

### Measuring Clean

#### Using ATP Meters to Measure Cleanliness in Schools and Other Facilities

With illness-related absenteeism and asthma rates growing and becoming a major concern in schools, it is becoming more important than ever to develop an efficient way to keep our schools and facilities clean and healthy, see [white paper](#). However, it is important not only to develop methods of cleaning our facilities, but also of ensuring that they are clean. This is where a method of measuring clean, such as an ATP monitoring system, comes in.

#### Why Should We Measure Clean?

The most common way to decide if a surface is clean is to simply look at it, and if the surface looks clean, then it is clean. The problem with this is that bacteria and viruses that can make us sick are invisible to the naked eye. So even though a surface has been wiped off and looks clean, there may be bacteria hiding on the surface, waiting to get us sick. Using the correct cleaning methods, paired with an efficient way of measuring cleanliness, is a great way to ensure that schools and other facilities are clean, free of bacteria and viruses, and healthy and safe for everyone. A new, more scientific way of measuring clean, called ATP Hygiene Monitoring, is becoming more and more popular, particularly for use in schools.

#### ATP Hygiene Monitoring

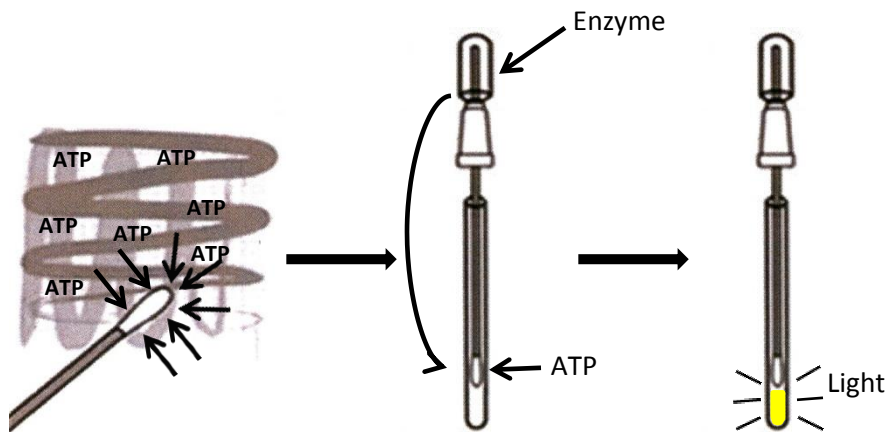
ATP Hygiene Monitoring uses a device called an ATP meter to measure how clean a surface is. A sample is taken with a special swab, inserted into the ATP meter, and a numerical value is returned. Pre-defined ranges of values determine if the surface is clean or dirty. This provides a quick, easy, and scientific method to determine if a surface is clean and free of bacteria.

#### How it Works

ATP (**A**denosine **T**ri-**P**hosphate) is an energy molecule that is present in all living cells. If it is alive or was once alive, it contains ATP. This includes animal cells (dust, oils), plant cells (soils, oils), and bacterial cells (bacteria, viruses). For this reason, a measurement of ATP correlates to a measurement of how clean a surface is. The less ATP, the less soil and contaminants, and the cleaner the surface is.



An ATP meter works by measuring the light produced from a reaction between ATP and an enzyme, luciferase. This enzyme is found in fireflies and is what causes them to light up. This enzyme reacts with ATP in the sample swab, produces a small amount of light invisible to the naked eye, and is read by the ATP meter.



## How to Use an ATP Meter

1. Swab a sample surface about 4" x 4" in size, using a back and forth pattern, and place the swab back in its tube.
2. Crack the valve at the top of the swab to inject the enzyme onto the sample swab, and gently shake the swab to mix the enzyme and sample.
3. Insert the swab into the ATP meter, press OK, and wait 15 seconds for the reading to appear.

The ATP meter will display a numerical value which corresponds to the amount ATP (soil) that is on the surface. The device manufacturer and other organizations have set ranges of values considered clean and dirty, so you just need to determine which criteria are best for your facility.

By using an ATP meter, we can get fast, accurate results that communicate if a surface has been cleaned properly and is free of bacteria, making your entire facility safer.

## Where to Use an ATP Meter

ATP Hygiene Monitoring is becoming a more prominent method of measuring clean, and can be useful in any facility. However, it is becoming more prominent in schools among other facilities, due to elevating concerns about absenteeism and illnesses among schoolchildren. ISSA has developed a clean standard for schools that has fully integrated the ATP Hygiene Monitoring system to measure the cleanliness of schools and ensure they are clean, healthy, and safe for schoolchildren. The standard lists all surfaces that are found in schools (desks, tables, toilets, drinking fountains, etc.) and states what ATP values are considered dirty and clean for each surface. Using this standard in combination with an ATP Hygiene Monitoring system is a great way to quickly and efficiently determine if your school is clean and healthy.

It is important to measure the cleanliness of any facility, to ensure that it is being cleaned properly, and to keep the facility healthy and safe for all who enter it.

