

Supplemental materials for Efficacy of powered air purifying respirators (PAPRs) for source control of simulated respiratory aerosols

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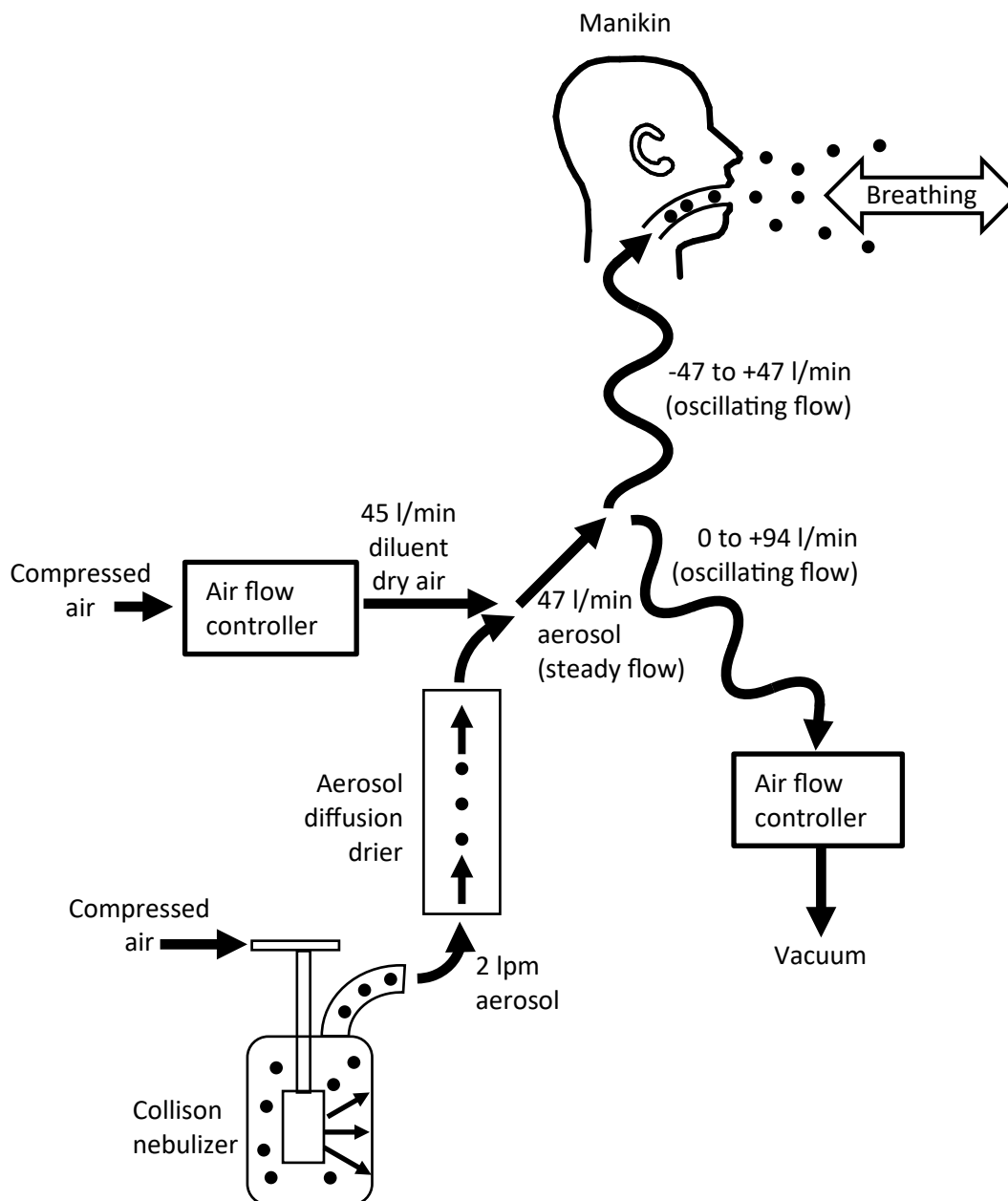


Figure S1: Schematic of aerosol flow through respiratory aerosol simulator. The aerosol and breathing airflow were produced using a method similar to that described by Li et al. (2023). The respiratory aerosol was produced using a 5% KCl solution in a Collison nebulizer operating at 138 kPa (20 lbs./in²), dried using a diffusion drier (Model 3062, TSI), and neutralized using a bipolar ionizer (not shown; Model HPX-1, Electrostatics). One mass flow controller was connected to a source of clean dry pressurized air and provided a steady airflow that mixed with the neutralized aerosol to give a constant airflow of 47 liters/minute with a constant aerosol concentration. The second mass flow controller was connected to a vacuum source and provided

a sinusoidal return flow oscillating between 0 and 94 liters/minute. The two mass flow controllers were connected with a wye-fitting near the mouth of the manikin so that the net combined airflow at the mouth of the manikin oscillated approximately sinusoidally between -47 and +47 liters/minute. The sinusoidal flow with a peak flowrate of 47 liters/minute and a breathing rate of 12 breaths/minute corresponded to a ventilation rate of 15 liters/minute, which is the ISO standard ventilation rate for a woman performing light work. This scheme using two mass flow controllers was adopted because it maintains a consistent concentration of the exhaled aerosol over the breathing cycle.

For the Salus, Versaflo, and Sentinel PAPRs, the blower of the PAPR to be tested was placed outside the chamber with the connecting hose passing through the chamber wall and connecting to the facepiece so that the PAPR blower drew air from outside the chamber and exhausted it inside (Figure 1). Since the respiratory aerosol simulator provided no net airflow into or out of the chamber, the airflow through the chamber during experiments was provided solely by the PAPR blower.

Unlike the other PAPRs, the Maxair PAPR has its blower built into the helmet worn by the user; thus, it was not possible to locate the blower outside the chamber. Instead, the top of the helmet (called the filter cover cap) was modified by adding a large port to the back and blocking off the circumferential slit through which air was normally drawn during operation. The port was connected to the opening in the chamber using a flexible hose so that air was drawn from outside the chamber, flowed through the PAPR helmet and filter, and then flowed into the chamber in a similar manner to the other PAPRs. The control experiments were performed with the helmet on the manikin and with the blower running, but without a face cuff.



Figure S2: Bullard Salus HC-M PAPR blower and standard facepiece with vent holes below the chin (catalog # 20LF2L, medium/large, NIOSH TC-21C-1235). The PAPR blower was placed outside the test chamber. The PAPR hose ran from the blower outside through an opening and to the PAPR facepiece.



Figure S3: Bullard Salus HC-M PAPR blower and facepiece with a HEPA filtration panel below the chin instead of vent holes (catalog # 20LFMHE, small/medium, NIOSH TC-21C-1237). The small/medium size facepiece was used rather than the medium/large because the small/medium formed a better face seal.

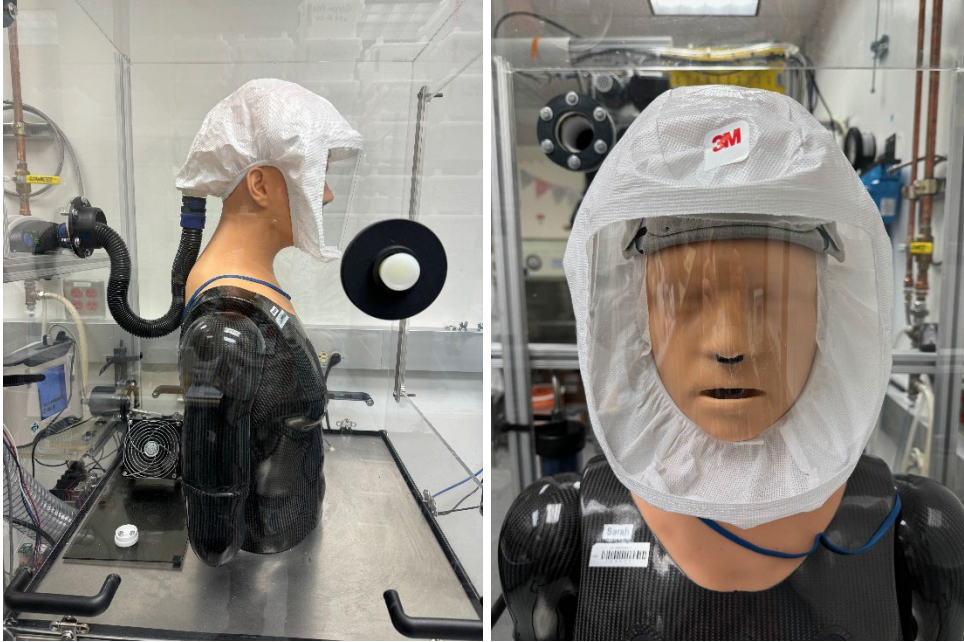


Figure S4: 3M Versaflo PAPR blower and facepiece (catalog # S-133L-5 medium/large, NIOSH TC-21C-1001).



Figure S5: ILC Dover Sentinel XP HP PAPR blower and facepiece (catalog # S-4001-2, single size, NIOSH TC-21C-1254).



Figure S6: Syntech International Maxair PAPR helmet and face cuff (catalog # 2365-02ML, medium/large). The PAPR ensemble included a new model of filter (2181XP) for which NIOSH approval is pending. Because the Maxair blower is in the helmet rather than worn on a belt, a hole was cut in the plastic cover cap, a custom adaptor was glued to the hole, and the adaptor was connected to a 3" (7.6 cm) hose leading outside the chamber. The perimeter of the helmet cover cap was blocked so that the blower pulled air from outside the chamber through the hose and into the PAPR rather than through the perimeter vent.

Table S1: Characteristics of the test aerosol. These results were determined by operating the PAPR blower and breathing simulator without a facepiece and without a mask or respirator on the manikin. The aerosol concentration was measured at the outlet of the test chamber using an optical particle spectrometer. The aerosol concentration in the test chamber varied slightly from PAPR to PAPR but the size distribution was essentially the same.

<i>Manufacturer</i>	<i>PAPR Model</i>	<i>PAPR airflow (liters /min)</i>	<i>Aerosol mass concentration ($\mu\text{g}/\text{m}^3$)</i>	<i>Count geometric mean diameter (μm)</i>	<i>Count geometric standard deviation</i>	<i>Mass geometric mean diameter (μm)</i>
3M	Versaflo	185	1100	0.48	1.53	1.50
Bullard	Salus HC-M	215	1092	0.48	1.54	1.55
ILC Dover	Sentinel XP HP	230	934	0.47	1.52	1.49
Syntech International	Maxair	215	854	0.47	1.51	1.51

Table S2: Average mass concentration in the collection chamber for each experiment. Background concentration has been subtracted.

