

Type of treatment+A1 :160	Source	Specifics	Pros	Cons	Eliminate Viral threat	Harmless to user	Effect on performance	Suggest
Ultraviolet Germicidal Irradiation (UVGI)	Univ. of Nebraska Protocol	Specific UV-C irradiator used Dose: 60 mJ/cm2 Irradiator 4 feet from target 5 minute run time		only log 2 decrease, less viricidal	YES	YES	Minimal: Degradation occurs when hitting 120 J/cm2 (this is 2000 cycles of 60 mJ/cm2 treatments)	✓
	TruD Machines, discussion with technical support (off label)	UV-C irradiator Irradiator 3 feet from target Dose: 120 mJ/cm2 or greater 15-20 min run time		log 4 decrease, considered sanitized	YES	YES	Minimal: Degradation occurs when hitting 120 J/cm2 (this is 1000 cycles of 120 mJ/cm2 treatments)	✓
	3B Lumin CPAP UV-C cleaner, discussion with technical support (off label)	UV-C irradiator Irradiator is inches from target Dose: 120-240 mJ/cm2 at 2 min Dose: 300-600 mJ/cm2 at full 5 min cycle		log 4 decrease, considered sanitized log 5 decrease, considered sanitized	YES	YES	Minimal: Degradation occurs when hitting 120 J/cm2 (this is 500 cycles of 240 mJ/cm2 treatments) Minimal: Degradation occurs when hitting 120 J/cm2 (this is 200 cycles of 600 mJ/cm2 treatments)	✓

	NIOSH 2009 article	UV-C irradiator Dose: 176-181 mJ/cm2 at 15 min to each side			YES	YES	Minimal: Degradation occurs when hitting 120 J/cm2 (this is 600+ cycles of 181 mJ/cm2 treatments)	✓
	Ann. Occup Hyg. 2011	UV-C irradiator Irradiator 25 cm from target Dose: 180 mJ/cm2 at 15 min			YES	YES	Minimal: Degradation occurs when hitting 120 J/cm2 (this is 600+ cycles of 180 mJ/cm2 treatments)	✓
Dry Heat	Stanford University article	70°C/158°F dry heat 30 minute duration			YES	YES	Minimal	✓
	Univ. of Tennessee article	70°C/158°F dry heat 30 minute duration			YES	YES	Minimal	✓
	Univ. of Tennessee article - Autoclave	160°C/320°F		Degrades filtration efficiency Melting starts at 100°C/212°F	YES	NO, degrades filtration	Significant	✗
Moist Heat	Univ. of Tennessee article - Steam sterilization	125°C/257°F steam 3 minute duration			YES	YES	Minimal	✓
	Ann. Occup Hyg. 2011 - Moist heat	65 ± 5°C/149 ± 41°F heated 3 hr. duration in oven 20 minute treatment			YES	YES	Minimal	✓
	Vaporized Hydrogen Peroxide (VPH)	Duke protocol Gassing time 25 min Gassing Dwell 20 min	30-50 cycle validated		YES	YES, but requires aeration	Minimal	✓

		Aeration 4 hours						
	NIOSH 2009 article	55 min standard cycle			YES	YES, but requires aeration	Minimal	✓
Ethylene Oxide (EtO)	NIOSH 2009 article	1 hour exposure 4 hour aeration				NO, residual gas is carcinogenic	Minimal	✗
Microwave generated steam	Ann. Occup Hyg. 2011	Max power (10) 2 min to generate steam			YES	YES	Minimal	✓
Microwave Irradiation	NIOSH 2009 article	Max power (10) 2 min			YES	NO, mask melts and filtration compromised	Significant	✗
Washing with Hypochlorite (bleach) solution, rinse, and dry	NIOSH 2009 article	0.6% sodium hypochlorite solution 30 minutes submersion	Degrades filtration efficiency De-gassing of chlorine after treatment		YES	NO, electrostatic charge lost and filtration compromised NO, Chlorine de-gassing	Significant	✗
75% alcohol soaking and drying	Stanford University article		Degrades filtration efficiency		YES	NO, electrostatic charge lost and filtration compromised	Significant	✗
Boiling water	Univ. of Tennessee article		Mask damage caused by paper pulp and nonwoven bonds being dissolved by water		YES	NO, mask damage can cause degrade filtration	Significant	✗
Wait and hold	Based on NEJM data	4 day cycle allowing mask to sit and dry out			Theoretically	YES	None	✓

Disclaimer: These recommendations are made based on a compilation of information gathered from the body of knowledge that is currently available. Many of these processes have not been done before, but given the current situation, are now being tried in an effort to meet the needs created by this