and sanitation remove all ATP from the contact surfaces (or production lines in the case of food processors). A failed ATP test indicates that the surface does not meet cleaning standards and should be re-cleaned.

Food production facilities have used ATP monitoring for decades – it is now part of their environmental monitoring program for meeting HACCP guidelines. It clearly defines the processes for cleaning and sanitation monitoring, validation, and verification. Since ATP is an indicator molecule for the presence of biological residues, ATP levels can be used to monitor cleaning effectiveness. To measure ATP, a sample is collected from a surface or water via a swab and placed in a reading device, a luminometer. ATP monitors deliver data using bioluminescence, read as a Relative Light Unit, or RLU. The higher the RLU, the greater the risk of potential contamination. ATP monitoring doesn't directly identify bacteria or viruses (there is currently no specific environmental surface test to determine the presence of COVID-19). Instead, it detects the general presence of organic matter, which bacteria and viruses can use to grow and/or spread. ATP systems, therefore, can effectively verify the cleaning processes.



Higher RLU's indicate the presence of potential contaminants and re-cleaning may be required. Each facility must set its own acceptable levels to ensure proper cleaning and sanitation has taken place.

Beyond Food Testing

The food and beverage industry is not the only industry that stands a risk. This process has been adopted by other industries such as hospitality, schools, healthcare, and others. Since hospitals and healthcare facilities need to maximize the safety of their patients and employees through proper cleaning and monitoring of its effectiveness, ATP testing is ideal. This is especially critical today, where COVID-19 has impacted facilities and forced them to reevaluate their cleaning protocols and environmental testing. Other businesses have adopted this methodology as well, bringing in specialists to audit facilities for cleanliness.

No matter what business you're in, in times like these, it is imperative that rapid, accurate and simple methods are used to ensure surfaces have been adequately cleaned. It is essential to implement measures that can provide numerical data to support your cleanliness claims to reassure the public and positively impact health and safety.

An Excellent Solution

Hygiena's cleaning verification solutions can tell you in as little as 10 seconds if a surface has been cleaned properly. ATP testing detects the presence of biological contamination which promotes the growth of microbes, such as bacteria and yeast, and gives objective indication as to whether cleaning standards have been met.

Our most advanced ATP monitoring system, EnSURE™ Touch, measures ATP levels and provides rapid and accurate sanitation verification data. Our ATP testing devices, including UltraSnap™ and AquaSnap™, are designed specifically for the system. The test devices are user-friendly, designed to maximize sample collection and recovery. After swabbing a surface or collecting a food or water sample, the system rapidly measures ATP levels from the device, providing a numerical value, indicating the level of cleanliness. UltraSnap devices are the easy-to-use, superior option for accurate, repeatable testing, meaning you can be confident in the data gathered and the cleanliness of each location.

Similar to a smartphone and using wireless technology, EnSURE Touch syncs and stores all data in our cloud-based software, SureTrend™ Cloud, allowing you to monitor, track, and trend testing results across multiple locations/instruments, and schedule reports, making risk management easier than ever.