



The Siriraj Dust Mite Center for Services and Research

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(FA 042/2564)

Test Report

Report no. : FA 042/2564

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Customer : R&T
18 Soi Kasemsamran 6 Klongton Wattana Bangkok 10110

Sample received date : April 8th, 2021

Testing date : April 21th – May 27th, 2021

Sample description : 1 m x 1 m white woven microfiber fabric labelled as
“Mite-Protex” Allergen-Proof Bedding Covers

Number of samples : 3 pieces

Product lot no. : 050121

Manufacture date : not specify

Expiry date : not specify

Objective : To test the protective efficacy against dust mites and dust mite allergen

Testing materials : - *Dermatophagoides pteronyssinus* mites
- In-house reference dust sample Lot.# : C-Derpt-001/2564

Testing methods : 1) Heat escape method
2) Siriraj chamber method
3) Dust leakage measurement
4) Allergen measurement by ELISA

Sample code	Fabric Sample	
	Face	Back
FA 042/2564		



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Results :

1) Heat escape method To assess the efficacy of the fabric against mite penetration into either the face or the back surface of fabric by chasing the mites with heat Interpretation Positive = mites was able to penetrate into the test fabric Negative = no mite was able to penetrate into the both face and back surface of test fabric	Negative (No mite penetration)
2) Siriraj chamber method To assess the efficacy of the fabric against mite embedding by constraining the mites with the fabric in Siriraj chamber testing apparatus for 48 hours. Interpretation Positive = mites were able to embed into the fabric either <u>partially</u> or <u>completely</u> . Negative = no mites was able to embed into the fiber either partially or completely	Negative (No mite embedding)
3) Dust leakage To examine the efficacy of the fabric in preventing the leakage of dust by vacuuming dust sample through the test fabric. The obtained dust weights were compared to the starting dust weight, then were expressed as a percentage of dust leakage. Interpretation: Lower % dust leakage, Greater dust protection.	$0.067 \pm 0.058\%$
4) Allergen protection To examine the efficacy of the fabric in preventing the leakage of dust mite allergen by examining quantity of dust mite allergen in the obtained dust through test fabric. The efficacy is expressed as a percentage of allergen protection. Interpretation: Higher % allergen protection, greater allergen protection	$99.9999 \pm 0.0000\%$
Required criteria 1. No mite penetration 2. No mite embedding 3. % Dust leakage $\leq 5\%$ 4. % Allergen protection $\geq 99\%$	

- References :**
- 1) TISI 3069-2563
 - 2) Textile Research Journal 2009; 79(5): 436–443.
 - 3) Allergy 2003; 58: 981-985
 - 4) J Allergy Clin Immunol 2006; 118: 1164-68



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Conclusion

This tested fabric (FA 042/2564) showed the protective efficacy against dust mites both mite penetration and mite embedding. Also, the tested fabric could protect dust leakage and dust mite allergen in accordance with the required criteria for anti-dust mite fabrics.

(Mrs. Prapagorn Vongjaroensanti)

Examiner

(Ms. Sudarat Boonyong)

Report Auditor



(Assistant Professor Dr. Nat Malainual)

Chairman, SDMC

HOUSE DUST MITES

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