



## PRO-Clean<sup>®</sup>

### Rapid Protein Residue Test for Surfaces

Product No. PRO-100 (100 tests)

## Introduction

### Description and Intended Use

PRO-Clean<sup>®</sup> devices are ready-to-use protein residue detection tests for use on surfaces after cleaning. PRO-Clean tests will turn from green to purple if protein is present in a sample. The more protein collected, the quicker and darker the color change. PRO-Clean is intended to provide rapid validation of surface hygiene and show due diligence in a HACCP program. PRO-Clean will also detect other reducing substances such as simple sugars, tannins and ascorbic acid.

### Important Tips and Notes Before Starting the Test

- PRO-Clean is designed to detect invisible/trace amounts of residue. Overloading the swab with physical matter by swabbing a visibly dirty surface will inhibit the reaction and produce inaccurate results.
- It is best practice to wait an appropriate time after sanitizing before testing a surface with PRO-Clean devices.
  - Sanitation is typically a two-step process involving detergent cleaning and subsequent (optional) disinfection. To ensure the best results, collect the PRO-Clean sample after detergent and rinsing steps, but before any terminal disinfection.

Product residues left on a surface after detergent cleaning reduce the effectiveness of disinfection. Testing before disinfection prevents wasted chemicals and time and ensures optimum test performance in a food safety program.
  - If testing before disinfection is not possible, observe proper dwell time before using PRO-Clean devices.
- Allow PRO-Clean devices to equilibrate to 20 to 25 °C (room temperature) before use.
- The swab tip is pre-moistened for maximum sample collection.
- Condensation may be visible on the inside of the swab tube; this is normal.



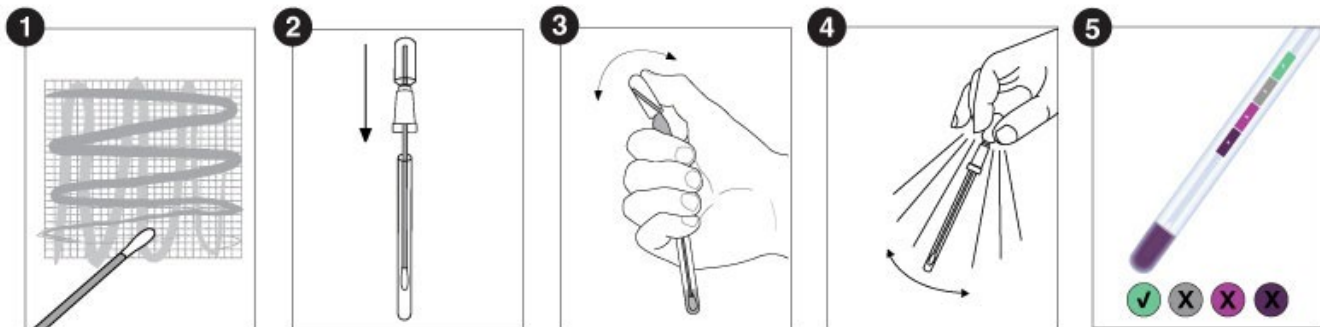
## Test Procedure

1. Holding the swab tube firmly, twist and pull the top of the swab out of the tube. Then, thoroughly swab a standard 10 x 10 cm (4 x 4 inch) area for a typical flat surface.

Important swabbing technique tips:

- a. Apply sufficient pressure to create flex in the swab shaft.
  - b. Swab in a crisscross pattern vertically, horizontally and diagonally in both directions.
  - c. Rotate the swab while collecting the sample to maximize sample collection on the swab tip.
  - d. For irregular surfaces, ensure the swabbing technique remains consistent for each test and swab a large enough area to collect a representative sample.
2. Place the swab back into the swab tube.
  3. To activate the device, hold the swab tube firmly and use your thumb and forefinger to break the Snap-Valve by bending the bulb forward and backward. Squeeze the bulb twice to expel all the liquid down the swab shaft.
  4. Bathe the swab tip in the liquid by shaking for 5 – 10 seconds.
  5. Wait 10 minutes at 20 to 25 °C, then compare the color of the reagent to the PRO-Clean color chart on the tube label and record the result. Refer to *Interpretation of Results* below.

**Note:** Most color changes take place in less than 60 seconds.



## Additional Information

### Interpretation of Results

The color of the PRO-Clean solution and the time in which the color change takes place will indicate the protein residue levels in the sample. By comparing the color of the solution against the chart on the PRO-Clean tube label, an estimate of surface cleanliness can be made. There is no need to continue timing if the color changes to purple before 10 minutes.

### Color Change

Color	Result	Interpretation and action
Green	Pass	Clean: no further action is required
Grey	Caution	A small amount of residue is present: Repeat testing, rinsing or cleaning, based on your protocol
Purple	Fail	Not clean: Repeat cleaning and testing



## ***Sensitivity***

At 20 to 25 °C:

- 80 µg after 1 minute
- 50 µg after 5 minutes
- 20 µg after 10 minutes

## ***Sanitizer Information***

Common sanitizers at normal concentrations do not cause interference or false-positive results. High concentrations of alkaline sanitizers may cause false-negative results in some cases. Peroxide-based disinfectants can cause a false-positive color change reaction.

## **Storage and Shelf Life**

- Store at 2 to 25 °C (36 to 77 °F).
- Do not use past the expiration date on the label.

## **Disposal**

PRO-Clean devices are made of 100% recyclable plastic and may be discarded accordingly.

## **Safety and Precautions**

- Components of PRO-Clean devices do not pose any health risk when used in accordance with standard laboratory practice and procedures in this insert.
- For further safety instructions, refer to the Safety Data Sheet (SDS) available at [www.hygiena.com/sds](http://www.hygiena.com/sds).

## **Hygiena Liability**

Hygiena will not be liable to the user or others for any loss or damage, whether direct or indirect, incidental or consequential, from use of these devices. If this product is proven to be defective, Hygiena's sole obligation will be to replace the product or at its discretion, refund the purchase price. Promptly notify Hygiena within 5 days of discovery of any suspected defect and return the product to Hygiena; contact Customer Service for a Returned Goods Authorization Number.

## **Contact Information**

For more information, visit [www.hygiena.com/contact](http://www.hygiena.com/contact). For technical support, visit [www.hygiena.com/support](http://www.hygiena.com/support).