

Spring Air and Airmid Healthgroup Partner to Launch the First Certified asthma & allergy friendly® Mattress in the United States



Overview

[Spring Air](#), a leading innovator in the mattress industry, partnered with Airmid Healthgroup to develop the [Spring Air Back Supporter Breathe™](#) collection, the first mattress in the U.S. to achieve [asthma & allergy friendly® Certification](#). The 18-month collaboration involved rigorous testing and research, ensuring the product met stringent health standards for allergen barrier performance, emissions, and real-world allergen reduction.

Background

About Spring Air:

Founded in 1926, Spring Air is renowned for its innovative mattress designs and commitment to quality and comfort. With 13 domestic factories and 22 international licensees operating in 32 countries, the company has sold over \$4 billion in sleep sets at retail over the last decade.

About Airmid Healthgroup:

Airmid Healthgroup is a world leader in health-focused product testing, specializing in allergen and indoor air quality research. As the [first ISO 17025:2005 accredited laboratory for house dust mite allergen \(Der p 1\) testing](#), Airmid provides robust scientific validation for consumer products.

Context:

While Spring Air is the fourth-largest mattress brand in the U.S., the company sought to further differentiate its products by prioritizing health-focused innovation. To achieve asthma & allergy friendly® Certification from the [Asthma and Allergy Foundation of America \(AAFA\)](#), Spring Air collaborated with Airmid Healthgroup to ensure their mattresses provided proven benefits for people impacted by asthma and allergies.

The Challenge

Spring Air aimed to develop a new line of bedding products that:

1. **Achieved Third-Party Validation:** The products needed to meet the rigorous requirements of the asthma & allergy friendly® Certification program.
2. **Supported Allergen Avoidance:** The mattress had to be effective as part of a comprehensive allergen avoidance plan while maintaining user comfort.
3. **Incorporated Health-Focused Innovation:** The design had to ensure allergen barrier efficacy, low chemical emissions, and real-world allergen reduction.

Goals

- **Primary Goal:** Develop a mattress that meets asthma & allergy friendly® Certification standards, positioning Spring Air as a leader in health-focused sleep products.
 - **Secondary Goal:** Ensure the final product provides consumers with a scientifically validated solution for healthier sleep.
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Solution/Approach

Airmid Healthgroup utilized a three-stage testing process to validate the health claims of the Spring Air Back Supporter Breathe™ mattress:

Stage 1: Barrier Function of Encasing Materials

- Multiple fabrics were tested to identify one that could effectively block allergens such as house dust mite allergen and cat dander while remaining breathable for user comfort.
- Tests included allergen exposure using house dust mite and cat allergen test dust (Der p 1 and Fel d 1) in simulated real-world conditions, such as the Modified Dust Trap and Simulated Use Test.

Stage 2: Component Emission Testing

- Foam filling materials were analyzed for any sensitizing chemicals, ensuring that these chemicals were either not present or present at levels low enough not to cause concern
- Testing was conducted in sealed chambers under controlled conditions to confirm compliance with

stringent health standards.

- The selected allergen barrier was incorporated as a dedicated layer beneath the ticking fabric.

Stage 3: Real-Time Allergen Testing on Constructed Product

- Production-grade mattresses were placed in an environmental chamber and infested with house dust mites for several weeks under controlled conditions.
 - Post-infestation, allergen content was measured using enzyme-linked immunosorbent assay (ELISA), and maintenance instructions for end-users were established.
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Key Results

- **Barrier Efficacy:** The selected encasing material blocked 100% of house dust mite allergen and cat allergens in controlled tests.
 - **Chemical Safety:** Component testing confirmed that any sensitizing chemicals were either not present or present at levels low enough not to cause concern.
 - **Real-World Performance:** The complete mattress demonstrated exceptional allergen reduction, ensuring it met asthma & allergy friendly® Certification standards.
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Impact

Industry First: The Spring Air Back Supporter Breathe™ mattress became the first mattress in the United States to achieve asthma & allergy friendly® Certification, joining a prestigious group of certified products.

Consumer Confidence: Certification from AAFA provides

consumers with trusted assurance of the product's health benefits.

Enhanced Market Position: Spring Air solidified its reputation as an innovator in sleep solutions, setting a new benchmark for health-focused bedding products.

Lessons Learned

- **Scientific Validation Builds Trust:** Independent testing ensures credibility and helps distinguish products in competitive markets.
 - **Innovation Supports Health:** Incorporating allergen barriers and ensuring low emissions are critical to creating sleep products that promote healthier environments.
 - **Comprehensive Testing Is Key:** Rigorous testing at all stages of product development ensures compliance with certification standards.
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Conclusion

Spring Air's partnership with Airmid Healthgroup exemplifies the importance of scientific validation in product development. The Spring Air Back Supporter Breathe™ mattress is a groundbreaking innovation, combining comfort with proven allergen reduction to support healthier sleep. Its certification as the first asthma & allergy friendly® mattress in the U.S. underscores Spring Air's commitment to quality and consumer well-being.

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Contact Us

Interested in validating your cleaning technology or other products? [Contact Airmid Healthgroup](#) to learn how our comprehensive testing services can help you achieve impactful results and consumer trust.

Related links and Tests

Allergen Laboratory Overview

Environmental Test Chambers

Determining Volatile Organic Compound (VOC) Emissions from Materials and Products