<i>Experiment</i>	<i>PAPR blower</i>	<i>Facepiece</i>	<i>PPE</i>	<i>Total mass concentration ($\mu\text{g}/\text{m}^3$)</i>
ILC-Non-Non-001	ILC Sentinel	None	None	838.91
ILC-Non-Non-002	ILC Sentinel	None	None	993.00
ILC-Non-Non-003	ILC Sentinel	None	None	935.27
ILC-Non-Non-004	ILC Sentinel	None	None	926.61
ILC-Non-Non-005	ILC Sentinel	None	None	983.51
ILC-Non-Non-006	ILC Sentinel	None	None	928.63
ILC-Non-N95-001	ILC Sentinel	None	N95 respirator	107.98
ILC-Non-N95-002	ILC Sentinel	None	N95 respirator	299.26
ILC-Non-N95-003	ILC Sentinel	None	N95 respirator	96.42
ILC-Non-N95-004	ILC Sentinel	None	N95 respirator	60.64
ILC-Non-N95-005	ILC Sentinel	None	N95 respirator	64.22
ILC-Non-N95-006	ILC Sentinel	None	N95 respirator	135.83
ILC-Non-Sur-001	ILC Sentinel	None	Surgical mask	650.38
ILC-Non-Sur-002	ILC Sentinel	None	Surgical mask	712.53
ILC-Non-Sur-003	ILC Sentinel	None	Surgical mask	637.39
ILC-Non-Sur-004	ILC Sentinel	None	Surgical mask	642.93

ILC-Non-Sur-005	ILC Sentinel	None	Surgical mask	700.25
ILC-Non-Sur-006	ILC Sentinel	None	Surgical mask	675.84
ILC-Std-N95-001	ILC Sentinel	ILC facepiece	N95 respirator	68.58
ILC-Std-N95-002	ILC Sentinel	ILC facepiece	N95 respirator	141.22
ILC-Std-N95-003	ILC Sentinel	ILC facepiece	N95 respirator	216.89
ILC-Std-N95-004	ILC Sentinel	ILC facepiece	N95 respirator	52.43
ILC-Std-N95-005	ILC Sentinel	ILC facepiece	N95 respirator	179.70
ILC-Std-N95-006	ILC Sentinel	ILC facepiece	N95 respirator	70.81
ILC-Std-Non-001	ILC Sentinel	ILC facepiece	None	868.91
ILC-Std-Non-002	ILC Sentinel	ILC facepiece	None	905.91
ILC-Std-Non-003	ILC Sentinel	ILC facepiece	None	820.30
ILC-Std-Non-004	ILC Sentinel	ILC facepiece	None	756.24
ILC-Std-Non-005	ILC Sentinel	ILC facepiece	None	765.19
ILC-Std-Non-006	ILC Sentinel	ILC facepiece	None	855.61
ILC-Std-Sur-001	ILC Sentinel	ILC facepiece	Surgical mask	698.71
ILC-Std-Sur-002	ILC Sentinel	ILC facepiece	Surgical mask	582.51
ILC-Std-Sur-003	ILC Sentinel	ILC facepiece	Surgical mask	611.73
ILC-Std-Sur-004	ILC Sentinel	ILC facepiece	Surgical mask	476.60
ILC-Std-Sur-005	ILC Sentinel	ILC facepiece	Surgical mask	612.26
ILC-Std-Sur-006	ILC Sentinel	ILC facepiece	Surgical mask	573.73
Max-Non-Non-001	Syntech Maxair	None	None	927.26
Max-Non-Non-002	Syntech Maxair	None	None	883.65
Max-Non-Non-003	Syntech Maxair	None	None	889.25
Max-Non-Non-004	Syntech Maxair	None	None	854.84
Max-Non-Non-005	Syntech Maxair	None	None	800.34
Max-Non-Non-006	Syntech Maxair	None	None	766.09
Max-Cuf-N95-001	Syntech Maxair	Maxair Cuff	N95 respirator	67.76
Max-Cuf-N95-002	Syntech Maxair	Maxair Cuff	N95 respirator	129.25
Max-Cuf-N95-003	Syntech Maxair	Maxair Cuff	N95 respirator	270.24
Max-Cuf-N95-004	Syntech Maxair	Maxair Cuff	N95 respirator	151.56
Max-Cuf-N95-005	Syntech Maxair	Maxair Cuff	N95 respirator	231.39
Max-Cuf-N95-006	Syntech Maxair	Maxair Cuff	N95 respirator	204.56
Max-Cuf-Non-001	Syntech Maxair	Maxair Cuff	None	760.92
Max-Cuf-Non-002	Syntech Maxair	Maxair Cuff	None	785.08
Max-Cuf-Non-003	Syntech Maxair	Maxair Cuff	None	822.00
Max-Cuf-Non-004	Syntech Maxair	Maxair Cuff	None	779.05
Max-Cuf-Non-005	Syntech Maxair	Maxair Cuff	None	804.02
Max-Cuf-Non-006	Syntech Maxair	Maxair Cuff	None	711.72
Max-Cuf-Sur-001	Syntech Maxair	Maxair Cuff	Surgical mask	646.41
Max-Cuf-Sur-002	Syntech Maxair	Maxair Cuff	Surgical mask	565.77

Max-Cuf-Sur-003	Syntech Maxair	Maxair Cuff	Surgical mask	593.77
Max-Cuf-Sur-004	Syntech Maxair	Maxair Cuff	Surgical mask	608.68
Max-Cuf-Sur-005	Syntech Maxair	Maxair Cuff	Surgical mask	489.04
Max-Cuf-Sur-006	Syntech Maxair	Maxair Cuff	Surgical mask	582.45
Max-Non-N95-001	Syntech Maxair	None	N95 respirator	39.99
Max-Non-N95-002	Syntech Maxair	None	N95 respirator	102.60
Max-Non-N95-003	Syntech Maxair	None	N95 respirator	171.45
Max-Non-N95-004	Syntech Maxair	None	N95 respirator	91.83
Max-Non-N95-005	Syntech Maxair	None	N95 respirator	132.74
Max-Non-N95-006	Syntech Maxair	None	N95 respirator	87.53
Max-Non-Sur-001	Syntech Maxair	None	Surgical mask	542.97
Max-Non-Sur-002	Syntech Maxair	None	Surgical mask	541.09
Max-Non-Sur-003	Syntech Maxair	None	Surgical mask	527.13
Max-Non-Sur-004	Syntech Maxair	None	Surgical mask	567.76
Max-Non-Sur-005	Syntech Maxair	None	Surgical mask	536.01
Max-Non-Sur-006	Syntech Maxair	None	Surgical mask	546.98
Sal-Non-Non-001	Bullard Salus	None	None	1009.21
Sal-Non-Non-002	Bullard Salus	None	None	1104.49
Sal-Non-Non-003	Bullard Salus	None	None	1199.10
Sal-Non-Non-004	Bullard Salus	None	None	1000.96
Sal-Non-Non-005	Bullard Salus	None	None	1148.38
Sal-Non-Non-006	Bullard Salus	None	None	1091.13
Sal-HEP-N95-001	Bullard Salus	Salus HEPA	N95 respirator	112.58
Sal-HEP-N95-002	Bullard Salus	Salus HEPA	N95 respirator	47.56
Sal-HEP-N95-003	Bullard Salus	Salus HEPA	N95 respirator	18.26
Sal-HEP-N95-004	Bullard Salus	Salus HEPA	N95 respirator	34.41
Sal-HEP-N95-005	Bullard Salus	Salus HEPA	N95 respirator	43.31
Sal-HEP-N95-006	Bullard Salus	Salus HEPA	N95 respirator	29.09
Sal-HEP-Non-001	Bullard Salus	Salus HEPA	None	136.03
Sal-HEP-Non-002	Bullard Salus	Salus HEPA	None	259.78
Sal-HEP-Non-003	Bullard Salus	Salus HEPA	None	63.89
Sal-HEP-Non-004	Bullard Salus	Salus HEPA	None	220.16
Sal-HEP-Non-005	Bullard Salus	Salus HEPA	None	162.98
Sal-HEP-Non-006	Bullard Salus	Salus HEPA	None	165.88
Sal-HEP-Sur-007	Bullard Salus	Salus HEPA	Surgical mask	165.78
Sal-HEP-Sur-008	Bullard Salus	Salus HEPA	Surgical mask	168.89
Sal-HEP-Sur-009	Bullard Salus	Salus HEPA	Surgical mask	259.00
Sal-HEP-Sur-010	Bullard Salus	Salus HEPA	Surgical mask	154.50
Sal-HEP-Sur-011	Bullard Salus	Salus HEPA	Surgical mask	114.03
Sal-HEP-Sur-012	Bullard Salus	Salus HEPA	Surgical mask	149.58

Sal-Non-N95-001	Bullard Salus	None	N95 respirator	146.07
Sal-Non-N95-002	Bullard Salus	None	N95 respirator	89.50
Sal-Non-N95-003	Bullard Salus	None	N95 respirator	142.45
Sal-Non-N95-004	Bullard Salus	None	N95 respirator	116.72
Sal-Non-N95-005	Bullard Salus	None	N95 respirator	141.67
Sal-Non-N95-006	Bullard Salus	None	N95 respirator	104.44
Sal-Non-Sur-007	Bullard Salus	None	Surgical mask	569.14
Sal-Non-Sur-008	Bullard Salus	None	Surgical mask	623.63
Sal-Non-Sur-009	Bullard Salus	None	Surgical mask	720.64
Sal-Non-Sur-010	Bullard Salus	None	Surgical mask	687.68
Sal-Non-Sur-011	Bullard Salus	None	Surgical mask	639.45
Sal-Non-Sur-012	Bullard Salus	None	Surgical mask	596.07
Sal-Std-N95-001	Bullard Salus	Salus Standard	N95 respirator	196.34
Sal-Std-N95-002	Bullard Salus	Salus Standard	N95 respirator	246.34
Sal-Std-N95-003	Bullard Salus	Salus Standard	N95 respirator	154.53
Sal-Std-N95-004	Bullard Salus	Salus Standard	N95 respirator	152.71
Sal-Std-N95-005	Bullard Salus	Salus Standard	N95 respirator	59.50
Sal-Std-N95-006	Bullard Salus	Salus Standard	N95 respirator	83.75
Sal-Std-Non-001	Bullard Salus	Salus Standard	None	991.59
Sal-Std-Non-002	Bullard Salus	Salus Standard	None	1071.51
Sal-Std-Non-003	Bullard Salus	Salus Standard	None	1174.36
Sal-Std-Non-004	Bullard Salus	Salus Standard	None	995.46
Sal-Std-Non-005	Bullard Salus	Salus Standard	None	963.63
Sal-Std-Non-006	Bullard Salus	Salus Standard	None	1114.35
Sal-Std-Sur-007	Bullard Salus	Salus Standard	Surgical mask	579.42
Sal-Std-Sur-008	Bullard Salus	Salus Standard	Surgical mask	610.37
Sal-Std-Sur-009	Bullard Salus	Salus Standard	Surgical mask	572.58
Sal-Std-Sur-010	Bullard Salus	Salus Standard	Surgical mask	583.62
Sal-Std-Sur-011	Bullard Salus	Salus Standard	Surgical mask	553.50
Sal-Std-Sur-012	Bullard Salus	Salus Standard	Surgical mask	575.38
Ver-Non-Non-001	3M Versaflo	None	None	1423.67
Ver-Non-Non-002	3M Versaflo	None	None	1089.22
Ver-Non-Non-003	3M Versaflo	None	None	1033.99
Ver-Non-Non-004	3M Versaflo	None	None	1036.97
Ver-Non-Non-005	3M Versaflo	None	None	996.22
Ver-Non-Non-006	3M Versaflo	None	None	1018.37
Ver-Non-N95-001	3M Versaflo	None	N95 respirator	87.46
Ver-Non-N95-002	3M Versaflo	None	N95 respirator	361.39
Ver-Non-N95-003	3M Versaflo	None	N95 respirator	48.98
Ver-Non-N95-004	3M Versaflo	None	N95 respirator	122.80

