CLEANING LABORATORY EVALUATION SUMMARY

SCL #:	2011
DateRun:	12/10/2011
Experimenters:	Jason Marshall, Timothy Weil, Johnny Le, Mahima Tank, Loc Nguyen
ClientType:	Cleaning Equipment Mfr
ProjectNumber:	Project #1
Substrates:	Textile
PartType:	Coupon
Contaminants:	Fibers
Cleaning Methods:	Mechanical Agitation
Analytical Methods:	Gravimetric, Visual
Purpose:	To evaluate the pet hair removal process of lint roller tool
Experimental Procedure:	Uniform application process: Take 0.0150 (+/- 0.0015) g of cat hair Pull hair clump apart into smaller fibrous bundles Place the bundles evenly across the 83 sq in surface, focusing hair application within center 3.5 inch path A plastic bag is then passed over the surface to better distribute the hair and impart static charge to the surface and hair Hair removal process: Weigh uncovered lint roller tape Pass the roller across the surface to complete one cycle (up and back) Weigh the roller to determine hair collection Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape Record total number of hair removal passes completed Agitator-hair removal process: Use the uniform soiled process Weigh uncovered lint roller tape Pass the agitator across the surface for a half cycle Pass the roller across the surface to complete cycle Weigh the roller to determine hair collection Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape Record total number of hair removal passes completed Agitator-hair removal process 2nd option: Use the uniform soiled process Weigh uncovered lint roller tape Pass the agitator across the surface for a half cycle using four to five short movements of the agitator Pass the roller across the surface to complete cycle Weigh the roller to determine hair collection Due to some surface materials, weights may exceed total hair weights as the roller may remove some of the fabric during the process Repeat Uniform application process and the Hair removal process for the initial tape piece until no hair is removed by the soiled lint roller tape Record total number of hair removal passes completed
Results:	Fleece Surface – Small surface area The evaluation of the Evercare classic roller showed that an individual section of the lint tape was completely used up within 4 cleaning cycles. The Ezpeel unit approached 5 cycles and the comparative product was around 3. When using the multiple short strokes across the surface, the agitators (both the nubs and wave) increased the number of cleaning cycles to more than 8 cycles. Each of the three tape rolls showed signs of limited weight gain soon after the point the observation was made that hair was being left behind. Conclusions: Both the supplied agitator handles were found to significantly increase the life of a single piece of the adhesive when compared to using the adhesive alone. Agitator improvement for hair collection: 2X. Fleece Surface – Large surface area The three rolls were only able to clean a portion of the larger fabric. The Evercare Ezpeel extra sticky roll visually looked the best, resulting in almost five passes of hair removal. The Evercare Classic had a little more than 3 passes while the comparative tape roll was just fewer than three passes. However, when

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using the weights of collected hair, the comparative product picked up more hair than the other two products.

When comparing the agitators, both the supplied models from oneCare resulted in higher collection efficiency than the comparative fur remover device. The comparative product at first appeared to require less time to clean the full surface area; however, to be reused the unit, the collected hair had to be removed. Combining the two times together for the device resulted in a longer cleaning time than either of the two supplied agitators. The Wave agitator had the highest of the three units and required the least amount of time to complete the cleaning.

Summary:

Conclusion: The wave agitator model was the most effective at removing cat hair from the fleece surface, removing 95% of the hair in under two minutes without the use of any tape. Both oneCare products outperformed the comparative product at a rate of 18-40% more hair removal in the same time frame. The oneCare agitators did not require any cleaning between trials and essentially cleaned the large surface area three times without loss of effectiveness. When compared to using tape, the agitators were able to complete 10 passes three times vs. the 3-4 passes with the classic and extra sticky tapes.