

Preventing Sanitizer Interference with 3M™ Clean-Trace™ Surface Protein Plus

The purpose of this Technical Bulletin is to describe the interference effects of various sanitizers on 3M™ Clean-Trace™ Surface Protein Plus and to recommend best practices to prevent sanitizer interference.

The following are best practices to avoid sanitizer interference with 3M Clean-Trace Surface Protein Plus test results:

- Test your equipment surfaces after cleaning and before applying the sanitizer to avoid sanitizer interference completely while still confirming that the surfaces were cleaned effectively.
- Do a final rinse using water after applying the sanitizer and before doing the testing to minimize sanitizer interference by removing the sanitizer from the surface before testing.

False positive results on protein detection tests could be due to residual peracetic acid/hydrogen peroxide; the only way to prevent the sanitizer interference is to test before application or after the rinse step. “No rinse” concentration formulas tend to be low enough that they wouldn’t impact the test chemistry.

The following table lists common sanitizers and their effects on 3M Clean-Trace Surface Protein Plus test results.

Type Cleaner /Sanitizer	Active Ingredients	Concentration	Positive (protein)	Negative (no protein)
Surfactants	Amphoteric (sanitizer)	1% (x1)	No effect	No effect
	Amphoteric (sanitizer)	5% (x5)	No effect	No effect
	Chorine/Anionic surfactant (Cleaner)	1% (x1)	No effect	No effect
	Chorine/Anionic surfactant (Cleaner)	5% (x5)	No effect	No effect
	Chlorine/NaOH/Non-ionic surfactant (Cleaner)	5% (x1)	Slight inhibition of color change (level 3 – 2/3)	Not tested
	Chlorine/NaOH/Non-ionic surfactant (Cleaner)	10% (x2)	Almost complete inhibition of color change	Not tested
	Chlorine/alkaline/surfactant (Cleaner)	1% (x1)	Slight inhibition of color change (level 3 – 2/3)	No effect
	Chlorine/alkaline/surfactant (Cleaner)	5% (x5)	Almost complete inhibition of color change	No effect
Oxidizers	Peracetic/H2O2/Acetic acid (sanitizer)	1% (x1)	Enhancement of color change (from level 3 – 4)	False positive (level 4 in <2 min)
	Peracetic/H2O2/Acetic acid (sanitizer)	5% (x5)	Enhancement of color change (from level 3 – 4)	False positive (level 4 in <2 min)
	Sodium Hypochlorite	20ppm (x0.1)	No effect	No effect
	Sodium Hypochlorite	200ppm (x1)	No effect	No effect
	Sodium Hypochlorite	2000ppm (x10)	No effect	No effect
	Hydrogen Peroxide	0.001%	No effect	False positive (level 1/2 in 10 min)
	Hydrogen Peroxide	0.01%	Enhancement of color change (from level 3 – 4)	False positive (level 3/4 in 10 min)
	Hydrogen Peroxide	0.10%	Enhancement of color change (from level 3 – 4)	False positive (level 4 in <2 min)
	Hydrogen Peroxide	1%	Enhancement of color change (from level 3 – 4)	False positive (level 4 in <2 min)
	Chlorine/alkaline	100ppm Chlorine (x0.5)	Slight inhibition of color change (level 3 – 2/3)	No effect
	Chlorine/alkaline	200ppm Chlorine (x1)	Inhibition of color change (level 3 – 2)	No effect
	Chlorine/alkaline	400ppm Chlorine (x2)	Almost complete inhibition of color change	No effect
Quaternary Ammonium Compounds	ADBAC* QUAT (disinfectant - food contact surfaces)	800ppm (x1)	No effect	No effect
	ADBAC* QUAT (disinfectant - non food contact surfaces)	400ppm (x1)	No effect	No effect
	ADBAC* QUAT (sanitizer)	200ppm (x1)	No effect	No effect
	*Alkyl Dimethyl Benzyl Ammonium Chloride			

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