Ver-Non-N95-005	3M Versaflo	None	N95 respirator	98.56
Ver-Non-N95-006	3M Versaflo	None	N95 respirator	33.68
Ver-Non-Sur-001	3M Versaflo	None	Surgical mask	919.66
Ver-Non-Sur-002	3M Versaflo	None	Surgical mask	896.57
Ver-Non-Sur-003	3M Versaflo	None	Surgical mask	788.23
Ver-Non-Sur-004	3M Versaflo	None	Surgical mask	753.29
Ver-Non-Sur-005	3M Versaflo	None	Surgical mask	630.30
Ver-Non-Sur-006	3M Versaflo	None	Surgical mask	601.79
Ver-Std-N95-001	3M Versaflo	Versaflo facepiece	N95 respirator	73.31
Ver-Std-N95-002	3M Versaflo	Versaflo facepiece	N95 respirator	105.81
Ver-Std-N95-003	3M Versaflo	Versaflo facepiece	N95 respirator	158.50
Ver-Std-N95-004	3M Versaflo	Versaflo facepiece	N95 respirator	40.36
Ver-Std-N95-005	3M Versaflo	Versaflo facepiece	N95 respirator	86.33
Ver-Std-N95-006	3M Versaflo	Versaflo facepiece	N95 respirator	87.38
Ver-Std-Non-001	3M Versaflo	Versaflo facepiece	None	485.68
Ver-Std-Non-002	3M Versaflo	Versaflo facepiece	None	502.20
Ver-Std-Non-003	3M Versaflo	Versaflo facepiece	None	492.20
Ver-Std-Non-004	3M Versaflo	Versaflo facepiece	None	510.39
Ver-Std-Non-005	3M Versaflo	Versaflo facepiece	None	448.30
Ver-Std-Non-006	3M Versaflo	Versaflo facepiece	None	506.86
Ver-Std-Sur-001	3M Versaflo	Versaflo facepiece	Surgical mask	561.01
Ver-Std-Sur-002	3M Versaflo	Versaflo facepiece	Surgical mask	484.82
Ver-Std-Sur-003	3M Versaflo	Versaflo facepiece	Surgical mask	340.69
Ver-Std-Sur-004	3M Versaflo	Versaflo facepiece	Surgical mask	488.75
Ver-Std-Sur-005	3M Versaflo	Versaflo facepiece	Surgical mask	436.50
Ver-Std-Sur-006	3M Versaflo	Versaflo facepiece	Surgical mask	378.83

Table S3: ILC Dover Sentinel PAPR comparison of experimental results with and without a facepiece, surgical mask, and N95 respirator.

<i>Comparison group 1</i>		<i>Comparison group 2</i>		<i>Difference</i>	<i>Standard error of difference</i>	<i>Lower confidence limit</i>	<i>Upper confidence limit</i>	<i>Adjusted p-value*</i>
<i>Face piece</i>	<i>PPE</i>	<i>Face piece</i>	<i>PPE</i>					
No	None	Yes	N95 respirator	812.7	37.4	698.9	926.5	<.0001
No	None	No	N95 respirator	806.9	37.4	693.1	920.7	<.0001
Yes	None	Yes	N95 respirator	707.1	37.4	593.3	820.9	<.0001
Yes	None	No	N95 respirator	701.3	37.4	587.5	815.1	<.0001
No	Surgical mask	Yes	N95 respirator	548.3	37.4	434.5	662.1	<.0001
No	Surgical mask	No	N95 respirator	542.5	37.4	428.7	656.3	<.0001
Yes	Surgical mask	Yes	N95 respirator	471.0	37.4	357.2	584.8	<.0001
Yes	Surgical mask	No	N95 respirator	465.2	37.4	351.4	579.0	<.0001
No	None	Yes	Surgical mask	341.7	37.4	227.9	455.5	<.0001
No	None	No	Surgical mask	264.4	37.4	150.6	378.2	<.0001
Yes	None	Yes	Surgical mask	236.1	37.4	122.3	349.9	<.0001
Yes	None	No	Surgical mask	158.8	37.4	45.0	272.6	0.0024
No	None	Yes	None	105.6	37.4	-8.2	219.4	0.081
No	Surgical mask	Yes	Surgical mask	77.3	37.4	-36.5	191.1	0.3314
No	N95 respirator	Yes	N95 respirator	5.8	37.4	-108.0	119.6	1

*Adjusted p-values are obtained from Tukey multiple comparison tests.

Table S4: Maxair PAPR comparison of experimental results with and without a facepiece, surgical mask, and N95 respirator.

<i>Comparison group 1</i>		<i>Comparison group 2</i>		<i>Difference</i>	<i>Standard error of difference</i>	<i>Lower confidence limit</i>	<i>Upper confidence limit</i>	<i>Adjusted p-value*</i>
<i>Face piece</i>	<i>PPE</i>	<i>Face piece</i>	<i>PPE</i>					
No	None	No	N95 respirator	749.2	29.3	660.0	838.4	<.0001
No	None	Yes	N95 respirator	677.8	29.3	588.6	767.0	<.0001
Yes	None	No	N95 respirator	672.8	29.3	583.6	762.0	<.0001
Yes	None	Yes	N95 respirator	601.3	29.3	512.1	690.6	<.0001
Yes	Surgical mask	No	N95 respirator	476.7	29.3	387.5	565.9	<.0001
No	Surgical mask	No	N95 respirator	439.3	29.3	350.1	528.5	<.0001
Yes	Surgical mask	Yes	N95 respirator	405.2	29.3	316.0	494.4	<.0001
No	Surgical mask	Yes	N95 respirator	367.9	29.3	278.7	457.1	<.0001
No	None	No	Surgical mask	309.9	29.3	220.7	399.1	<.0001
No	None	Yes	Surgical mask	272.6	29.3	183.3	361.8	<.0001
Yes	None	No	Surgical mask	233.5	29.3	144.3	322.7	<.0001
Yes	None	Yes	Surgical mask	196.1	29.3	106.9	285.3	<.0001
No	None	Yes	None	76.4	29.3	-12.8	165.7	0.1269
Yes	N95 respirator	No	N95 respirator	71.4	29.3	-17.8	160.6	0.1764
Yes	Surgical mask	No	Surgical mask	37.4	29.3	-51.8	126.6	0.7964

*Adjusted p-values are obtained from Tukey multiple comparison tests.

Table S5: Salus PAPR comparison of experimental results with and without a standard facepiece with vent holes, a facepiece with a HEPA panel, a surgical mask, and an N95 respirator.

<i>Comparison group 1</i>		<i>Comparison group 2</i>		<i>Difference</i>	<i>Standard error of difference</i>	<i>Lower confidence limit</i>	<i>Upper confidence limit</i>	<i>Adjusted p-value*</i>
<i>Face piece</i>	<i>PPE</i>	<i>Face piece</i>	<i>PPE</i>					
None	None	HEPA	N95 respirator	1044.7	33.2	936.6	1152.8	<.0001
Standard	None	HEPA	N95 respirator	1004.3	33.2	896.2	1112.4	<.0001
None	None	None	N95 respirator	968.7	33.2	860.6	1076.8	<.0001
None	None	Standard	N95 respirator	943.4	33.2	835.2	1051.5	<.0001
Standard	None	None	N95 respirator	928.3	33.2	820.2	1036.4	<.0001
None	None	HEPA	None	924.1	33.2	816.0	1032.2	<.0001
None	None	HEPA	Surgical mask	923.6	33.2	815.5	1031.7	<.0001
Standard	None	Standard	N95 respirator	903.0	33.2	794.8	1011.1	<.0001
Standard	None	HEPA	None	883.7	33.2	775.6	991.8	<.0001
Standard	None	HEPA	Surgical mask	883.2	33.2	775.1	991.3	<.0001
None	Surgical mask	HEPA	N95 respirator	591.9	33.2	483.8	700.0	<.0001
Standard	Surgical mask	HEPA	N95 respirator	531.6	33.2	423.5	639.7	<.0001
None	Surgical mask	None	N95 respirator	516.0	33.2	407.9	624.1	<.0001
None	None	Standard	Surgical mask	513.1	33.2	405.0	621.2	<.0001
None	Surgical mask	Standard	N95 respirator	490.6	33.2	382.5	598.7	<.0001
Standard	None	Standard	Surgical mask	472.7	33.2	364.6	580.8	<.0001
None	Surgical mask	HEPA	None	471.3	33.2	363.2	579.4	<.0001
None	Surgical mask	HEPA	Surgical mask	470.8	33.2	362.7	578.9	<.0001
Standard	Surgical mask	None	N95 respirator	455.7	33.2	347.6	563.8	<.0001
None	None	None	Surgical mask	452.8	33.2	344.7	560.9	<.0001
Standard	Surgical mask	Standard	N95 respirator	430.3	33.2	322.2	538.4	<.0001
Standard	None	None	Surgical mask	412.4	33.2	304.3	520.5	<.0001
Standard	Surgical mask	HEPA	None	411.0	33.2	302.9	519.1	<.0001
Standard	Surgical mask	HEPA	Surgical mask	410.5	33.2	302.4	518.6	<.0001

HEPA	Surgical mask	HEPA	N95 respirator	121.1	33.2	13.0	229.2	0.0179
HEPA	None	HEPA	N95 respirator	120.6	33.2	12.5	228.7	0.0187
Standard	N95 respirator	HEPA	N95 respirator	101.3	33.2	-6.8	209.4	0.0819
None	N95 respirator	HEPA	N95 respirator	75.9	33.2	-32.2	184.0	0.3706
None	Surgical mask	Standard	Surgical mask	60.3	33.2	-47.8	168.4	0.6713
HEPA	Surgical mask	None	N95 respirator	45.2	33.2	-63.0	153.3	0.9065
HEPA	None	None	N95 respirator	44.6	33.2	-63.5	152.8	0.9117
None	None	Standard	None	40.4	33.2	-67.7	148.5	0.9484
Standard	N95 respirator	None	N95 respirator	25.4	33.2	-82.7	133.5	0.9973
HEPA	Surgical mask	Standard	N95 respirator	19.8	33.2	-88.3	127.9	0.9996
HEPA	None	Standard	N95 respirator	19.3	33.2	-88.9	127.4	0.9996
HEPA	Surgical mask	HEPA	None	0.5	33.2	-107.6	108.6	1

*Adjusted p-values are obtained from Tukey multiple comparison tests.

