

Event:
Date:
Place:

ENERGY in BUILDINGS 2024
Saturday November 9, 2024
Athens, Hellas



#	Angela Southey Ph.D.	
Title:	Chief Technical Officer, Airmid Healthgroup Ltd	
email:	asouthey@airmidhealthgroup.com	•
Presentation title:	Independent Validation of Products which Improve Indoor Air Quality	
<p>The evaluation of HVAC systems and air cleaning devices plays a critical role in improving energy efficiency and indoor air quality in modern homes and buildings. This study presents the testing capabilities of an independent commercial laboratory that specializes in third-party validation of building materials and products, with a focus on air cleaning technologies and filtration systems.</p> <p>The laboratory is equipped with robust testing infrastructure, including an ASHRAE 52.2 duct test rig, designed for the precise assessment of HVAC filters. This setup allows for the standardized measurement of particulate removal efficiency, pressure drop, and overall filter performance under various conditions. Additionally, the lab has developed standard or bespoke protocols for testing air cleaning devices in accordance with the ASHRAE 241 Standard, which addresses the control of infectious aerosols in indoor environments, and ASHRAE 185.3 Standard which evaluates commercial and industrial in-room air cleaning devices and systems for microorganism bioaerosol removal or inactivation. By rigorously evaluating the performance of these devices, the laboratory generates data that is essential for understanding their effectiveness in real-world applications.</p> <p>The testing methodologies employed are based on industry standards, ensuring the generation of reliable and consistent data. This data is crucial for validating product performance and contributes to the broader goal of enhancing building energy efficiency and indoor air quality. The laboratory's role as an independent entity ensures that the testing outcomes are unbiased, providing valuable information to manufacturers, regulators, and consumers alike. Importantly, this testing differentiates between devices that fulfill their marketing claims and those that fall short, providing a critical layer of transparency in product performance.</p> <p>The findings from both these standardized and uniquely designed testing activities support ongoing efforts to improve the design and implementation of building systems that contribute to healthier, more sustainable indoor environments.</p>		

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Short CV:

Angela graduated from Dept. of Medicine and Therapeutics, UCD with a PhD in lung fibrosis and then moved to Japan for 2 years to complete a post-doctorate study on ulcerative colitis. Upon returning to Ireland, she worked as a postdoctoral researcher in the Veterinary College, Dublin, investigating the feasibility of vaccinating badgers against tuberculosis (TB) to reduce its spread in cattle. She then went on to enhance her expertise in virology, first at the Irish Equine Centre (Kildare), then at Wyeth Biopharma (Grange Castle) and finally at Abbott Diagnostics (Sligo).

She initially started working in Indoor Air Quality when she joined airmid healthgroup Ltd in 2008 as their Technical Manager and stayed for 12 years. During that time, Angela contributed significantly to the establishment of the laboratories and environmental test chambers and provided technical input into attaining ISO17025 accreditation for the allergen lab. In addition to laboratory test methods, she also developed techniques for evaluating a wide range of air/surface cleaning technologies and anti-microbial coatings designed to mitigate biological pollutants (allergens and micro-organisms) from indoor spaces. In 2020, Angela left airmid healthgroup to join Sonitus Systems Ltd., a manufacturer of sensor-based environmental monitoring devices, to set up their particulate monitor calibration laboratory and implement the ISO 9001:2015 quality management system. She decided that her key interest was in the Indoor Air Quality field, so she returned to airmid healthgroup in December 2023, as Chief Technical Officer where she provides technical expertise for evaluating the impact of consumer products (including air cleaners, vacuum cleaners, textiles, filter media and flooring) on indoor pollutants to support the product development process and client marketing claims.

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CV:

Angela Southey, PhD, MPH.

No. 5 Clanmalire Crescent, Canal Road, Portarlinton, Co. Laois

Email: southeyangela@gmail.com Mobile: 085-7433031

Nationality: Irish. Status: Married

Profile

- 13 years of experience in evaluating the impact of consumer products (including air cleaners, vacuum cleaners, textiles, filter media and flooring) on indoor pollutants to support product development process and marketing claims of our clients.

Key Skills

- Quality management system implementation in lab start-ups (GMP & ISO standards).
- Technical writing skills -authoring SOPs, client proposals, compiling/reviewing test reports.
- Excellent problem-solving skills and adapts well to changing priorities.
- Significant experience in data analysis and laboratory techniques such as ELISA, microbiological and virological methods.
- Works effectively in cross functional teams or self-directed.

Achievements:

- Qualified with a BSc. Microbiology, a PhD in Biochemistry and a Masters in Public Health (MPH).
- Developed QC Virology Test Methods for screening in-process/cell culture components from Enbrel manufacture.
- Provided technical support to cross-functional teams for Hepatitis B immunoassay kits (AxSYM/IMx).
- Set-up product testing labs and test rigs/chambers for product performance testing.
- Designed, optimised and executed product testing and calibration protocols.
- Responsible for attaining ISO 9001 certification of quality management system and played key role in obtaining ISO 17025 accreditation of 2 test methods.
- Became Chief Technical Officer at airmid healthgroup in December 2023.

