

Clinical Evaluation of the Hypoallergenic Properties of Cotton



With hundreds of easily searchable resources, we're your go-to textile tool for discovering what's possible with cotton.

cottonworks.com







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# Webinar Support



Clinical Evaluation of the Hypoallergenic Properties of Cotton

#### **OUR MISSION**

 To Increase the DEMAND for & PROFITABILITY of COTTON Through RESEARCH & PROMOTION

### GLOBAL PRESENCE

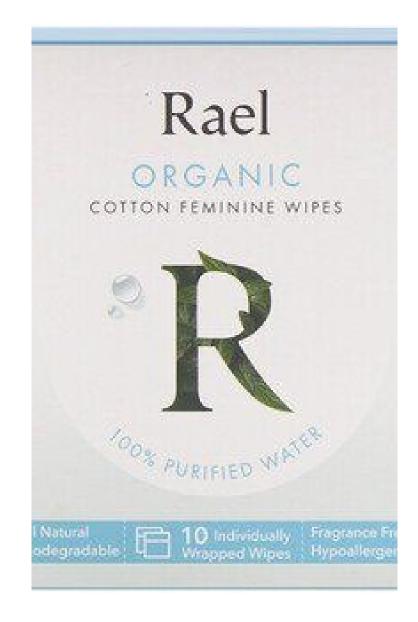




# COTTON & SKIN WELLNESS

- Products with cotton often claim hypoallergenic properties
- Claims tied to end use product
- Is the actual cotton FIBER hypoallergenic?







#### THE OBJECTIVE

- Clinical evaluation for skin sensitivity
- Two types of cotton tested
  - Natural cotton
    - Mechanically cleaned
    - Hydrophobic
  - Purified cotton
    - Scoured and whitened
    - Hydrophilic
  - Cotton fiber was tested







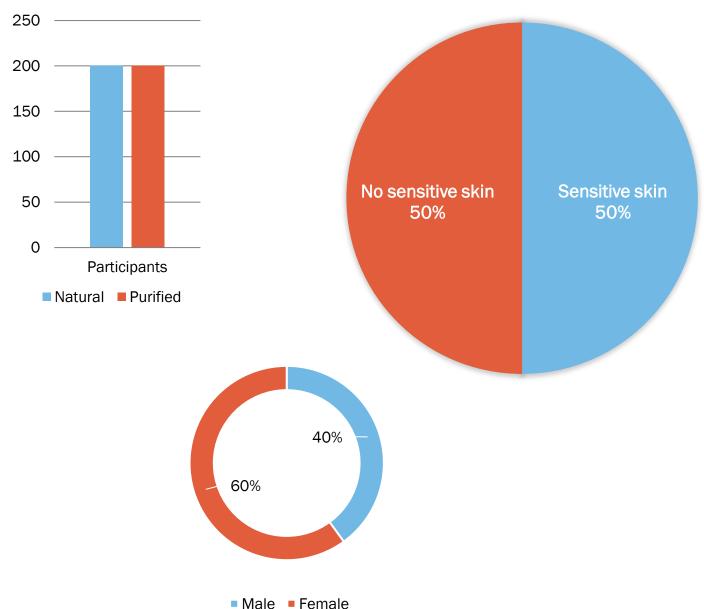
#### THE TEST LAB

- Product Investigations Inc.
- Human Repeat Insult Patch Test (HRIPT)



#### WHO WAS TESTED?

- 200 participants
  - Natural Cotton
  - Purified Cotton
- 50% self-perceived sensitive skin
- Ages 18-84
- 60/40 Female to Male Ratio





#### THE TEST (HRIPT)

- Contact Dermatitis
- Test Regime
  - Induction Phase
  - Rest
  - Challenge Phase