Table S6: Versaflo PAPR comparison of experimental results with and without a facepiece, surgical mask, and N95 respirator.

<i>Comparison group 1</i>		<i>Comparison group 2</i>		<i>Difference</i>	<i>Standard error of difference</i>	<i>Lower confidence limit</i>	<i>Upper confidence limit</i>	<i>Adjusted p-value*</i>
<i>Face piece</i>	<i>PPE</i>	<i>Face piece</i>	<i>PPE</i>					
No	None	Yes	N95 respirator	1007.8	60.7	823.1	1192.5	<.0001
No	None	No	N95 respirator	974.3	60.7	789.5	1159.0	<.0001
No	Surgical mask	Yes	N95 respirator	673.0	60.7	488.3	857.7	<.0001
No	None	Yes	Surgical mask	651.3	60.7	466.6	836.0	<.0001
No	Surgical mask	No	N95 respirator	639.5	60.7	454.8	824.2	<.0001
No	None	Yes	None	608.8	60.7	424.1	793.5	<.0001
Yes	None	Yes	N95 respirator	399.0	60.7	214.3	583.7	<.0001
Yes	None	No	N95 respirator	365.5	60.7	180.7	550.2	<.0001
Yes	Surgical mask	Yes	N95 respirator	356.5	60.7	171.8	541.2	<.0001
No	None	No	Surgical mask	334.8	60.7	150.0	519.5	<.0001
Yes	Surgical mask	No	N95 respirator	323.0	60.7	138.2	507.7	0.0001
No	Surgical mask	Yes	Surgical mask	316.5	60.7	131.8	501.3	0.0002
No	Surgical mask	Yes	None	274.0	60.7	89.3	458.8	0.0012
Yes	None	Yes	Surgical mask	42.5	60.7	-142.2	227.2	0.9805
No	N95 respirator	Yes	N95 respirator	33.5	60.7	-151.2	218.2	0.9933

*Adjusted p-values are obtained from Tukey multiple comparison tests.

Table S7: Average particle concentration (# particles/cm³) in collection chamber by particle size bin for each experiment. Background concentrations have been subtracted.

Aerosol particle size bins																
Lower bound (μm)	0.3	0.374	0.465	0.579	0.721	0.897	1.117	1.391	1.732	2.156	2.685	3.343	4.162	5.182	6.451	8.032
Upper bound (μm)	0.374	0.465	0.579	0.721	0.897	1.117	1.391	1.732	2.156	2.685	3.343	4.162	5.182	6.451	8.032	10
Experiment	Average particle concentration (#/cm ³)															
ILC-Non-N95-001	1.665E+02	8.115E+01	4.730E+01	1.956E+01	1.362E+01	1.077E+01	3.779E+00	2.897E+00	1.984E+00	8.545E-01	2.467E-01	6.555E-02	2.017E-02	6.409E-03	2.101E-03	7.353E-04
ILC-Non-N95-002	3.599E+02	1.883E+02	1.153E+02	4.966E+01	3.574E+01	3.057E+01	1.079E+01	8.602E+00	5.865E+00	2.614E+00	7.686E-01	2.085E-01	5.235E-02	1.356E-02	5.042E-03	8.960E-04
ILC-Non-N95-003	1.433E+02	6.995E+01	4.093E+01	1.730E+01	1.213E+01	9.658E+00	3.490E+00	2.681E+00	1.794E+00	7.834E-01	2.226E-01	6.432E-02	1.629E-02	4.594E-03	1.252E-03	4.178E-04
ILC-Non-N95-004	9.581E+01	4.562E+01	2.679E+01	1.116E+01	7.680E+00	6.026E+00	2.163E+00	1.691E+00	1.128E+00	4.824E-01	1.378E-01	3.506E-02	9.357E-03	3.290E-03	7.201E-04	3.084E-04
ILC-Non-N95-005	9.667E+01	4.643E+01	2.723E+01	1.145E+01	7.916E+00	6.369E+00	2.261E+00	1.762E+00	1.226E+00	5.303E-01	1.529E-01	3.581E-02	9.876E-03	2.984E-03	1.337E-03	5.145E-04
ILC-Non-N95-006	2.019E+02	9.904E+01	5.927E+01	2.473E+01	1.739E+01	1.447E+01	4.602E+00	3.598E+00	2.488E+00	1.106E+00	3.250E-01	8.730E-02	2.167E-02	6.692E-03	2.337E-03	4.249E-04
ILC-Non-Non-001	7.529E+02	4.372E+02	2.924E+02	1.259E+02	9.201E+01	9.303E+01	3.160E+01	2.471E+01	1.663E+01	7.498E+00	2.134E+00	6.156E-01	1.901E-01	5.665E-02	1.547E-02	6.559E-03
ILC-Non-Non-002	7.714E+02	4.550E+02	3.123E+02	1.377E+02	1.035E+02	1.054E+02	3.760E+01	2.984E+01	2.067E+01	9.451E+00	2.758E+00	7.564E-01	2.214E-01	6.073E-02	1.973E-02	7.706E-03
ILC-Non-Non-003	7.647E+02	4.494E+02	3.051E+02	1.335E+02	9.921E+01	1.036E+02	3.494E+01	2.759E+01	1.899E+01	8.680E+00	2.514E+00	6.993E-01	2.118E-01	6.076E-02	1.924E-02	7.826E-03
ILC-Non-Non-004	7.850E+02	4.511E+02	3.116E+02	1.354E+02	9.958E+01	1.025E+02	3.453E+01	2.751E+01	1.893E+01	8.390E+00	2.398E+00	6.733E-01	1.974E-01	6.167E-02	2.108E-02	9.272E-03
ILC-Non-Non-005	7.875E+02	4.600E+02	3.184E+02	1.398E+02	1.044E+02	1.074E+02	3.629E+01	2.932E+01	2.040E+01	9.257E+00	2.687E+00	7.502E-01	2.053E-01	6.007E-02	2.101E-02	6.251E-03
ILC-Non-Non-006	7.769E+02	4.541E+02	3.114E+02	1.356E+02	1.002E+02	1.019E+02	3.473E+01	2.757E+01	1.883E+01	8.493E+00	2.511E+00	6.937E-01	2.019E-01	6.318E-02	1.805E-02	5.459E-03
ILC-Non-Sur-001	6.735E+02	3.740E+02	2.479E+02	1.058E+02	7.644E+01	7.291E+01	2.424E+01	1.897E+01	1.272E+01	5.563E+00	1.570E+00	4.293E-01	1.245E-01	3.932E-02	1.318E-02	3.518E-03
ILC-Non-Sur-002	6.602E+02	3.723E+02	2.479E+02	1.080E+02	7.965E+01	7.755E+01	2.616E+01	2.098E+01	1.455E+01	6.521E+00	1.875E+00	5.148E-01	1.379E-01	3.952E-02	1.131E-02	4.529E-03
ILC-Non-Sur-003	6.180E+02	3.426E+02	2.252E+02	9.766E+01	7.146E+01	6.824E+01	2.300E+01	1.839E+01	1.279E+01	5.814E+00	1.688E+00	4.696E-01	1.363E-01	3.456E-02	1.074E-02	4.691E-03
ILC-Non-Sur-004	6.484E+02	3.566E+02	2.369E+02	1.017E+02	7.389E+01	7.093E+01	2.398E+01	1.913E+01	1.296E+01	5.655E+00	1.567E+00	4.276E-01	1.177E-01	3.800E-02	1.010E-02	3.983E-03
ILC-Non-Sur-005	6.575E+02	3.650E+02	2.441E+02	1.053E+02	7.686E+01	7.570E+01	2.559E+01	2.049E+01	1.416E+01	6.407E+00	1.818E+00	5.052E-01	1.465E-01	4.258E-02	1.407E-02	5.271E-03
ILC-Non-Sur-006	6.701E+02	3.729E+02	2.489E+02	1.067E+02	7.741E+01	7.458E+01	2.465E+01	1.958E+01	1.348E+01	6.004E+00	1.715E+00	4.653E-01	1.315E-01	4.010E-02	9.668E-03	5.531E-03
ILC-Std-N95-001	1.207E+02	5.925E+01	3.386E+01	1.410E+01	9.872E+00	7.744E+00	2.378E+00	1.826E+00	1.213E+00	5.020E-01	1.357E-01	2.942E-02	7.666E-03	1.968E-03	6.217E-04	1.035E-04
ILC-Std-N95-002	2.320E+02	1.175E+02	6.754E+01	2.818E+01	1.971E+01	1.591E+01	5.062E+00	3.860E+00	2.478E+00	1.070E+00	2.901E-01	6.683E-02	1.609E-02	4.827E-03	1.073E-03	3.218E-04
ILC-Std-N95-003	3.281E+02	1.667E+02	1.008E+02	4.208E+01	2.911E+01	2.394E+01	8.147E+00	6.206E+00	4.032E+00	1.691E+00	4.303E-01	1.038E-01	2.464E-02	6.741E-03	1.548E-03	9.938E-04
ILC-Std-N95-004	9.594E+01	4.585E+01	2.662E+01	1.097E+01	7.581E+00	5.995E+00	1.816E+00	1.399E+00	9.248E-01	3.843E-01	9.488E-02	1.871E-02	4.934E-03	1.336E-03	4.112E-04	3.084E-04
ILC-Std-N95-005	2.801E+02	1.408E+02	8.380E+01	3.500E+01	2.433E+01	2.004E+01	6.521E+00	5.006E+00	3.320E+00	1.408E+00	3.832E-01	7.874E-02	2.025E-02	4.789E-03	1.633E-03	5.438E-04
ILC-Std-N95-006	1.326E+02	6.479E+01	3.687E+01	1.508E+01	1.032E+01	8.078E+00	2.477E+00	1.912E+00	1.230E+00	4.935E-01	1.268E-01	2.983E-02	2.860E-03	1.664E-03	4.160E-04	5.200E-04
ILC-Std-Non-001	7.403E+02	4.380E+02	2.922E+02	1.283E+02	9.547E+01	9.732E+01	3.314E+01	2.637E+01	1.789E+01	8.090E+00	2.288E+00	6.077E-01	1.624E-01	3.963E-02	1.169E-02	5.125E-03
ILC-Std-Non-002	8.143E+02	4.787E+02	3.289E+02	1.427E+02	1.052E+02	1.056E+02	3.539E+01	2.778E+01	1.855E+01	7.933E+00	2.179E+00	5.711E-01	1.403E-01	3.941E-02	1.326E-02	6.174E-03
ILC-Std-Non-003	7.688E+02	4.476E+02	3.020E+02	1.308E+02	9.615E+01	9.509E+01	3.124E+01	2.452E+01	1.658E+01	7.186E+00	1.988E+00	5.253E-01	1.397E-01	3.916E-02	1.236E-02	4.728E-03
ILC-Std-Non-004	7.665E+02	4.396E+02	2.959E+02	1.268E+02	9.190E+01	8.966E+01	2.901E+01	2.258E+01	1.497E+01	6.333E+00	1.741E+00	4.621E-01	1.179E-01	3.383E-02	1.084E-02	3.656E-03
ILC-Std-Non-005	7.820E+02	4.461E+02	3.026E+02	1.284E+02	9.289E+01	9.167E+01	2.976E+01	2.308E+01	1.531E+01	6.503E+00	1.709E+00	4.351E-01	1.024E-01	3.150E-02	1.116E-02	2.754E-03
ILC-Std-Non-006	8.164E+02	4.746E+02	3.260E+02	1.392E+02	1.013E+02	1.006E+02	3.328E+01	2.573E+01	1.699E+01	7.294E+00	2.032E+00	5.248E-01	1.530E-01	4.339E-02	1.280E-02	3.472E-03
ILC-Std-Sur-001	6.982E+02	4.029E+02	2.658E+02	1.156E+02	8.498E+01	8.116E+01	2.795E+01	2.153E+01	1.419E+01	6.120E+00	1.641E+00	3.924E-01	9.547E-02	1.971E-02	6.273E-03	1.408E-03
ILC-Std-Sur-002	6.982E+02	3.924E+02	2.574E+02	1.087E+02	7.771E+01	7.222E+01	2.318E+01	1.752E+01	1.122E+01	4.497E+00	1.122E+00	2.702E-01	6.398E-02	1.833E-02	4.675E-03	2.148E-03
ILC-Std-Sur-003	6.981E+02	3.929E+02	2.590E+02	1.097E+02	7.883E+01	7.374E+01	2.395E+01	1.837E+01	1.184E+01	4.882E+00	1.279E+00	3.022E-01	9.063E-02	2.341E-02	7.340E-03	1.649E-03
ILC-Std-Sur-004	6.115E+02	3.337E+02	2.131E+02	8.992E+01	6.385E+01	5.742E+01	1.832E+01	1.400E+01	8.999E+00	3.691E+00	9.485E-01	2.332E-01	5.454E-02	1.671E-02	5.369E-03	1.098E-03
ILC-Std-Sur-005	6.732E+02	3.801E+02	2.468E+02	1.055E+02	7.608E+01	7.189E+01	2.412E+01	1.855E+01	1.224E+01	5.191E+00	1.371E+00	3.311E-01	8.563E-02	1.561E-02	4.281E-03	8.813E-04
ILC-Std-Sur-006	6.809E+02	3.787E+02	2.489E+02	1.045E+02	7.455E+01	6.950E+01	2.216E+01	1.687E+01	1.096E+01	4.532E+00	1.201E+00	3.032E-01	6.969E-02	1.908E-02	6.526E-03	3.139E-03
Max-Cuf-N95-001	1.163E+02	5.696E+01	3.233E+01	1.350E+01	9.308E+00	7.292E+00	2.213E+00	1.674E+00	1.112E+00	5.148E-01	1.419E-01	3.774E-02	1.199E-02	4.344E-03	7.246E-04	9.309E-04
Max-Cuf-N95-002	1.950E+02	9.790E+01	5.673E+01	2.395E+01	1.682E+01	1.351E+01	4.380E+00	3.485E+00	2.363E+00	1.067E+00	2.985E-01	7.973E-02	2.046E-02	4.136E-03	2.015E-03	6.361E-04

