



COVID Research Pilot Grant

*Efficacy and Efficiency of Antiviral 3D
Printed and Injection Molded Face Masks*

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| Evaluated Masks

NanoHack (Injection Molded)



Shabri (3D Printed)



3M 8210 N95 Respirator

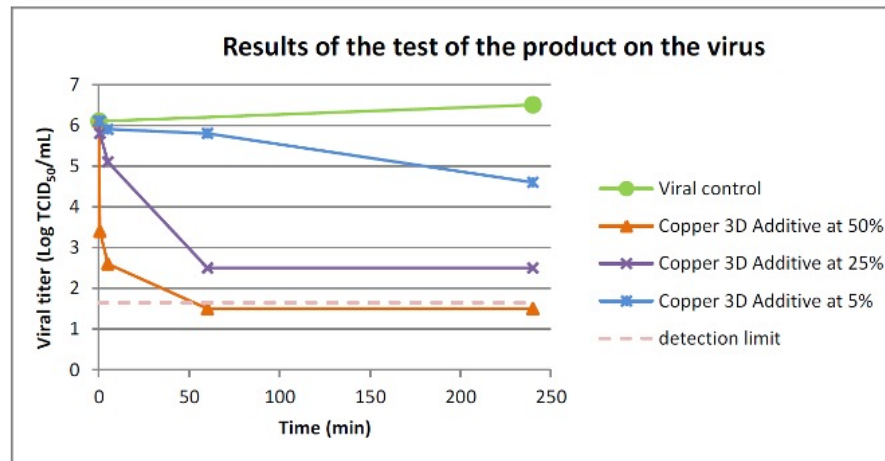




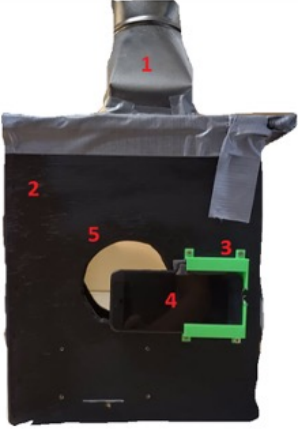


Copper Efficacy in Viral Load Reduction

		Log Reduction			
		30 s	5 min	1 hour	4 hours
Additive Concentration (%)	50%	2.8	3.5	≥ 4.6	≥ 4.6
	25%	0.4	1.0	3.6	3.6
	5%	0.0	0.3	0.4	1.5

		Reduction (%)			
		30 s	5 min	1 hour	4 hours
Additive Concentration (%)	50%	99.842%	99.968%	≥ 99.997%	≥ 99.997%
	25%	60.189%	90.000%	99.975%	99.975%
	5%	0.000%	49.881%	60.189%	96.838%



Testing Chamber

Rear Perspective	Front Perspective	Side Perspective
		
Description		
<ul style="list-style-type: none"> 1: Intake Ducting 2: Testing Chamber 3: Phone Bracket 4: Phone 5: Camera Hole 	<ul style="list-style-type: none"> 1: Intake Ducting 2: Testing Chamber 3: Speaker Hole 4: Phone 5: Camera Hole 	<ul style="list-style-type: none"> 1: Intake Ducting 2: Testing Chamber 3: Light Curtain Hole

Particle Tracking

