INSTRUCTIONS FOR USE

ATP GO Swab Test

BARCODED FOR FOX.OX AND FALCON.OX

NEMIS

Intended Use

NEMIS ATP GO Swab Test (REF 00073) is a rapid and sensitive method for hygiene monitoring in the food industry with a portable, hand-held device. This test measures the amount of ATP (adenosine triphosphate) present on surfaces and equipment, which indicates the level of contamination with microbes and/or food residues. The NEMIS ATP GO test is designed to rapidly assess the cleanliness of food contact surfaces and other areas in food factories and kitchens, for example food processing equipment, floors, sinks, shelves, and refrigerators. This test is valuable for maintaining high standards of hygiene and cleanliness in food production and processing facilities.

Each test tube is labelled with a unique barcode which can be scanned with the NEMIS scanning device for linking results to specific sampling points in the FOX.OX and FALCON.OX data aggregation software.

FOX.OX FALCON.OX

Measurement Principle

The method is based on the detection of ATP by an enzymatic reaction which produces light. ATP is a molecule that provides energy for cellular processes and is present in all animals, plants, fungal cells and bacteria. Metabolically active (living) cells contain the highest levels of ATP. The test tube contains a premoistened swab connected to a liquid reagent reservoir at its upper end. Once the liquid reagent has been released from the reservoir, the amount of light is measured as relative light units (RLU). This value is directly proportional to the amount of ATP present in the sample, which corresponds to the level of contamination. The NEMIS ATP GO test is designed for long shelf life, ease of use and robust performance.

Specificity and Sensitivity

NEMIS ATP GO has a high level of specificity as it only detects ATP produced by cells and no other organic molecules. Furthermore, background luminescence in the absence of ATP is close to the electronic noise of the instrument, making ATP measurement with the NEMIS hand-held luminometer extremely sensitive. The NEMIS ATP GO test can detect ATP produced by just a few thousand bacteria.

Storage and Shelf Life

Storage conditions: +2-8 °C / 36-46 °F, **DO NOT FREEZE**
Transport conditions: Ambient (+2-30°C/ +36°F-86°F).

Shelf life: Guaranteed efficacy up to the expiration date stated on the product label.

Setting up the RLU threshold

NEMIS recommends 100 RLU as generic upper limit for clean surfaces, However, ATP tests are only effective when tailored to the specific factory environment and kitchen they are used in. It is necessary to define a sampling plan and set RLU limits that should not be exceeded if a specific surface or equipment is considered clean. These thresholds must be defined separately for each food production process.

Follow these steps for setting RLU thresholds:

1. Identify sampling points in your factory where hygiene conditions should be regularly checked with the ATP GO test.
2. Upload an Excel file with sampling point descriptions to the FOX.OX or FALCON.OX software or create and describe the sampling points directly in the software.
3. Perform the ATP GO test (see page 2) at each sampling point 3 times before cleaning and 3 times after appropriate cleaning.
4. Calculate the average RLU values obtained for each condition at each sampling point.
5. Define an RLU threshold value which is two to three fold higher than the average measured value of "clean" surfaces and lower than the average measured value of "dirty" surfaces. Set the RLU threshold accordingly in the FOX.OX or FALCON.OX software and in the NEMIS handheld luminometer by changing fail limits.

Precautions

To prevent sample contamination during environmental sample collection, use gloves when handling the ATP GO test tubes and swabs. We recommend activating and measuring ATP GO tests within 60 min after sampling.

Safety

NEMIS ATP GO tests are not hazardous to health when used by trained personnel following these instructions. Do not ingest and prevent contact of the assay buffer with skin and mucosal surfaces.

Disposal

NEMIS ATP GO tests do not require special disposal procedures. Since the test does not contain hazardous materials or components that require specific measures, the tests can be disposed of in regular waste bins.

Exclusion of warranty and liability

The product is provided on an as-is basis to be used solely in accordance with this instructions for use. NEMIS excludes any guarantee of the quality of food, beverage products, or processes tested with its products. NEMIS excludes all liability for damage to its products. However, should any NEMIS product found to be damaged, NEMIS, at its sole discretion, may choose to either replace or refund such product. To the extent legally possible, NEMIS will not be liable to users or others for any loss or damage, whether direct or indirect, incidental, or consequential, from either proper or improper use of its products.

Contact Information

If you have any questions or require assistance, please refer to the Frequently Asked Questions (FAQ) and other technical resources available in the FOX.OX or FALCON.OX software or contact **techsupport@nemistech.com**

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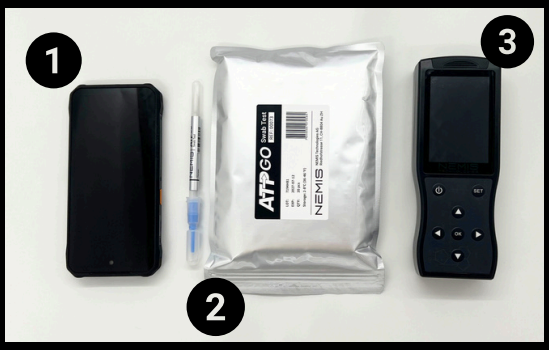

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REQUIRED DEVICES AND MATERIALS:

1. Scanning device (REF 00080)
2. ATP GO Swab Tests, barcoded (REF 00073)
3. NEMIS Hand Held Luminometer HHL1 (REF 00056)

REF 00073

1. PREPARATION

Remove required number of barcoded ATP GO Swab Tests for sampling campaign from refrigerator.

Leave for at least 10 min at room temperature

Turn on luminometer before start of sampling:

1. Place device in upright position on a table with flippable holder on the back
2. Make sure lid of tube holder is closed and no tube is inside
3. Press <ON> button, wait until calibration is finished (takes 15 sec).

2. SAMPLING

Remove swab from test tube.
Sample a spot or surface according to your test plan.
Streak over spot/surface multiple times while turning the swab tip, apply moderate pressure.
Use 10 x 10 cm2 frame provided with hand-held luminometer if desired.
Place **swab** back **into ATP GO tube**.

3. ACTIVATION

Bend reagent reservoir at the top of tube **to the side** while tube is in **upright position,** wait until all liquid has flown to the bottom of the tube

Mix swab and reagent **by** strongly **shaking tube** 5-10 times

4. RLU READING

IMPORTANT: Perform RLU reading within 30 sec after releasing reagent from reservoir (measure each ATP GO test separately)

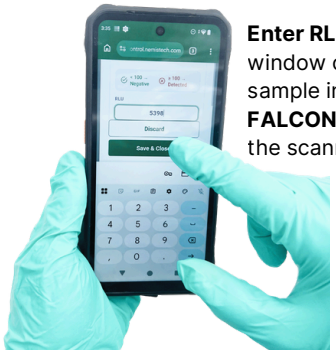
Select sampling **point in FOX.OX** or **FALCON.OX** software on the scanning device.
Scan barcode on tube.

Insert ATP GO tube into measurement chamber of hand-held luminometer

Close lid.
Press **OK** button to initiate reading

Pass, test result is lower than the limit set for sufficient cleanliness

Detected, test result is higher than the limit set for sufficient cleanliness



Enter RLU value in result window of the scanned sample in the **FOX.OX** / **FALCON.OX** software on the scanneing device

Ordering infomation: www.nemistech.com, sales@nemistech.com