

PRO-Clean™ Surface Hygiene Monitoring Swab

PRO-Clean is a quick and easy way to accurately monitor the cleanliness of food equipment surfaces to help ensure food safety and product quality. PRO-Clean detects protein or microbial residues left on a surface after cleaning. Simply swab a surface, release the reagent and if food residue or microbes are present the reagent will turn purple. The color change provides a semi-quantitative measure of the surface cleanliness. The more contamination present, the quicker the color change to purple and the darker the color. PRO-Clean quickly validates the hygiene of a surface, allowing immediate corrective action to be taken if necessary.

Key Features:

- Extremely sensitive down to 20 ug of proteins in 10 minutes at room temperature – for enhanced sensitivity down to 1 ug, see AllerSnap
- Pre-moistened swab bud for enhanced sample pick-up
- Easy to interpret results
- Semi-quantitative results
- No instrumentation

Benefits:

- Quick and easy way to monitor HACCP/SSOP program
- Cost effective
- Instant results allow for immediate corrective action
- No training required

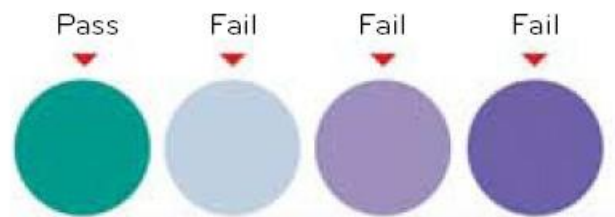
Device Design:

- All-in-one surface Sanitation test
- Easy-to-use and activate (3 steps)
- Patented Snap Valve™ technology - snap & squeeze
- Write-on swab tube label

Shelf Life:

- 18 months at room or refrigerated temperatures (2-25°C)

Part#: ATP-120



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PRO-Clean Technical Information

Test performance-

The reaction is time-dependent i.e. the color develops with time and therefore it is important to record color change up to 10 min and disregard any color change after this set time. Most reactions happen within 60 seconds. Timing can be stopped as soon as any color change is observed. PRO-Clean provides dirty or clean result as well as a how dirty result based on the speed of the reaction. The reaction is also temperature-dependent and therefore it is important to allow the devices to equilibrate to ambient room temperature (15 - 25°C) if they have been stored at a different temperature.

Other reducing agents giving a positive result with PRO-Clean-

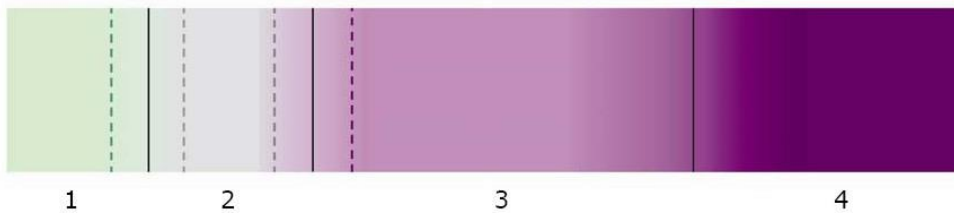
This test also detects other substances capable of reducing the copper (Cu⁺⁺ to Cu⁺) such as reducing sugars (glucose) and uric acid. Other strong reducing materials such as ascorbic acid (present in some fruit juices) or tannin (present in tea) may also give a positive result with PRO-Clean.

Sensitivity performance-

20ug protein in 10 minutes at room temperature (15-25°C)

PRO-Clean concentration corresponding to color level

The chart below shows the color change associated certain dilutions of Protein. (µg/100µl)



Levels	Detection	Color Change	Result
1	0 - 20ug	Lime green	Pass
2	20 - 40ug	Grey/Light Purple	Fail
3	40 - 100ug	Light Purple	Fail
4	>100ug	Dark Purple	Fail



Summary of Products Tested with PRO-Clean

PRODUCT	CATEGORY	DILUTION	DETECTED	COMMENTS
Ground Beef	Meat	1/10	Yes	Level 4 within 10 min
Beef Steak	Meat	1/10	Yes	Level 4 within 10 min
Processed Beef	Meat	1/10	Yes	Level 3 after 5 min.
Processed Ham	Meat	1/10	Yes	Level 2 within 10 min.
Raw Chicken	Meat	1/10	Yes	Level 4 after 5 min.
Cooked Chicken	Meat	1/10	Yes	Level 3 after 5 min.
Raw Eggs	Meat	1/10	Yes	Level 4 within 10 min
Shrimp	Meat	1/10	Yes	Level 3 within 10 min.
Fish	Meat	1/10	Yes	Level 4 within 10 min
Pasteurized Milk	Dairy	1/10	Yes	Level 4 within 10 min
UHT Milk	Dairy	1/10	Yes	Level 4 within 10 min
Cream	Dairy	1/10	No	Inhibits Signal
Cheddar Cheese	Diary	1/10	Yes	Level 4 within 4 min.
Cottage Cheese	Dairy	1/10	Yes	Level 4 within 10 min.
Yoghurt	Dairy	1/10	Yes	Level 3 within 10 min.
Margarine	Dairy	1/10	No	Not enough protein
Chocolate	Confectionary	1/10	Yes	Level 4 within 2 min.



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