# HRIPT TESTING PROTOCOL

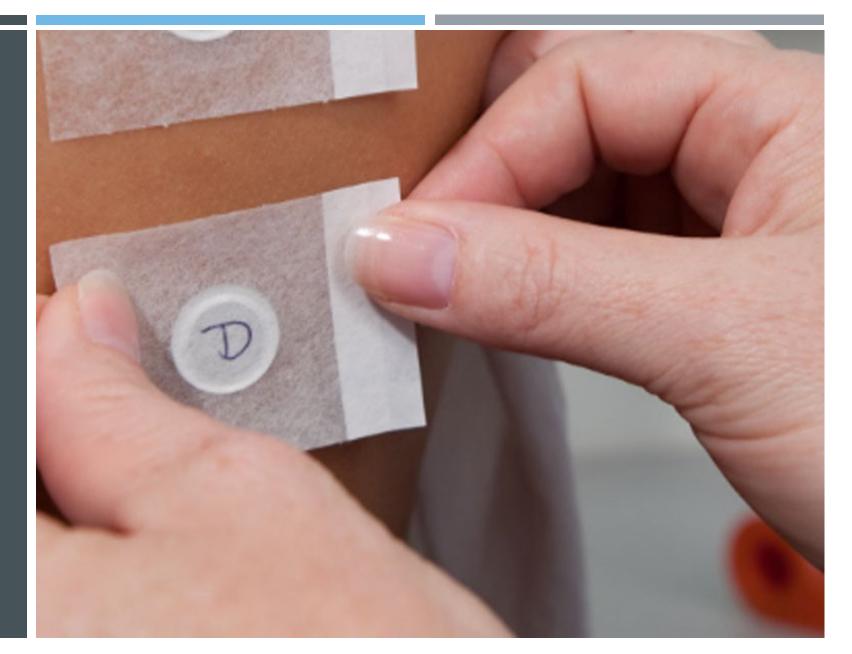
- Daily commitment to evaluation
- Induction Phase weeks 1- 3
- Rest weeks 4 & 5
- Challenge Phase week 6
- Observation weeks 7 & 8

|        | Monday           | Tuesday        | Wednesday        | Thursday | Friday           | Saturday         | Sunday |
|--------|------------------|----------------|------------------|----------|------------------|------------------|--------|
| Week 1 | Apply            | Remove         | Grade /<br>Apply | Remove   | Grade /<br>Apply | Remove –<br>Home |        |
| Week 2 | Grade /<br>Apply | Remove         | Grade /<br>Apply | Remove   | Grade /<br>Apply | Remove –<br>Home |        |
| Week 3 | Grade /<br>Apply | Remove         | Grade /<br>Apply | Remove   | Grade /<br>Apply | Remove –<br>Home |        |
| Week 4 | Grade            |                |                  |          |                  |                  |        |
| Week 6 | Apply            | Remove / Grade | Grade            | Grade    | Grade            |                  |        |



#### **INDUCTION PHASE**

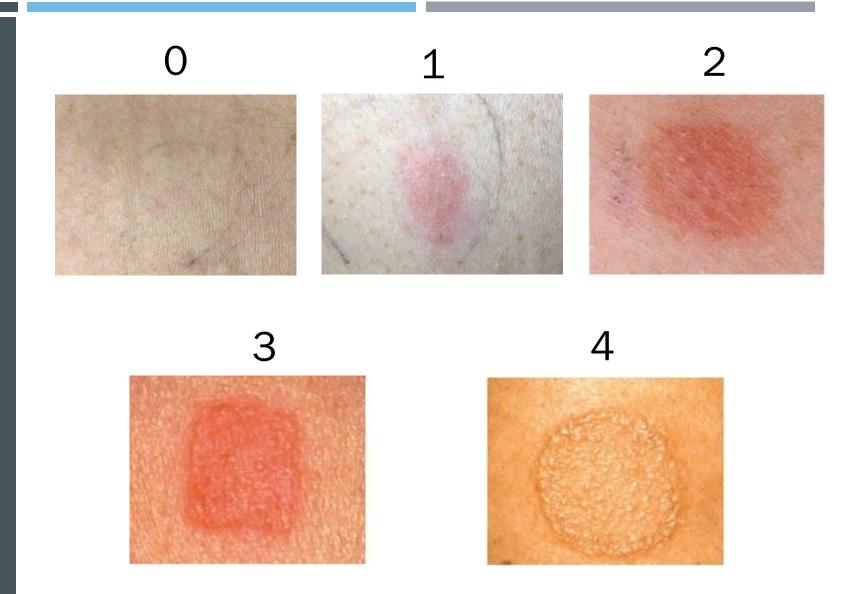
- 9 sequential 24-hour applications
- Graded 0 to 4
  - 0 = No change
  - 1 = Mild redness
  - 2 = Redness & faint edema
  - 3 = Redness plus welldefined edema
  - 4 = Redness plus papule, vesicles, or ulcerations
- New sample placed on original 0 or 1) or naïve site (2-4)