Education

2014 – 2015 Master of Public Health (MPH) 1st Class Hons. School of Public Health, Physiotherapy and Population Science (PHPPS), UCD, Clonskeagh, Dublin 4.

2013 – 2014 Diploma in Health Economics. 1st Class Hons. Institute of Public Administration, Dublin 4.

1990 - 1994 PhD. Biochemistry. Dept. of Medicine and Therapeutics, UCD, Clonskeagh, Dublin 4.

1986 – 1990 BSc. Microbiology Hon's. 2.1. Dept. Microbiology, UCC, College Road, Cork.

Work History

airmid healthgroup Ltd.

12/2023 to present

2056 Castle Drive, Citywest Business Campus, Dublin 24.

Chief Technical Officer. airmid healthgroup *evaluates consumer products (including air cleaners, vacuum cleaners, textiles, filter media and flooring), for their indoor pollutant removal ability to support client's product development and claims.*

- Manage product testing schedules, run weekly management and team meetings, updating management.
- Management of testing projects, assigning to laboratory personnel, ensuring they are completed within agreed timelines.
- Overseeing the management of the ISO 17025 quality system by the Quality Lead, review and approval of documentation, reports, addressing non-conformances, performing in-house audits.
- Technical expertise to resolve product testing issues, assist with method design, execution, data analysis and reviewing of test reports.
- Liaising with clients on product testing proposals, testing timelines and issuing test reports.
- Hiring personnel, carrying out performance reviews, training and management of staff.

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Sonitus Systems Ltd.

05/2020 to 11/2023

Goldenbridge Industrial Estate, Inchicore, Dublin 8.

Quality Manager/Senior Air Quality Scientist

Sonitus Systems manufactures cloud-based environmental monitoring devices for airborne particulates, noise and vibration.

- *Established, implemented and maintained the quality system to ensure ongoing compliance with ISO 9001:2015 standard, other regulatory standards including MCERTs.*
- *Day-to-day operation of dust laboratory to ensure airborne particulate monitor verification targets were met, reducing variance in product performance and promoting continuous improvement.*
- *Worked with production team to ensure compliance with work instructions and quality procedures, provided training in QMS processes.*
- *Supported investigations of non-conforming or out of specification product and recommended corrective actions and effective closure.*
- *Compiled and managed databases for customer complaints, process changes and improvements, non-conformances, staff training logs and risk register.*
- *Scheduled and ran management reviews, planned and carried out internal audits, and tracked KPIs.*
- *Quality Representative at external audits, providing the requested information and documentation.*

Airmid Healthgroup Ltd.

11/2017 to 03/2020

Trinity Enterprise Campus, Macken Street, Dublin 2.

Laboratory Manager/Technical Manager. *Airmid evaluates consumer products (including air cleaners, vacuum cleaners, textiles, filter media and flooring), for their indoor pollutant removal ability to support client's product development and claims.*

- *Managed product testing schedules, ran weekly team meetings, delegated testing and maintenance to lab personnel and trained laboratory staff.*
- *Involved in maintenance of the ISO 17025 quality system, participated in PT schemes, maintained control charts, addressed non-conformances, performed in-house audits and assisted external auditor at annual INAB audit.*
- *Project-managed product testing including method design and execution, data analysis, compiling/reviewing test reports.*
- *Provided technical support to management in relation to resolving product testing issues and addressed client queries.*

Airmid Healthgroup Ltd.

04/2008 to 11/2017

Trinity Enterprise Campus, Macken Street, Dublin 2 (*Previously Allergy Standards Ltd. until 2010*)

Technical Manager

- *Set-up allergen and microbiology testing labs and environmental test chambers to the value of €270k*
- *Drew up main technical and housekeeping SOPs, set-up/validated ELISAs and viral bioassays.*
- *Provided technical expertise for ISO 17025 certification of 2 ELISAs.*
- *Devised test methods for testing consumer products in the test chambers, project managed testing, compiled proposals and test reports.*
- *Liaised with management to resolve product testing issues and addressed client queries.*

Abbott Ireland Diagnostics Division (AIDD)

07/2005 to 03/2008

Finisklin, Sligo.

Technical Specialist

- *Provided technical support to quality and manufacturing cross-functional teams for Hepatitis B immunoassay kits for Abbott AxSYM and IMx automated immunoassay analysers.*
- *Investigated out of specification or invalid test results via Test Investigation Reports.*
- *Completed validation reports, non-conformance investigations on product-related issues, implemented document change controls.*
- *Ensured that all work carried out was compliant with cGMP.*

Wyeth Biopharma – (Pfizer)

06/2003 to 06/2005

Grange Castle, Dublin 22

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Quality Control Analyst

- Developed QC Virology Test Methods for screening in-process samples and cell culture components from Enbrel manufacture.
- Planned and performed test methods and validation, including viral bioassays and cell culture, in accordance with cGMP.

Irish Equine Centre Virology Analyst, Johnstown, Co. Kildare. 12/2002 to 06/2003

Laois County Council Water, Services Section Environmental Technician. 04/2002 to 10/2002

Large Animal Clinic, Veterinary College, UCD. Postdoctoral Researcher. 10/1997 to 09/2001

Tanabe Seiyaku Co. Ltd, Osaka, Japan. Postdoctoral Researcher. 07/1995 to 07/1997