Max-Cuf-N95-003	3.744E+02	1.947E+02	1.183E+02	4.982E+01	3.525E+01	3.017E+01	9.266E+00	7.293E+00	4.966E+00	2.174E+00	6.078E-01	1.672E-01	4.638E-02	1.213E-02	4.040E-03	1.236E-03
Max-Cuf-N95-004	2.357E+02	1.162E+02	6.964E+01	2.913E+01	2.026E+01	1.715E+01	5.404E+00	4.200E+00	2.817E+00	1.201E+00	3.214E-01	8.037E-02	2.243E-02	0.000E+00	1.931E-03	0.000E+00
Max-Cuf-N95-005	3.377E+02	1.692E+02	1.035E+02	4.319E+01	3.007E+01	2.586E+01	8.359E+00	6.451E+00	4.287E+00	1.814E+00	4.949E-01	1.281E-01	3.168E-02	8.302E-03	3.209E-03	1.550E-03
Max-Cuf-N95-006	3.300E+02	1.648E+02	9.832E+01	4.054E+01	2.783E+01	2.284E+01	7.264E+00	5.506E+00	3.543E+00	1.501E+00	4.158E-01	1.054E-01	2.725E-02	9.376E-03	4.963E-03	7.720E-04
Max-Cuf-Non-001	7.263E+02	4.201E+02	2.782E+02	1.207E+02	8.793E+01	8.520E+01	2.794E+01	2.180E+01	1.490E+01	6.688E+00	1.946E+00	5.532E-01	1.519E-01	3.791E-02	1.586E-02	6.708E-03
Max-Cuf-Non-002	7.509E+02	4.341E+02	2.898E+02	1.245E+02	9.042E+01	8.738E+01	2.910E+01	2.266E+01	1.531E+01	6.762E+00	1.940E+00	5.529E-01	1.664E-01	4.543E-02	1.778E-02	8.958E-03
Max-Cuf-Non-003	7.536E+02	4.387E+02	2.942E+02	1.273E+02	9.270E+01	9.097E+01	3.040E+01	2.376E+01	1.614E+01	7.198E+00	2.118E+00	5.878E-01	1.746E-01	5.886E-02	1.853E-02	7.434E-03
Max-Cuf-Non-004	7.097E+02	4.084E+02	2.721E+02	1.181E+02	8.723E+01	8.822E+01	2.889E+01	2.274E+01	1.549E+01	6.871E+00	2.010E+00	5.558E-01	1.643E-01	4.932E-02	1.522E-02	6.714E-03
Max-Cuf-Non-005	7.537E+02	4.305E+02	2.922E+02	1.264E+02	9.260E+01	9.269E+01	3.023E+01	2.377E+01	1.588E+01	7.049E+00	1.960E+00	5.341E-01	1.515E-01	4.682E-02	1.521E-02	7.157E-03
Max-Cuf-Non-006	7.534E+02	4.267E+02	2.843E+02	1.203E+02	8.602E+01	8.226E+01	2.702E+01	2.061E+01	1.344E+01	5.746E+00	1.599E+00	4.349E-01	1.347E-01	4.278E-02	1.783E-02	8.262E-03
Max-Cuf-Sur-001	6.668E+02	3.770E+02	2.458E+02	1.056E+02	7.642E+01	7.206E+01	2.340E+01	1.839E+01	1.247E+01	5.545E+00	1.605E+00	4.435E-01	1.248E-01	3.935E-02	1.291E-02	6.014E-03
Max-Cuf-Sur-002	5.963E+02	3.361E+02	2.139E+02	9.208E+01	6.700E+01	6.207E+01	2.055E+01	1.616E+01	1.104E+01	4.973E+00	1.450E+00	3.920E-01	1.128E-01	2.932E-02	7.706E-03	2.329E-03
Max-Cuf-Sur-003	6.363E+02	3.580E+02	2.308E+02	9.901E+01	7.185E+01	6.624E+01	2.181E+01	1.710E+01	1.146E+01	5.096E+00	1.456E+00	3.935E-01	1.061E-01	3.167E-02	8.045E-03	4.084E-03
Max-Cuf-Sur-004	6.210E+02	3.441E+02	2.247E+02	9.683E+01	7.042E+01	6.790E+01	2.228E+01	1.748E+01	1.192E+01	5.283E+00	1.504E+00	4.070E-01	1.243E-01	3.546E-02	1.371E-02	5.666E-03
Max-Cuf-Sur-005	5.750E+02	3.081E+02	1.989E+02	8.433E+01	6.033E+01	5.607E+01	1.778E+01	1.386E+01	9.256E+00	4.028E+00	1.098E+00	2.993E-01	8.711E-02	2.386E-02	9.759E-03	5.057E-03
Max-Cuf-Sur-006	6.780E+02	3.772E+02	2.438E+02	1.025E+02	7.256E+01	6.717E+01	2.201E+01	1.683E+01	1.093E+01	4.587E+00	1.292E+00	3.479E-01	9.881E-02	3.135E-02	1.041E-02	5.020E-03
Max-Non-N95-001	6.996E+01	3.416E+01	1.895E+01	7.803E+00	5.488E+00	4.210E+00	1.310E+00	9.734E-01	6.400E-01	3.042E-01	8.072E-02	2.511E-02	8.574E-03	2.858E-03	0.000E+00	7.146E-04
Max-Non-N95-002	1.710E+02	8.344E+01	4.835E+01	1.992E+01	1.369E+01	1.094E+01	3.405E+00	2.675E+00	1.762E+00	7.696E-01	2.201E-01	5.570E-02	1.650E-02	5.465E-03	2.102E-03	1.157E-03
Max-Non-N95-003	2.665E+02	1.326E+02	7.910E+01	3.275E+01	2.267E+01	1.887E+01	5.781E+00	4.555E+00	3.073E+00	1.341E+00	3.704E-01	1.025E-01	2.468E-02	6.277E-03	3.030E-03	1.083E-03
Max-Non-N95-004	1.663E+02	7.868E+01	4.572E+01	1.840E+01	1.251E+01	9.899E+00	3.097E+00	2.342E+00	1.541E+00	6.601E-01	1.801E-01	4.507E-02	1.195E-02	5.135E-03	2.306E-03	1.048E-03
Max-Non-N95-005	2.067E+02	9.961E+01	5.965E+01	2.466E+01	1.700E+01	1.374E+01	4.887E+00	3.642E+00	2.463E+00	1.046E+00	2.823E-01	7.882E-02	1.990E-02	6.479E-03	2.868E-03	0.000E+00
Max-Non-N95-006	1.601E+02	7.643E+01	4.386E+01	1.795E+01	1.222E+01	9.764E+00	2.862E+00	2.255E+00	1.459E+00	5.974E-01	1.607E-01	4.259E-02	1.329E-02	3.454E-03	1.883E-03	1.465E-03
Max-Non-Non-001	7.699E+02	4.562E+02	3.040E+02	1.345E+02	1.003E+02	1.006E+02	3.384E+01	2.662E+01	1.818E+01	8.474E+00	2.589E+00	7.517E-01	2.346E-01	6.254E-02	2.182E-02	8.071E-03
Max-Non-Non-002	7.668E+02	4.519E+02	3.004E+02	1.325E+02	9.915E+01	9.769E+01	3.262E+01	2.554E+01	1.733E+01	7.891E+00	2.383E+00	6.754E-01	2.036E-01	6.067E-02	1.854E-02	6.847E-03
