

MAAK IMPEX PVT LTD

GO GREEN

GO WITH MAAK



ANTIVIRAL & ANTIBACTERIAL PROTECTCION FOR SCHOOL UNIFROMS

Consumer Concerns Today

- **Consumers have become much more aware of how infectious viruses and dangerous microbes spread due to COVID- 19 pandemic.**
- **School Uniforms/Textiles can act as a major source for transmission of infections.**
- **Young kids may not have the discipline to strictly follow the Hygiene norms.**
- **Parents and schools are worried about keeping the kids protected.**





Need for Antiviral & Antibacterial Protection

- Uniforms provide a large hosting surface area for infective viruses & Bacteria.
- After the coronavirus lockdown, personal Hygiene & Protection is a topic of discussion as life carefully returns to normal.
- Need of the hour is to assure Protection of the kids.
- The threat of Viruses and Bacteria is here for ever.

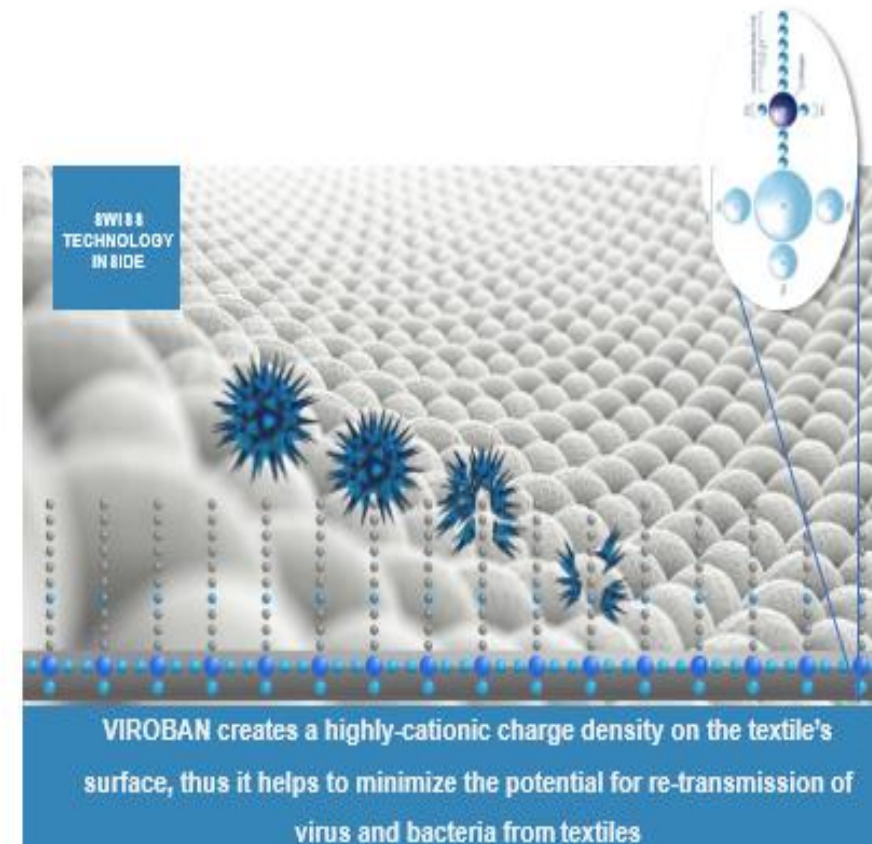


ADVANCED
ANTIVIRAL
ACTIVE
TEXTILE
FINISH

SWISS
TECHNOLOGY
INSIDE

How MAAK Works

- MAAK is a custom blend of Sanitized® T20-19, a patented Swiss quaternary silane technology.
- Creates a highly-cationic charge density on the textile's surface, deactivating the spread of the virus on contact.
- Acts quickly to prevent the transmission of enveloped and non-enveloped viruses.



