



VACUUM

Research for Healthy Vacuum Cleaners (Bioaerosols, Allergens & Ultrafine Particles)

Vacuum cleaners should provide the means for a healthy intervention in the indoor environment by:

- 1 Safely removing any bioburdens present, and
- 2 Preventing the introduction of harmful pollutants and particles during this intervention.

With core expertise in the area of preventing ill health due to indoor air pollutants, airmid scientists apply their skills to evaluate the complex interactions of biological and physical properties associated with vacuum cleaner products, and provide customers with a complete solution for healthy living and label claim validation. We have experience in traditional filter based designs, as well as cleaners that incorporate steam, water-based filtration, UV, heat and robotic technology.

Ultrafine Particles

An Australian study has raised serious concerns as to the safety of many of today's most popular vacuum cleaners. The New York Times picked up on this study and published an article highlighting to consumers the potential hazardous nature of ultrafine particles.

It is concerning that the emission of ultrafine particles, even from vacuum cleaners with HEPA filtration, results in consumers being exposed to bacterial fragments and other noxious particulate materials. However, it is not surprising given household dust can contain bacteria, viruses, mould and toxins. Of course, exposure has the capacity to induce ill-health!

Our research team can independently test your vacuum cleaners in our state of the art facility to ensure these products limit consumer exposure to ultrafine particle emissions.

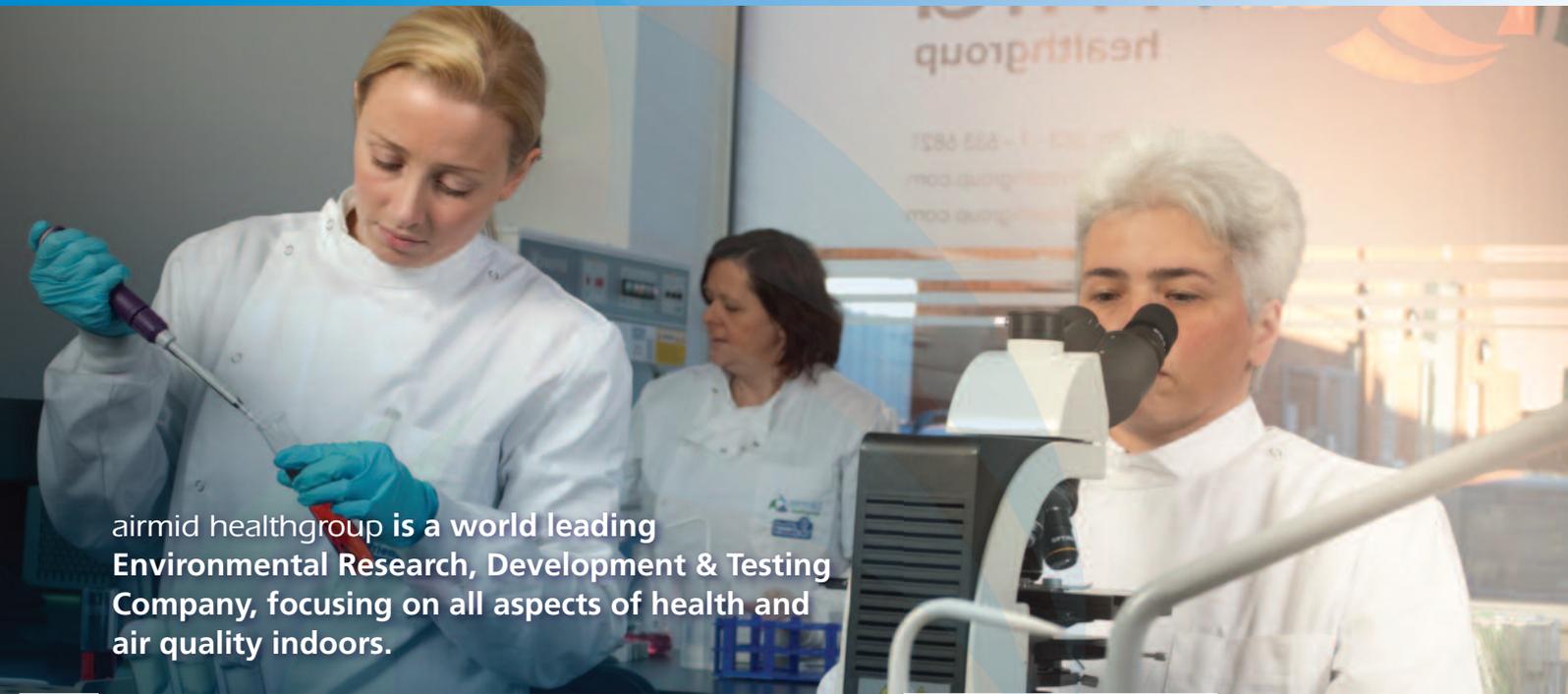
Allergen

We recognise the importance of designing research studies that closely replicate what is happening in real-life in the home. Our experiments use proprietary test dust scientifically proven to have particle size distributions and bioburden levels representative of what occurs in a typical indoor space.

Our scientists have the knowledge & expertise to evaluate:

- Removal of allergen-containing test dust from flooring
- Airborne allergen levels during vacuuming
- The integrity of air filtration systems
- Performance of the vacuum cleaner immediately prior to activation of bag replacement / receptacle emptying signal and filter change signal
- Consumer exposure to allergens during bag change or receptacle emptying





airmid healthgroup is a world leading **Environmental Research, Development & Testing Company**, focusing on all aspects of health and air quality indoors.

Research Methodologies

airmid healthgroup (AHG) is a world leading Environmental Research, Development & Testing Company, focusing on all aspects of health and air quality indoors. International Standards Organisation accredited (ISO 17025), AHG has the capacity to assess products and services both in the field and at its vertically integrated Dublin facility.

Combining molecular biology with state-of-the-art air sampling and particle counting in highly sophisticated room sized environmental test chambers. AHG specialises in measuring both surface and airborne bacteria, moulds, allergens, viruses, and other toxic ultrafine particles.

Contract Research

Our Research & Development department is often described by our partners as an extension of their own in-house research capabilities. We would be happy to discuss your health-related research projects further.

Study Dissemination, Media & Public Relations

An environmental & health assessment of vacuum cleaner technologies is likely to generate publishable data given the high relevance of the topic. Should this be appropriate and desired by our clients, airmid healthgroup will assist in research dissemination through relevant streams, such as scientific journals, industry publications or general interest media.



28.5m³ AHAM type chamber, with controlled temperature, humidity and air change, used to simulate real-world environments

Mr Graeme Tarbox
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