Max-Non-Non-003	7.696E+02	4.509E+02	3.021E+02	1.332E+02	9.893E+01	9.811E+01	3.293E+01	2.577E+01	1.763E+01	7.956E+00	2.388E+00	6.783E-01	2.010E-01	6.120E-02	2.093E-02	5.396E-03
Max-Non-Non-004	7.640E+02	4.364E+02	2.974E+02	1.286E+02	9.439E+01	9.534E+01	3.172E+01	2.494E+01	1.700E+01	7.601E+00	2.193E+00	6.153E-01	1.789E-01	5.337E-02	2.209E-02	9.414E-03
Max-Non-Non-005	7.629E+02	4.316E+02	2.937E+02	1.258E+02	9.098E+01	9.128E+01	3.080E+01	2.379E+01	1.590E+01	6.931E+00	1.895E+00	5.293E-01	1.509E-01	4.342E-02	1.838E-02	7.305E-03
Max-Non-Non-006	7.822E+02	4.458E+02	2.970E+02	1.267E+02	9.116E+01	8.779E+01	2.861E+01	2.191E+01	1.445E+01	6.170E+00	1.731E+00	4.996E-01	1.566E-01	5.217E-02	2.406E-02	1.138E-02
Max-Non-Sur-001	5.956E+02	3.313E+02	2.094E+02	8.969E+01	6.483E+01	5.976E+01	1.944E+01	1.526E+01	1.038E+01	4.670E+00	1.380E+00	3.705E-01	1.084E-01	2.944E-02	9.032E-03	4.025E-03
Max-Non-Sur-002	6.207E+02	3.414E+02	2.188E+02	9.244E+01	6.589E+01	6.101E+01	1.950E+01	1.519E+01	1.018E+01	4.504E+00	1.284E+00	3.538E-01	9.613E-02	3.032E-02	1.142E-02	4.296E-03
Max-Non-Sur-003	5.886E+02	3.222E+02	2.062E+02	8.790E+01	6.274E+01	5.777E+01	1.857E+01	1.473E+01	1.004E+01	4.517E+00	1.292E+00	3.659E-01	1.055E-01	3.361E-02	1.165E-02	3.279E-03
Max-Non-Sur-004	6.243E+02	3.386E+02	2.215E+02	9.400E+01	6.703E+01	6.294E+01	2.171E+01	1.674E+01	1.124E+01	4.828E+00	1.337E+00	3.595E-01	1.006E-01	2.801E-02	6.060E-03	3.929E-03
Max-Non-Sur-005	6.404E+02	3.546E+02	2.248E+02	9.415E+01	6.694E+01	6.138E+01	2.007E+01	1.512E+01	9.923E+00	4.193E+00	1.169E+00	3.189E-01	9.594E-02	2.949E-02	1.277E-02	6.072E-03
Max-Non-Sur-006	6.577E+02	3.569E+02	2.310E+02	9.643E+01	6.826E+01	6.284E+01	2.066E+01	1.567E+01	1.021E+01	4.265E+00	1.181E+00	3.173E-01	9.444E-02	2.615E-02	1.066E-02	7.313E-03
Sal-HEP-N95-001	1.707E+02	8.483E+01	4.987E+01	2.106E+01	1.465E+01	1.161E+01	4.101E+00	3.145E+00	2.100E+00	8.922E-01	2.449E-01	6.704E-02	1.621E-02	4.630E-03	1.263E-03	5.262E-04
Sal-HEP-N95-002	7.608E+01	3.706E+01	2.151E+01	9.013E+00	6.295E+00	5.167E+00	1.593E+00	1.254E+00	8.753E-01	3.858E-01	1.080E-01	2.802E-02	6.648E-03	1.126E-03	2.044E-04	3.069E-04
Sal-HEP-N95-003	3.847E+01	1.807E+01	1.010E+01	4.053E+00	2.697E+00	1.936E+00	6.076E-01	4.696E-01	2.963E-01	1.227E-01	3.427E-02	9.098E-03	2.224E-03	3.033E-04	0.000E+00	0.000E+00
Sal-HEP-N95-004	6.240E+01	2.975E+01	1.668E+01	6.770E+00	4.638E+00	3.546E+00	1.148E+00	8.616E-01	5.776E-01	2.511E-01	7.215E-02	2.138E-02	7.127E-03	2.036E-03	1.018E-04	3.054E-04
Sal-HEP-N95-005	7.002E+01	3.336E+01	1.938E+01	8.013E+00	5.592E+00	4.589E+00	1.419E+00	1.139E+00	7.669E-01	3.592E-01	9.828E-02	2.592E-02	8.267E-03	1.939E-03	6.125E-04	1.020E-04
Sal-HEP-N95-006	5.706E+01	2.616E+01	1.504E+01	5.998E+00	3.995E+00	3.103E+00	1.031E+00	7.834E-01	4.988E-01	2.160E-01	5.130E-02	1.412E-02	3.352E-03	5.079E-04	0.000E+00	2.032E-04
Sal-HEP-Non-001	2.188E+02	1.083E+02	6.355E+01	2.645E+01	1.802E+01	1.397E+01	4.806E+00	3.602E+00	2.419E+00	1.026E+00	2.876E-01	8.368E-02	2.335E-02	6.928E-03	2.346E-03	6.393E-04
Sal-HEP-Non-002	3.453E+02	1.765E+02	1.081E+02	4.583E+01	3.231E+01	2.745E+01	9.801E+00	7.667E+00	5.029E+00	2.203E+00	6.155E-01	1.471E-01	3.765E-02	8.133E-03	2.006E-03	3.337E-04
Sal-HEP-Non-003	1.326E+02	6.212E+01	3.456E+01	1.377E+01	8.955E+00	6.583E+00	2.157E+00	1.536E+00	9.627E-01	4.243E-01	1.265E-01	3.381E-02	1.047E-02	3.422E-03	1.037E-03	5.185E-04
Sal-HEP-Non-004	3.293E+02	1.647E+02	9.963E+01	4.178E+01	2.895E+01	2.401E+01	7.696E+00	5.958E+00	3.973E+00	1.726E+00	4.829E-01	1.286E-01	4.017E-02	9.715E-03	3.863E-03	2.210E-04
Sal-HEP-Non-005	2.379E+02	1.164E+02	6.940E+01	2.883E+01	1.989E+01	1.634E+01	5.783E+00	4.474E+00	2.973E+00	1.340E+00	3.773E-01	1.167E-01	3.079E-02	9.976E-03	2.574E-03	6.436E-04
Sal-HEP-Non-006	2.516E+02	1.215E+02	7.381E+01	3.015E+01	2.080E+01	1.782E+01	5.714E+00	4.613E+00	3.112E+00	1.354E+00	3.694E-01	9.581E-02	2.153E-02	8.396E-03	2.369E-03	5.380E-04
Sal-HEP-Sur-007	2.836E+02	1.438E+02	8.256E+01	3.446E+01	2.387E+01	1.877E+01	5.838E+00	4.374E+00	2.810E+00	1.186E+00	3.178E-01	7.746E-02	2.295E-02	6.853E-03	1.631E-03	6.519E-04
Sal-HEP-Sur-008	2.997E+02	1.523E+02	8.711E+01	3.587E+01	2.474E+01	1.928E+01	6.172E+00	4.426E+00	2.796E+00	1.144E+00	2.984E-01	7.436E-02	2.187E-02	5.687E-03	2.953E-03	7.654E-04