Fast Facts of MAAK



SWISS
TECHNOLOGY
INSIDE

Custom Blend of Sanitized® T20-19	Acts quickly to prevent transmission of virus	Non Metal
Patented Quat Silane Technology	Resists Microbial Odor Development	Sustainable
Non-Leaching	High Cationic charge density	Suitable for all fibre types

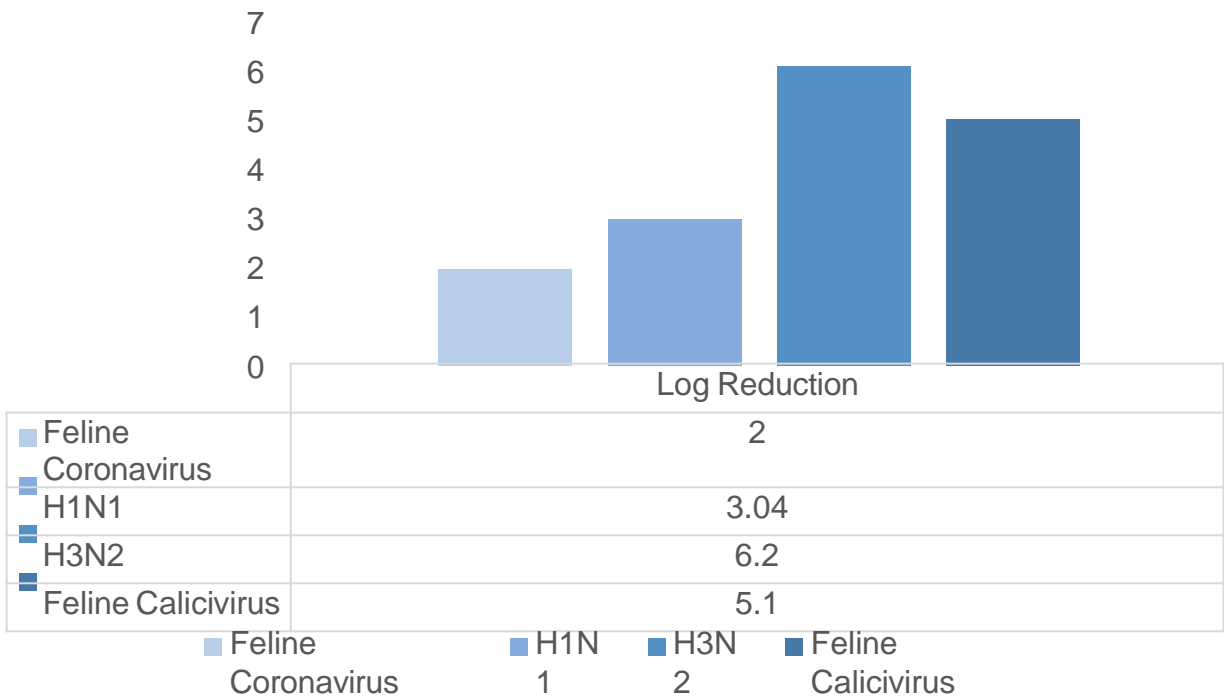


ANTIVIRAL EFFICACY TEST RESULTS

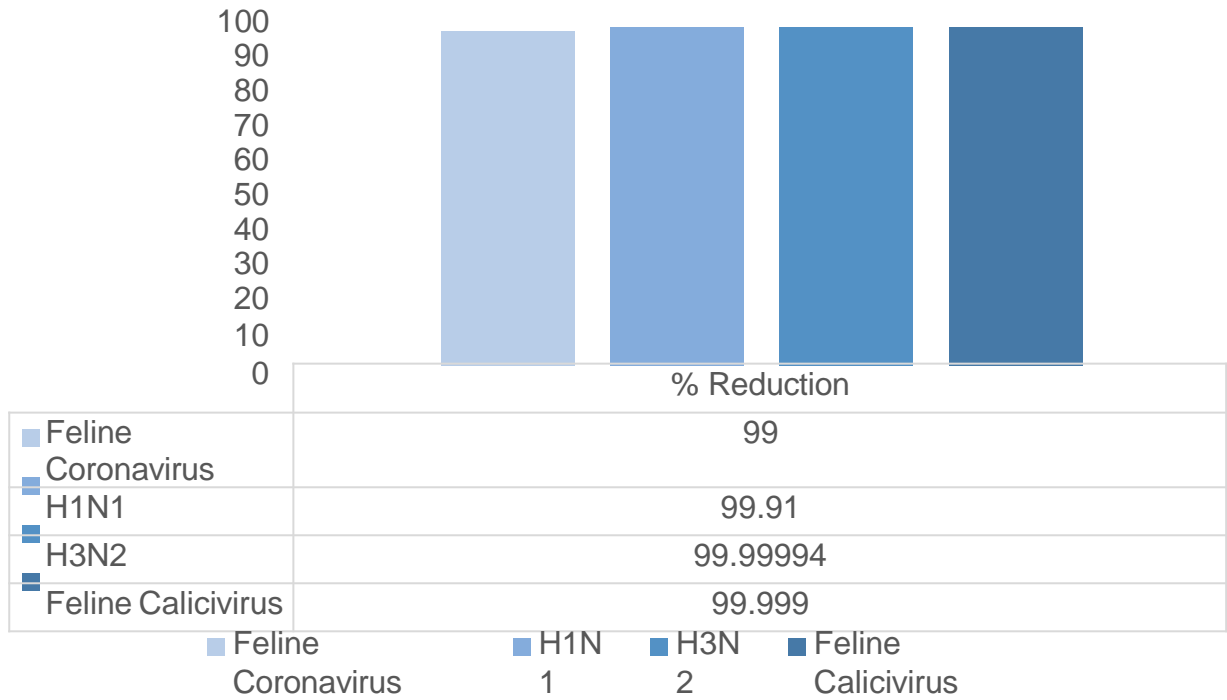
(ISO 18184)

