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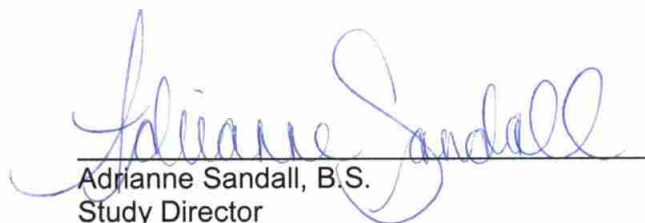
LATEX PARTICLE CHALLENGE – FINAL REPORT

Laboratory Number:	499325
Procedure Number:	STP0005 REV 02
Sample Source:	Shanghai Dochem Industries Co., Ltd.
Sample Identification:	Refer to Table 1
Deviations:	None
Statement of Uncertainty:	If applicable, available upon request
Sample Received Date:	27 Oct 2009
Lab Phase Start Date:	17 Nov 2009
Lab Phase Completion Date:	22 Nov 2009
Report Issue Date:	23 Nov 2009

Procedure: The Latex Particle Challenge procedure is performed to determine the particle filtration efficiency of various materials and filtration devices using a challenge of monodispersed polystyrene (latex) microspheres manufactured by Duke Scientific.

The procedure employed the basic particle filtration method described in ASTM F2299, with some exceptions; notably the procedure incorporated a non-neutralized challenge. In real use, particles carry a charge, thus this challenge represents a more natural state. The non-neutralized aerosol is also specified in the FDA guidance document on surgical face masks. The flow rate through the test system was maintained at 1 CFM \pm 5%. The control particle concentration passed through the sample was maintained at 10,000-15,000 particles per cubic foot. Filtration efficiencies were calculated by comparison to control values.

Results: A reference control was included to verify the test system was within acceptable control limits. The results are summarized in Table 1.


Adrienne Sandall, B.S.
Study Director


Study Completion Date

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TABLE 1. Results
Sample Identification: flat face mask

SAMPLE NUMBER	AVERAGE SAMPLE COUNTS	AVERAGE CONTROL COUNTS	FILTRATION EFFICIENCY (%)
6	138	12397	98.9
7	99	12336	99.20
8	90	12284	99.26
9	82	12856	99.36
10	91	13241	99.31

SAMPLE AREA TESTED: 91.5 cm²

PARTICLE SIZE: 0.1 μm (0.097 ± 0.003 μm)

PARTICLE BACKGROUND: <1 particles/min

AVERAGE FILTRATION EFFICIENCY: 99.20%

STANDARD DEVIATION: 0.187