Sal-HEP-Sur-009	4.036E+02	2.073E+02	1.227E+02	5.015E+01	3.449E+01	2.782E+01	9.168E+00	6.729E+00	4.339E+00	1.783E+00	4.915E-01	1.489E-01	4.948E-02	1.888E-02	8.936E-03	4.633E-03
Sal-HEP-Sur-010	3.030E+02	1.499E+02	8.676E+01	3.506E+01	2.368E+01	1.883E+01	5.451E+00	4.007E+00	2.510E+00	9.802E-01	2.376E-01	5.470E-02	1.146E-02	3.931E-03	1.528E-03	4.368E-04
Sal-HEP-Sur-011	2.493E+02	1.236E+02	6.776E+01	2.713E+01	1.830E+01	1.380E+01	3.803E+00	2.701E+00	1.688E+00	6.573E-01	1.672E-01	3.987E-02	1.042E-02	3.868E-03	9.668E-04	7.522E-04
Sal-HEP-Sur-012	2.961E+02	1.470E+02	8.410E+01	3.389E+01	2.286E+01	1.740E+01	5.669E+00	3.982E+00	2.416E+00	9.180E-01	2.239E-01	4.764E-02	8.860E-03	4.250E-03	2.397E-03	7.627E-04
Sal-Non-N95-001	1.794E+02	8.936E+01	5.395E+01	2.326E+01	1.652E+01	1.431E+01	4.752E+00	3.927E+00	2.794E+00	1.318E+00	3.965E-01	1.185E-01	3.761E-02	9.932E-03	2.431E-03	9.504E-04
Sal-Non-N95-002	1.201E+02	5.891E+01	3.512E+01	1.511E+01	1.069E+01	9.118E+00	2.925E+00	2.388E+00	1.695E+00	8.042E-01	2.328E-01	6.101E-02	1.680E-02	5.080E-03	1.348E-03	7.258E-04
Sal-Non-N95-003	1.724E+02	8.705E+01	5.139E+01	2.231E+01	1.627E+01	1.366E+01	4.787E+00	3.868E+00	2.777E+00	1.317E+00	3.921E-01	1.125E-01	3.642E-02	7.602E-03	2.957E-03	3.167E-04
Sal-Non-N95-004	1.462E+02	7.348E+01	4.362E+01	1.889E+01	1.358E+01	1.153E+01	3.839E+00	3.159E+00	2.240E+00	1.060E+00	2.995E-01	8.464E-02	2.427E-02	7.847E-03	2.720E-03	1.151E-03
Sal-Non-N95-005	1.751E+02	8.729E+01	5.204E+01	2.241E+01	1.602E+01	1.364E+01	4.605E+00	3.760E+00	2.685E+00	1.319E+00	3.920E-01	1.193E-01	3.565E-02	9.067E-03	1.793E-03	9.489E-04
Sal-Non-N95-006	1.354E+02	6.674E+01	3.956E+01	1.696E+01	1.212E+01	1.037E+01	3.379E+00	2.763E+00	1.981E+00	9.499E-01	2.841E-01	7.594E-02	2.198E-02	7.084E-03	1.875E-03	8.334E-04
Sal-Non-Non-001	7.987E+02	4.786E+02	3.284E+02	1.448E+02	1.075E+02	1.104E+02	3.744E+01	2.946E+01	2.028E+01	9.297E+00	2.800E+00	8.414E-01	2.418E-01	6.874E-02	1.816E-02	6.850E-03
Sal-Non-Non-002	8.375E+02	5.018E+02	3.523E+02	1.570E+02	1.186E+02	1.226E+02	4.191E+01	3.298E+01	2.261E+01	1.006E+01	2.957E+00	8.475E-01	2.576E-01	7.441E-02	2.444E-02	1.023E-02
Sal-Non-Non-003	8.321E+02	4.933E+02	3.526E+02	1.570E+02	1.187E+02	1.271E+02	4.450E+01	3.636E+01	2.571E+01	1.179E+01	3.507E+00	9.856E-01	2.639E-01	7.233E-02	2.346E-02	8.461E-03
Sal-Non-Non-004	8.060E+02	4.740E+02	3.249E+02	1.414E+02	1.041E+02	1.073E+02	3.536E+01	2.832E+01	1.983E+01	9.287E+00	2.770E+00	8.425E-01	2.814E-01	8.753E-02	2.291E-02	9.110E-03
Sal-Non-Non-005	8.126E+02	4.716E+02	3.351E+02	1.474E+02	1.100E+02	1.184E+02	4.182E+01	3.351E+01	2.371E+01	1.117E+01	3.405E+00	1.035E+00	3.252E-01	1.018E-01	2.880E-02	6.188E-03
Sal-Non-Non-006	8.121E+02	4.653E+02	3.311E+02	1.437E+02	1.067E+02	1.143E+02	3.889E+01	3.182E+01	2.245E+01	1.041E+01	3.101E+00	9.486E-01	2.900E-01	9.606E-02	3.016E-02	1.018E-02
Sal-Non-Sur-007	6.500E+02	3.664E+02	2.308E+02	9.838E+01	7.023E+01	6.463E+01	2.094E+01	1.594E+01	1.045E+01	4.512E+00	1.319E+00	3.692E-01	1.082E-01	3.580E-02	1.471E-02	6.099E-03
Sal-Non-Sur-008	6.938E+02	3.956E+02	2.550E+02	1.094E+02	7.889E+01	7.311E+01	2.382E+01	1.801E+01	1.176E+01	5.017E+00	1.387E+00	3.750E-01	1.085E-01	3.051E-02	1.090E-02	3.667E-03
Sal-Non-Sur-009	7.645E+02	4.446E+02	2.916E+02	1.245E+02	9.006E+01	8.605E+01	2.700E+01	2.018E+01	1.325E+01	5.695E+00	1.615E+00	4.395E-01	1.334E-01	4.077E-02	2.162E-02	9.246E-03
Sal-Non-Sur-010	7.636E+02	4.386E+02	2.875E+02	1.220E+02	8.745E+01	8.149E+01	2.614E+01	1.951E+01	1.259E+01	5.323E+00	1.474E+00	4.137E-01	1.251E-01	3.926E-02	1.748E-02	7.506E-03
Sal-Non-Sur-011	7.444E+02	4.196E+02	2.758E+02	1.160E+02	8.259E+01	7.723E+01	2.498E+01	1.853E+01	1.186E+01	4.883E+00	1.310E+00	3.447E-01	9.442E-02	3.301E-02	1.465E-02	4.368E-03
Sal-Non-Sur-012	7.012E+02	3.979E+02	2.546E+02	1.076E+02	7.704E+01	7.225E+01	2.227E+01	1.673E+01	1.082E+01	4.602E+00	1.281E+00	3.368E-01	1.084E-01	3.796E-02	1.193E-02	2.984E-03
Sal-Std-N95-001	2.682E+02	1.369E+02	8.283E+01	3.529E+01	2.473E+01	2.024E+01	6.945E+00	5.446E+00	3.704E+00	1.620E+00	4.691E-01	1.243E-01	3.592E-02	1.009E-02	3.363E-03	3.259E-04
Sal-Std-N95-002	3.176E+02	1.656E+02	9.990E+01	4.286E+01	3.053E+01	2.547E+01	9.035E+00	7.062E+00	4.674E+00	2.117E+00	6.034E-01	1.654E-01	4.032E-02	9.280E-03	1.766E-03	1.216E-03
Sal-Std-N95-003	1.999E+02	9.847E+01	6.030E+01	2.556E+01	1.816E+01	1.516E+01	5.551E+00	4.434E+00	3.093E+00	1.377E+00	4.122E-01	1.044E-01	2.137E-02	6.805E-03	1.807E-03	4.253E-04
Sal-Std-N95-004	2.264E+02	1.116E+02	6.634E+01	2.773E+01	1.924E+01	1.534E+01	5.422E+00	4.130E+00	2.748E+00	1.227E+00	3.538E-01	1.064E-01	2.887E-02	7.379E-03	2.995E-03	8.554E-04
Sal-Std-N95-005	9.828E+01	4.736E+01	2.748E+01	1.138E+01	7.800E+00	6.291E+00	1.901E+00	1.482E+00	9.977E-01	4.650E-01	1.364E-01	3.755E-02	1.317E-02	3.909E-03	6.172E-04	5.142E-04
Sal-Std-N95-006	1.220E+02	5.797E+01	3.496E+01	1.455E+01	1.018E+01	8.505E+00	2.913E+00	2.239E+00	1.594E+00	7.094E-01	2.032E-01	5.534E-02	1.585E-02	3.627E-03	1.762E-03	2.073E-04
Sal-Std-Non-001	7.994E+02	4.772E+02	3.286E+02	1.450E+02	1.083E+02	1.089E+02	3.631E+01	2.882E+01	1.980E+01	9.066E+00	2.748E+00	8.056E-01	2.417E-01	6.877E-02	1.770E-02	5.888E-03
Sal-Std-Non-002	8.192E+02	4.913E+02	3.445E+02	1.529E+02	1.151E+02	1.187E+02	4.062E+01	3.202E+01	2.208E+01	1.000E+01	2.966E+00	8.308E-01	2.353E-01	6.381E-02	1.548E-02	6.655E-03
Sal-Std-Non-003	8.043E+02	4.672E+02	3.353E+02	1.479E+02	1.108E+02	1.199E+02	4.231E+01	3.452E+01	2.462E+01	1.154E+01	3.528E+00	1.063E+00	3.191E-01	9.690E-02	3.346E-02	8.091E-03
Sal-Std-Non-004	8.266E+02	4.851E+02	3.362E+02	1.464E+02	1.080E+02	1.094E+02	3.637E+01	2.860E+01	1.957E+01	8.989E+00	2.732E+00	8.086E-01	2.504E-01	7.342E-02	2.345E-02	5.923E-03
Sal-Std-Non-005	8.195E+02	4.817E+02	3.335E+02	1.449E+02	1.060E+02	1.074E+02	3.478E+01	2.749E+01	1.887E+01	8.647E+00	2.562E+00	7.512E-01	2.405E-01	6.872E-02	2.237E-02	7.901E-03
Sal-Std-Non-006	7.914E+02	4.596E+02	3.248E+02	1.421E+02	1.063E+02	1.164E+02	4.101E+01	3.302E+01	2.318E+01	1.091E+01	3.284E+00	9.388E-01	2.925E-01	9.669E-02	2.811E-02	6.730E-03
Sal-Std-Sur-007	6.665E+02	3.790E+02	2.404E+02	1.031E+02	7.407E+01	6.787E+01	2.153E+01	1.634E+01	1.070E+01	4.679E+00	1.289E+00	3.667E-01	1.021E-01	2.857E-02	1.028E-02	3.384E-03
Sal-Std-Sur-008	6.963E+02	3.994E+02	2.543E+02	1.077E+02	7.742E+01	7.237E+01	2.309E+01	1.724E+01	1.118E+01	4.833E+00	1.368E+00	3.640E-01	1.079E-01	2.658E-02	1.234E-02	6.103E-03
Sal-Std-Sur-009	6.714E+02	3.790E+02	2.426E+02	1.032E+02	7.392E+01	6.778E+01	2.154E+01	1.609E+01	1.051E+01	4.424E+00	1.245E+00	3.175E-01	9.669E-02	3.169E-02	1.290E-02	5.763E-03
Sal-Std-Sur-010	7.166E+02	4.032E+02	2.596E+02	1.093E+02	7.702E+01	7.021E+01	2.239E+01	1.648E+01	1.047E+01	4.352E+00	1.151E+00	3.092E-01	8.547E-02	3.044E-02	1.382E-02	7.228E-03
Sal-Std-Sur-011	6.870E+02	3.805E+02	2.465E+02	1.031E+02	7.305E+01	6.754E+01	2.077E+01	1.552E+01	1.006E+01	4.187E+00	1.115E+00	2.950E-01	8.346E-02	2.871E-02	1.041E-02	4.886E-03
Sal-Std-Sur-012	7.074E+02	4.002E+02	2.564E+02	1.083E+02	7.717E+01	7.091E+01	2.179E+01	1.611E+01	1.029E+01	4.331E+00	1.150E+00	2.989E-01	8.829E-02	2.724E-02	1.255E-02	4.817E-03
Ver-Non-N95-001	1.206E+02	5.955E+01	3.501E+01	1.496E+01	1.060E+01	8.535E+00	3.019E+00	2.404E+00	1.694E+00	7.755E-01	2.234E-01	6.140E-02	1.525E-02	4.253E-03	6.224E-04	3.112E-04
Ver-Non-N95-002	4.035E+02	2.118E+02	1.308E+02	5.602E+01	4.021E+01	3.643E+01	1.278E+01	1.026E+01	7.074E+00	3.312E+00	9.771E-01	2.676E-01	8.155E-02	2.030E-02	6.723E-03	1.714E-03
Ver-Non-N95-003	8.566E+01	4.034E+01	2.336E+01	9.510E+00	6.471E+00	5.253E+00	1.659E+00	1.238E+00	8.120E-01	3.873E-01	1.043E-01	2.726E-02	7.378E-03	1.844E-03	1.025E-03	5.123E-04
Ver-Non-N95-004	1.957E+02	9.675E+01	5.554E+01	2.301E+01	1.587E+01	1.274E+01	4.324E+00	3.336E+00	2.200E+00	9.900E-01	2.768E-01	7.262E-02	1.678E-02	5.303E-03	1.484E-03	5.302E-04
Ver-Non-N95-005	1.666E+02	8.040E+01	4.651E+01	1.910E+01	1.311E+01	1.044E+01	3.510E+00	2.671E+00	1.768E+00	7.413E-01	2.028E-01	5.428E-02	1.365E-02	9.358E-05	1.890E-03	1.155E-03
Ver-Non-N95-006	6.451E+01	2.967E+01	1.707E+01	6.887E+00	4.616E+00	3.660E+00	1.124E+00	7.858E-01	5.413E-01	2.478E-01	6.537E-02	2.036E-02	4.378E-03	1.323E-03	6.109E-04	5.088E-04
Ver-Non-Non-001	8.573E+02	5.293E+02	3.780E+02	1.708E+02	1.317E+02	1.485E+02	5.186E+01	4.227E+01	3.015E+01	1.446E+01	4.508E+00	1.358E+00	3.978E-01	1.055E-01	2.402E-02	6.777E-03
Ver-Non-Non-002	8.617E+02	5.157E+02	3.606E+02	1.565E+02	1.159E+02	1.218E+02	4.203E+01	3.301E+01	2.225E+01	9.925E+00	2.873E+00	7.988E-01	2.330E-01	7.186E-02	2.128E-02	7.467E-03