Proven Antiviral Performance: Test Results Summary

ISO 18184: Antiviral Test Method



ISO 18184: Antiviral Test Method

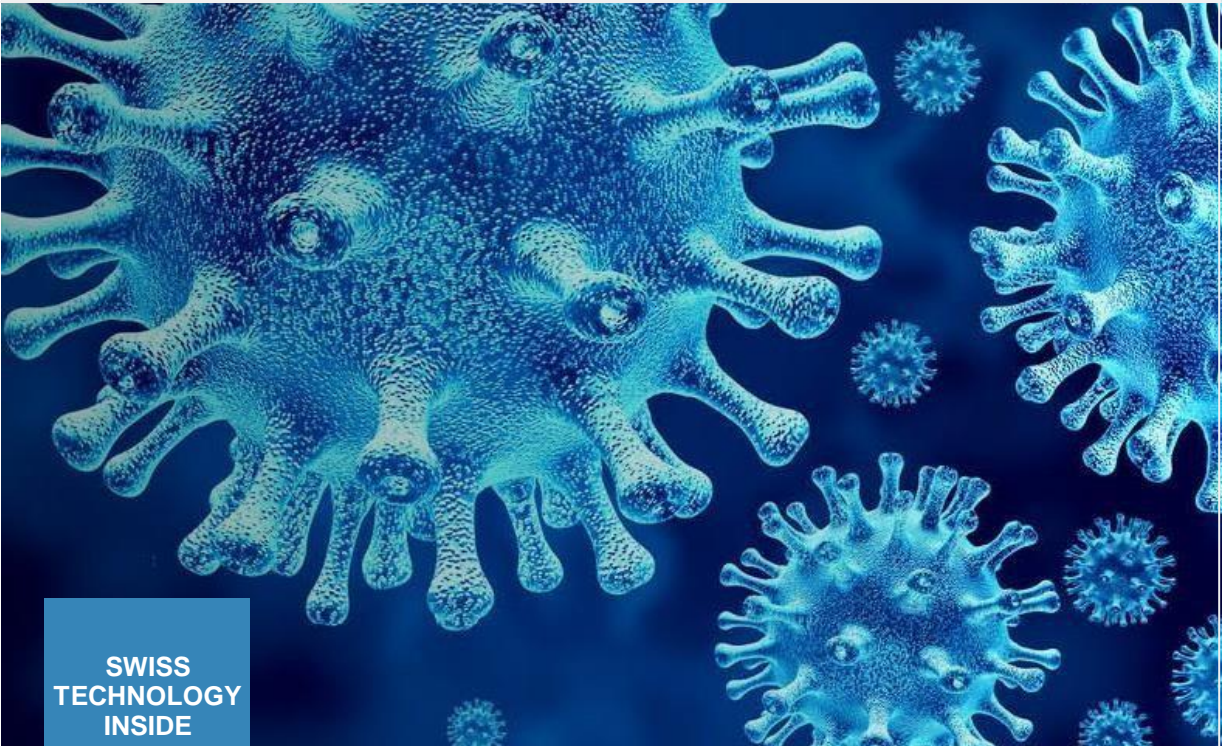


ISO 18184: Antiviral testing performed at

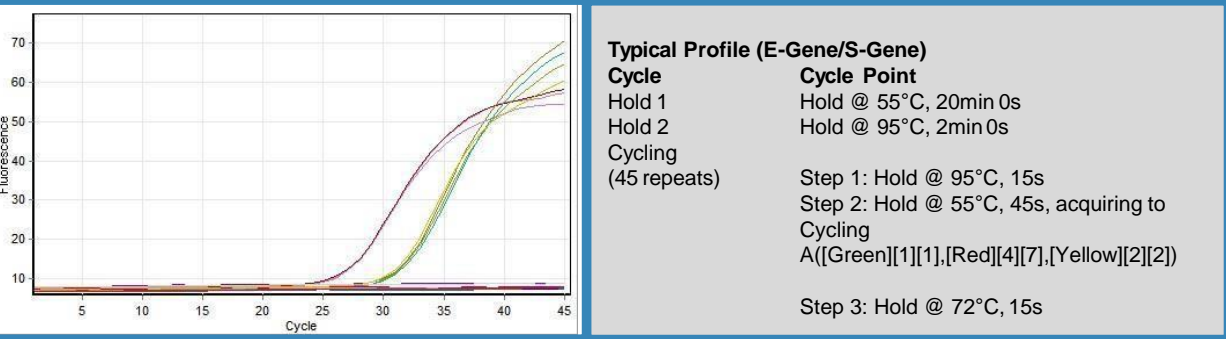


Proven Antiviral Performance


>99.9999 SARS-CoV-2 Reduction (30x Washes)



SWISS TECHNOLOGY INSIDE



Modified ISO 18184: Antiviral testing performed at



RGCB

DISCOVERIES FOR A BETTER TOMORROW

Tested against SARS- CoV-2 (E Gene) & (S Gene)						
	Untreated Control			N9 XTS-18 Treated Fabric		
Sample	Ct Value*	Delta Ct**	% Reduction in Viral load	Ct Value*	Delta Ct**	% Reduction in Viral load
Textile immediately after inoculation	25	-	Non Significant	22	-	-
Textile after 15 min contact time	26	1		26	4	>95
Textile after 30 min contact time	27	1		ND	-	>99.9999
Textile after 2 hours contact time	30	1		ND	-	> 99.9999

A microscopic view of various bacteria, including rod-shaped and spherical forms, some with flagella, set against a blue background.

ANTIMICROBIAL EFFICACY TEST RESULTS

Proven Antimicrobial Performance (IAC AATCC 100)

100% Cotton

Test Method: AATCC 100; 1:20 NB in sterile distilled water + 0.05% Triton X-100 wetting agent; 24 hour contact, 1.0g sample; 1000ul inoculum; 10ml D/E neutralizing broth; EMB agar; Mannitol Salts agar

Name of test bacteria (Strain Number)	<i>Staphylococcus aureus</i> (ATCC 6538) <i>Klebsiella pneumoniae</i> (ATCC 4352)		