#### **GRADING SCALE**

#### **CHALLENGE PHASE**

- Same patches 4cm X 4cm
- Natural & Purified Cotton
- Two Sites:
  - Initial Induction
  - Naïve
- 24 hours later grading:
  - 15 20 minutes
  - 24 hours
  - 48 hours
  - 72 hours





#### **RESULTS**

- ZERO IRRITATION RESPONSES
- Registered all "0"
  - No observable irritation was recorded
- Sensitivity Test Pass
- Dermatologist Reviewed



### THE DATA

|       |                                      |                 | CHALLENGE PHASE          |                    |  |
|-------|--------------------------------------|-----------------|--------------------------|--------------------|--|
| GRADE | Type of Response                     | INDUCTION PHASE | ORIGINAL CONTACT<br>SITE | NAIVE CONTACT SITE |  |
| 0     | No visible change                    | 215 SUBJECTS    | 214 SUBJECTS             | 214 SUBJECTS       |  |
| 1     | FAINT REDNESS, UNDEFINED BORDER      | 0 "             | 0 "                      | 0 "                |  |
| 2     | INTENSE REDNESS, DEFINED BORDER      | 0 "             | 0 "                      | 0 "                |  |
| 3     | REDNESS + DEFINITE EDEMA             | 0 "             | 0 "                      | 0 "                |  |
| 4     | REDNESS + PAPULES, OR VESICLES, ETC. | 0 "             | 0 "                      | 0 "                |  |
|       | No. of Responders                    | 0 SUBJECTS      | 0 SUBJECTS               | 0 SUBJECTS         |  |
|       | No Data Acquired                     | 0 SUBJECTS      | 1 SUBJECT                | 1 SUBJECT          |  |

|       |                                      |                 | CHALLENGE PHASE          |                    |  |
|-------|--------------------------------------|-----------------|--------------------------|--------------------|--|
| GRADE | Type of Response                     | INDUCTION PHASE | ORIGINAL CONTACT<br>SITE | NAIVE CONTACT SITE |  |
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#### Global Market for Baby Care Today & Tomorrow

Cotton Incorporated teamed with The Martec Group to conduct a global market research project, concentrating primarily on baby diapers and baby wipes. In this webinar, Jan O'Regan, the director of nonwovens marketing at Cotton Incorporated, explores the results of this research project and takes a closer look at the similarities and differences between baby care products.

#### About the Research

To get a sense of similarities and differences, consumers from eight countries were surveyed: United States, Mexico, Brazil, China, India, Germany, France, and the UK. This work also incorporates economic and demographic data providing an understanding of these markets today and where they are headed 5 years from now.



Download the Global Market for Baby Care presentation slides

#### Global Feminine Hygiene Market & Millennials

In the coming years, Millennials and Gen Z will account for almost all of the feminine hygiene population.

Watch our Global Feminine Hygiene Market & Millennials webinar to learn about the impact millennials will have on the future of the feminine hygiene market. Discover market dynamics projected over the next 15 years, habits related to product usage including the impact of technology in the retail environment, and opportunities for you to win market share and customer loyalty into the future.



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Learn more about the role that cotton plays in the global nonwovens market.

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The New Normal: Accelerating Consumer Trends in the Current & Post-COVID World Cotton & the Climate Roadmap: Strategies for the Apparel Industry to Reach Net Zero

Cotton & Science-Based Targets: Industry Progress & Path to Net Zero

Cotton & Soil Health: A Solution to Global Challenges

Navigate the Market: Economic, Consumer, & Retail Insights

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