Ver-Non-Non-003	8.488E+02	4.973E+02	3.474E+02	1.493E+02	1.098E+02	1.144E+02	3.843E+01	3.019E+01	2.073E+01	9.305E+00	2.715E+00	7.489E-01	2.444E-01	8.210E-02	2.722E-02	1.211E-02
Ver-Non-Non-004	8.688E+02	5.148E+02	3.580E+02	1.550E+02	1.143E+02	1.178E+02	3.894E+01	3.037E+01	2.059E+01	9.153E+00	2.606E+00	7.362E-01	2.332E-01	7.048E-02	2.729E-02	1.248E-02
Ver-Non-Non-005	8.474E+02	5.048E+02	3.464E+02	1.487E+02	1.098E+02	1.157E+02	3.822E+01	2.947E+01	1.980E+01	8.811E+00	2.531E+00	7.029E-01	2.162E-01	6.148E-02	1.916E-02	7.808E-03
Ver-Non-Non-006	8.772E+02	5.165E+02	3.612E+02	1.548E+02	1.137E+02	1.178E+02	3.899E+01	3.059E+01	2.054E+01	8.884E+00	2.523E+00	6.898E-01	2.011E-01	6.013E-02	2.169E-02	8.648E-03
Ver-Non-Sur-001	7.230E+02	4.159E+02	2.833E+02	1.250E+02	9.368E+01	9.409E+01	3.281E+01	2.676E+01	1.898E+01	8.860E+00	2.714E+00	7.964E-01	2.459E-01	6.464E-02	1.865E-02	4.398E-03
Ver-Non-Sur-002	7.487E+02	4.321E+02	2.952E+02	1.290E+02	9.591E+01	9.779E+01	3.375E+01	2.683E+01	1.848E+01	8.350E+00	2.448E+00	6.679E-01	1.870E-01	5.471E-02	1.495E-02	4.859E-03
Ver-Non-Sur-003	7.333E+02	4.173E+02	2.809E+02	1.198E+02	8.694E+01	8.435E+01	2.963E+01	2.303E+01	1.551E+01	6.935E+00	2.013E+00	5.739E-01	1.795E-01	5.513E-02	2.014E-02	7.228E-03
Ver-Non-Sur-004	7.451E+02	4.257E+02	2.832E+02	1.204E+02	8.693E+01	8.415E+01	2.928E+01	2.251E+01	1.494E+01	6.501E+00	1.864E+00	4.889E-01	1.300E-01	3.776E-02	1.246E-02	5.066E-03
Ver-Non-Sur-005	6.850E+02	3.773E+02	2.475E+02	1.040E+02	7.442E+01	7.031E+01	2.361E+01	1.826E+01	1.226E+01	5.281E+00	1.504E+00	4.038E-01	1.225E-01	3.535E-02	1.069E-02	4.780E-03
Ver-Non-Sur-006	6.798E+02	3.694E+02	2.431E+02	1.017E+02	7.236E+01	6.849E+01	2.263E+01	1.747E+01	1.172E+01	5.011E+00	1.383E+00	3.715E-01	1.020E-01	2.840E-02	9.147E-03	4.252E-03
Ver-Std-N95-001	1.281E+02	6.223E+01	3.667E+01	1.538E+01	1.066E+01	8.579E+00	2.631E+00	2.015E+00	1.312E+00	5.292E-01	1.297E-01	2.772E-02	6.853E-03	1.869E-03	6.227E-04	1.039E-04
Ver-Std-N95-002	1.882E+02	9.260E+01	5.293E+01	2.180E+01	1.488E+01	1.181E+01	3.798E+00	2.855E+00	1.877E+00	7.674E-01	1.928E-01	4.725E-02	1.258E-02	2.643E-03	8.458E-04	3.176E-04
Ver-Std-N95-003	3.082E+02	1.522E+02	8.883E+01	3.571E+01	2.400E+01	1.937E+01	5.725E+00	4.189E+00	2.588E+00	1.022E+00	2.428E-01	5.643E-02	1.159E-02	3.391E-03	7.656E-04	4.378E-04
Ver-Std-N95-004	8.503E+01	4.014E+01	2.262E+01	9.112E+00	6.064E+00	4.478E+00	1.498E+00	1.064E+00	6.593E-01	2.609E-01	5.949E-02	1.249E-02	4.608E-03	7.169E-04	2.048E-04	2.048E-04
Ver-Std-N95-005	1.916E+02	9.130E+01	5.202E+01	2.078E+01	1.375E+01	1.056E+01	3.057E+00	2.200E+00	1.321E+00	4.987E-01	1.121E-01	2.247E-02	3.798E-03	1.583E-03	9.492E-04	5.276E-04
Ver-Std-N95-006	1.811E+02	8.536E+01	4.933E+01	1.953E+01	1.295E+01	9.822E+00	3.273E+00	2.391E+00	1.441E+00	5.627E-01	1.213E-01	2.777E-02	5.259E-03	1.052E-03	7.361E-04	9.465E-04
Ver-Std-Non-001	7.639E+02	4.202E+02	2.617E+02	1.058E+02	7.241E+01	6.237E+01	1.884E+01	1.344E+01	8.239E+00	3.197E+00	7.944E-01	1.869E-01	3.776E-02	1.042E-02	2.415E-03	1.144E-03
Ver-Std-Non-002	8.068E+02	4.505E+02	2.872E+02	1.159E+02	7.967E+01	7.021E+01	2.031E+01	1.410E+01	8.139E+00	3.013E+00	6.440E-01	1.344E-01	3.116E-02	7.784E-03	2.465E-03	5.207E-04
Ver-Std-Non-003	7.920E+02	4.401E+02	2.798E+02	1.122E+02	7.636E+01	6.657E+01	1.976E+01	1.374E+01	8.106E+00	2.948E+00	6.721E-01	1.421E-01	2.846E-02	8.502E-03	3.607E-03	2.579E-03
Ver-Std-Non-004	8.231E+02	4.707E+02	2.954E+02	1.191E+02	8.207E+01	7.115E+01	2.115E+01	1.438E+01	8.141E+00	2.979E+00	6.376E-01	1.312E-01	2.978E-02	6.167E-03	1.706E-03	9.179E-04
Ver-Std-Non-005	8.013E+02	4.385E+02	2.750E+02	1.082E+02	7.288E+01	6.270E+01	1.783E+01	1.226E+01	7.018E+00	2.425E+00	5.082E-01	1.015E-01	2.198E-02	5.783E-03	2.314E-03	8.972E-04
Ver-Std-Non-006	8.154E+02	4.589E+02	2.894E+02	1.157E+02	7.871E+01	7.055E+01	2.094E+01	1.445E+01	8.341E+00	2.949E+00	6.432E-01	1.350E-01	2.326E-02	7.692E-03	2.612E-03	1.948E-03
Ver-Std-Sur-001	6.570E+02	3.600E+02	2.337E+02	9.897E+01	7.067E+01	6.531E+01	2.172E+01	1.672E+01	1.098E+01	4.664E+00	1.208E+00	3.103E-01	7.615E-02	1.938E-02	5.219E-03	1.490E-03
Ver-Std-Sur-002	6.678E+02	3.656E+02	2.351E+02	9.774E+01	6.860E+01	6.195E+01	1.951E+01	1.447E+01	8.968E+00	3.490E+00	8.229E-01	1.699E-01	3.939E-02	1.019E-02	3.730E-03	1.242E-03
Ver-Std-Sur-003	5.808E+02	3.082E+02	1.887E+02	7.576E+01	5.143E+01	4.201E+01	1.376E+01	9.624E+00	5.725E+00	2.140E+00	4.966E-01	1.086E-01	2.666E-02	7.894E-03	1.556E-03	1.317E-03
Ver-Std-Sur-004	7.041E+02	3.938E+02	2.497E+02	1.039E+02	7.285E+01	6.495E+01	1.944E+01	1.404E+01	8.682E+00	3.360E+00	7.825E-01	1.652E-01	3.604E-02	7.558E-03	1.637E-03	1.134E-03
Ver-Std-Sur-005	6.610E+02	3.597E+02	2.274E+02	9.294E+01	6.447E+01	5.672E+01	1.725E+01	1.267E+01	7.682E+00	2.967E+00	6.854E-01	1.481E-01	3.359E-02	7.290E-03	2.100E-03	6.177E-04
Ver-Std-Sur-006	6.222E+02	3.311E+02	2.058E+02	8.278E+01	5.652E+01	4.920E+01	1.451E+01	1.059E+01	6.501E+00	2.476E+00	5.772E-01	1.226E-01	2.735E-02	7.778E-03	1.701E-03	1.215E-03