Concentration of inoculum (cells/ml)	<i>S. aureus</i>	<i>K. pneumoniae</i>	
	1.28E+05	1.01E+05	
Measuring method of number of living bacteria	Pour plate method		
Type of Sample Material	XTS-18 + XTS BD Pad; 100% Cotton		
		<i>S. aureus</i> Percent Reduction from Supplied Control	<i>K. pneumo</i> Percent Reduction from Supplied Control
Blank		-	-
Treated Sample		>99.9%	>99.9%

Conclusions: The bacterial reduction was calculated relative to the supplied control against both test organisms.



Proven Antimicrobial Performance (IAC AATCC 100)

100% Polyester

Test Method: AATCC 100; 1:20 NB in sterile distilled water + 0.05% Triton X-100 wetting agent; 24 hour contact, 1.0g sample; 1000ul inoculum; 10ml D/E neutralizing broth; EMB agar; Mannitol Salts agar

Name of test bacteria (Strain Number)	<i>Staphylococcus aureus</i> (ATCC 6538) <i>Klebsiella pneumoniae</i> (ATCC 4352)	
Concentration of inoculum (cells/ml)	<i>S. aureus</i>	<i>K. pneumoniae</i>
	1.28E+05	1.01E+05
Measuring method of number of living bacteria	Pour plate method	
Type of Sample Material	XTS-18 + XTS BD Pad; 100% Polyester	
	<i>S. aureus</i> Percent Reduction from Supplied Control	<i>K. pneumo</i> Percent Reduction from Supplied Control
Blank	-	-
Treated Sample	>99.9%	>99.9%

Conclusions: The bacterial reduction was calculated relative to the supplied control against both test organisms.



