

Instruction Manual of Lyophilized ATP Test Swab

【 Product Name 】 Lyophilized ATP Test Swab

【 Product Model 】 Lyophilized Quick Swab

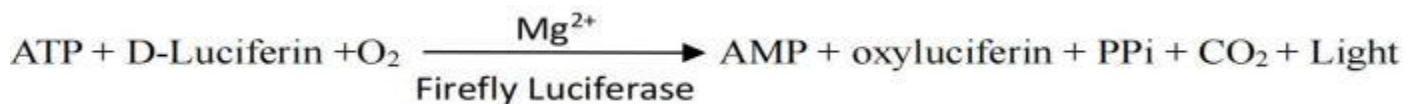
【 Packing Strength 】 10 pcs/bag

【 Intended Use 】 This product can be used with the ATP detector to measure cleanliness of public places, indoor tableware, desktops, hand surfaces of operators, operating tables of medical and health industry, and medical speculums.

【 Detection Principle 】

Adenosine Triphosphate (ATP) is universally present in all biological cells containing animal, plant, bacterial, yeast and mold cells. It is an energy substance for the metabolism of organisms and has special significance for the existence of organisms and the life process in the body. Therefore, by measuring the amount of ATP in the sample, the degree of contamination of the test article can be evaluated. In ATP bioluminescence assay, ATP reacts with luciferin-luciferase to generate photons, and then a fluorometer is used to detect the luminescence value and reports results in Relative Light Units (RLUs).

The ATP Test Swab is a rapid detection device based on the principle of ATP bioluminescence assay to determine the degree of contamination in a sample. That is, in the presence of ATP, firefly luciferase can catalyze the oxidation of the substrate D-luciferin and emit fluorescence. In addition to ATP, when other substrates are in excess, the number of photons and the amount of ATP have a linear relationship within a certain range. The higher the RLUs, the higher the ATP, indicating the higher the contamination degree of sample.



【 Product Composition 】

Component Name	Units per Pack
ATP Test Tube	10 pcs/bag
Cotton Swab	10 pcs/bag

【 Storage & Shelf Life 】 When stored at 10-30°C, it is valid for 12 months; Keep it away from light and keep it sealed.

【 Applicable Instruments 】 Biolum Portable ATP Monitoring System Pro

【 Instructions for Use 】

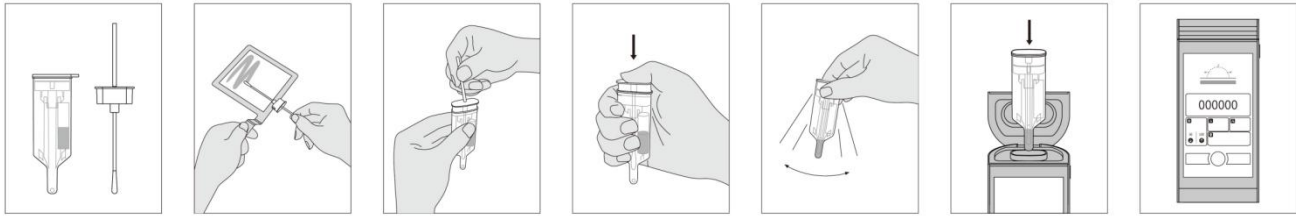
1. Unwrap: Tear open the aluminum foil bag and take out the ATP test tube and cotton swab.
2. Cotton swab sampling: Hold the handle part of the cotton swab and sample with the tip of the swab.

Important swabbing technique tips:

- For a typical flat surface, thoroughly swab a standard 10 x 10 cm (4 x 4 inch) area in an orderly manner by using the sampling card. Swab the cotton tip on the test surface in "Z" shape horizontally, vertically and diagonally in both directions.
 - Make an angle of 15-30° between test surface and the swab shaft, apply enough pressure to hold the swab tip against the surface, and rotate the swab during the swabbing process to make the cotton head fully in contact with the test sample.
 - For irregular surfaces, it's important to ensure that a continuous and consistent swabbing method is used for each test of each control point.
3. Installing the integrated tube: Remove the silicone cap from the test tube, insert the cotton swab into the correct position of the test tube, and break off the handle of the cotton swab.
 4. Injecting reagent: Press down on the platform part of the cotton swab so that the reservoir cavity is punctured, and swing the test tube downward to ensure that all the liquid in the reservoir cavity enters the tube.
 5. Shaking and mixing: Hold the top of the ATP test tube and shake it at 30° left and right (3~5 seconds) to make the

reagent completely react with the sample.

6. Sample testing: quickly insert the ATP test tube into the test chamber of the Biolum Portable ATP Monitoring System Pro when the testing interface is on, close lid, and run the test.



【 Precautions 】 Please read the precautions before using this product.

1. It is imperative to maintain the ATP Test Swab at the recommended storage conditions and promptly perform the test within the specified time frame. It is critical to adhere strictly to the Instructions for use.
2. Please be aware that common or commercial disinfectants, especially in high concentrations, may lead to carryover and therefore compromise test results, as the ingredients of the disinfectant may interfere with the ATP reaction and cause inaccurate results. It is recommended to rinse after sanitizing and then proceed to collect the surface test sample.
3. Disposable gloves should be worn during the experiment to avoid contamination of adventitious ATP.
4. Do not touch the cotton swab during sampling, make sure that the cotton swab only touches the surface of the test article.
5. After the sample on the ATP Test Swab reacts with the solution, place it in the ATP detector and read the value within 10 seconds.
6. The control points should be established taking into account of the special structure of individual objects, such as smoothness of the desktop, seams of the instrument, recessed area, cracks on the tableware (easy to hide dirt), etc.
7. This reagent detects the cleanliness of the surface of an object below the resolution of the naked eye. Therefore, if the control point to be tested has visible dirt or the head of the swab turns black after swabbing, the subsequent operations can be skipped to avoid wasting the ATP Test Swab.
8. If there is excess liquid on the surface of the test article, the test should be performed after the surface is somewhat dried to avoid diluting the reagent (no special drying is required).

【 Basic Information 】

Manufacturer: Xi'an Tianlong Science and Technology Co., Ltd.

Address: No.4266, Shanglin Road, Weiyang District, Xi'an, 710021, Shaanxi, P.R. China

【 Version and Modification Date 】 V1.0 15/4/2024