

## Particle Filtration Efficiency (PFE) Final Report

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**Sponsor** GLOVETEX CO.,LTD.

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Study Number65-0126-M001Testing Date29 April 2022Expired Date28 April 2023

**Testing Facility** RUEE, Research Unit of Applied Electric Field in Engineering

**Test Procedure** PFE Standard Test Method: ASTM F2299-03

**Summary:** This procedure was performed to evaluate the non-viable particle filtration efficiency of the test article and employed the basic particle filtration method described in ASTM F2299-03. Polystyrene Latex (PSL) were nebulized mono-dispersedly and passed through the test article. The test procedure measures filtration efficiency by comparing between the particle concentration count in the upstream and the downstream ones.

Filtered and dried air is passed through an atomizer to produce an aerosol containing suspended latex spheres. This aerosol is than passed through a charge neutralizer. The aerosol is then mixed and diluted with additional preconditioned air to produce a stable, neutralizer, and dried aerosol of latex spheres.

One-minute particle concentration count were performed, with and without the test article in the system. The filtration efficiency was calculated using the average number of particles penetrating the test article compared to the average of the control values.

Area of test: 17.80 cm<sup>2</sup>
Particle Size: PM 2.5
Face Velocity: 10.6 cm/s

Environment: 25±3°C and 58±5% relative humidity (RH) for 4 hours

References: TSI Classifier Model 3082 S/N: 3082001807003,

TSI CPC Model 3788 S/N: 3788180801,

Average Filtration Efficiency: 98.01 %

Test Article Number	Upstream Counts (particles/cm³)	Downstream Counts (particles/cm³)	Filtration Efficiency (%)
1	761,364.00	15,281.00	97.99
2	751,463.00	14,694.00	98.04
3	774,196.00	15,367.00	98.02
4	752,463.00	15,146.00	97.99
5	742,119.00	14,663.00	98.02

Study Director Assoc. Prof. Dr.Panich Intra

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\*\*\* End of Report \*\*\*

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## Reference Note:

- FACEMASK MICROTEX
- CAREPLUS BLUE LEVEL 2

Study Director Assoc. Prof. Dr.Panich Intra

01 - May -2022 Study Completion Date