Proven Antimicrobial Performance (ASTM E 2149)

SGS **Test Report**

SAMPLE NOT DRAWN BY SGS INDIA PVT. LTD.

Sample / Report No : CG20-008541.003
ULR No : TC500620000036832F

Report Control No : CGR0001191616

Sample Described by Customer as : 100% POLYETHER GRORY COLOR KNIT FABRIC

Customer Name : MAAK IMPEX PVT LTD
Customer Address : GC, ALSA GLENRIDGE,32, LANGFORD ROAD, Bengaluru,
BENGALURU URBAN,KARNATAKA-560025

City : karnataka
Postal Code :
State :
Country :
Sample Type : 100% POLYETHER GRORY COLOR KNIT FABRIC
Received : 04/07/2020
Sample Qty. Reod. : 1 PIECE
Mark on sample : 1758 XTS 18 4-T (D WASH)

Test Start : 04/07/2020
End Date : 11/07/2020
Group : Resistance to Microbial Attack : Textiles and Fabrics

Print Date : 11/07/2020
JOE No : CG20-008541

0X Wash: (99.9%) reduction

Antibacterial Activity	
Test Procedure	: ASTM E2149 - 10
DISCIPLINE: BIOLOGICAL	
% reduction of E.coli	: 99.9
Gram negative bacteria	: Escherichia coli (ATCC 25922)
Test specimen	: 1g
Exposure time	: 1 hr
Media	: Plate count agar
Incubation	: 37 deg C for 24hr

Per pro SGS India Private Ltd


Kavita SP
Authorized Signatory

****End of Report****

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Regd & Corp. Off: SGS House, 4B, A.S. Marg, Vilepar (West), Mumbai-400003, Tel: (022) 25796421 to 28 Fax: (022) 25796421 to 35 www.sgs.com

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SGS **Test Report**

SAMPLE NOT DRAWN BY SGS INDIA PVT. LTD.

Sample / Report No : CG20-008541.004
ULR No : TC500620000036833F

Report Control No : CGR0001191616

Sample Described by Customer as : 100% POLYETHER GRORY COLOR KNIT FABRIC

Customer Name : MAAK IMPEX PVT LTD
Customer Address : GC, ALSA GLENRIDGE,32, LANGFORD ROAD, Bengaluru,
BENGALURU URBAN,KARNATAKA-560025

City :
Postal Code :
State :
Country :
Sample Type : 100% POLYETHER GRORY COLOR KNIT FABRIC
Received : 04/07/2020
Sample Qty. Reod. : 1 PIECE
Mark on sample : 1758 XTS 18 4-T (D WASH)

Test Start : 04/07/2020
End Date : 11/07/2020
Group : Resistance to Microbial Attack : Textiles and Fabrics

Print Date : 11/07/2020
JOE No : CG20-008541

20X Washes: (99.9%) reduction

Antibacterial Activity	
Test Procedure	: ASTM E2149 - 10
DISCIPLINE: BIOLOGICAL	
% reduction of E.coli	: 99.9
Gram negative bacteria	: Escherichia coli (ATCC 25922)
Test specimen	: 1g
Exposure time	: 1 hr
Media	: Plate count agar
Incubation	: 37 deg C for 24hr

Per pro SGS India Private Ltd


Kavita SP
Authorized Signatory

****End of Report****

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Global Registration & Compliance

- In compliance with the requirements of the
 - BPR: Regulation (EU) No 528/2012 (the Biocidal Products Regulation, BPR).
 - REACH: Regulation (EC) No 1907/2006 (REACH)
- Registered with the U.S. Environmental Protection Agency as Sanitized® T 20-19
- Compliance for Bluesign, Oeko-Tex and ZDHC MRSL.
- The active substance is AOX-free and is readily degradable in biological waste water plants according to OECD 301A
- The treated articles were tested for skin sensitisation according to the international norm OECD 406 and passed successfully the Repeated Insult Patch Test (RIPT)





- This Technology can be incorporated in the Fabric stage as well as the Garment washing stage.
- Depending on the sourcing route for uniforms an ideally suited method can be devised.
- The finish lasts for multiple home launderings.
- The chemistry is proven safe to be worn by kids.
- The technology has global certifications to prove its efficacy and safety.

IT'S TIME
TO MAKE
SCHOOLS
SAFE AGAIN!



Thank You

MR AMEEN RAHAMAN

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Bengaluru,

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