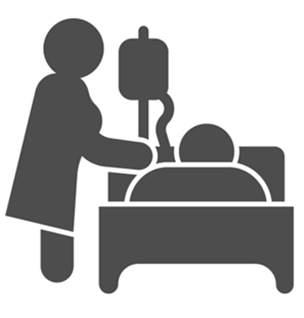
In the patient care environment, quality of cleaning is measured by which and what percentage of high-touch surfaces (HTSs) are adequately cleaned and disinfected. Below, the four most common methods of monitoring are discussed, including their pros and cons.

# Observation1-3

* A supervisor or trained staff conducts visual inspection of HTSs and observes cleaning practices.

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| **Advantages** | **Disadvantages** |
| * Quick and easy monitoring method. * Simple to put into practice. * Does not require special skills or training. | * Surfaces may appear clean and free of visible soiling but are still not adequately disinfected. |

# Culturing1-3

* Samples are swabbed from HTs and cultured in a microbiology lab to identify and quantify organisms.

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| **Advantages** | **Disadvantages** |
| * Helpful in targeting one specific organism of concern. * Can provide a high level of detail. | * Labor intensive and requires lab expertise. * Delayed results; no immediate feedback. * Not standard practice in hospitals; may be done for research or specific outbreak investigations. |

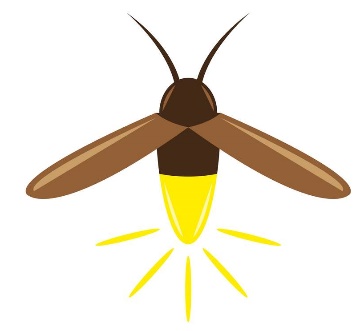
# Fluorescent Gel Monitoring1-4

* HTSs are marked with fluorescent gel, which is invisible to the eye, but glows under ultraviolet (UV) light.
  + After a set interval (usually a day), the surfaces are rechecked with a UV flashlight.
  + If the surface glows, then it has not been adequately cleaned.

Source: Ecolab USA Inc. Images used with permission.

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| **Advantages** | **Disadvantages** |
| * Supported by evidence.4 * Easy to teach and to use. * Results are intuitive and easy to interpret. * Provides immediate visual feedback. | * Does not identify pathogens. * Requires a subjective yes/no judgment from observer. * More likely to induce Hawthorne effect—the observer’s effect on behavior being assessed. * Cost depends on the product used. |

# ATP (Adenosine Triphosphate) Monitoring System1-3,5-6

* A device measures organic material on HTSs by detecting ATP, an energy molecule found in all organic cells.
  + A specialized swab containing luciferase—a natural enzyme found in fireflies—is used to sample the surface.
    - Luciferase produces bioluminescent light on contact with ATP.
  + The swab is inserted into an ATP meter, which analyzes the sample for light being emitted.
  + By measuring bioluminescence, the meter can estimate the amount of organic matter on the surface.

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| **Advantages** | **Disadvantages** |
| * Supported by evidence.6 * Provides quantitative data. * Results may be more objective. * Provides immediate feedback. | * Does not identify pathogens. * ATP readings can’t differentiate live and inactivated pathogens. * Results are less intuitive to interpret. * Costly; requires specialized equipment and maintenance |

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AHRQ Pub. No. 25-0007

October 2024