

Improved Allergen Capture

Traditional methods for aerosolised allergen sampling include Institute of Occupational Medicine (IOM) samplers and Electrostatic Dust Collectors (EDC). IOMs are designed for personal sampling using a specialized pump, which require calibration, and are loud/cumbersome to use. EDCs only allow for passive collection of settled dust.

When designing Apollo, InBio aimed to enhance the user experience while improving the sampling methods available to the IAQ industry. The result is a quiet, high throughput air sampler which allows for efficient, easy, and reproducible allergen sampling. Compared to traditional air sampling methods, Apollo demonstrates improved sensitivity and collects up to 10x more allergen across a range of indoor and food allergens - and is as simple as plugging in!

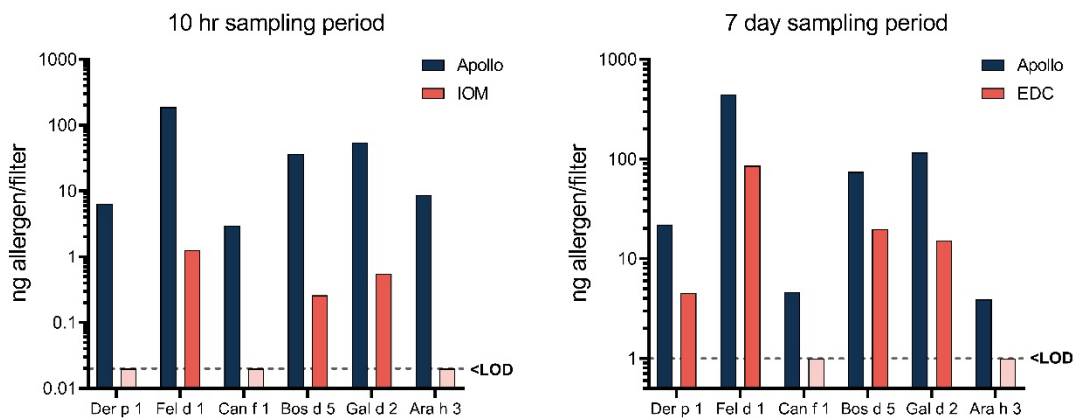


Figure 1 – Representative data from 1 household. IOM and Apollo devices were run simultaneously for 10 hours, and EDC and Apollo for 7 days. Results are provided in ng allergen per filter on a log scale.

	Nanogram of allergen per filter/collector							
	Der p 1	Mite G2	Fel d 1	Can f 1	Bos d 5	Gal d 2	Ara h 3	Ana o 3
IOM (10hrs)	<LOD	<LOD	1.28	<LOD	0.26	0.56	<LOD	<LOD
Apollo (10hrs)	6.35	2.40	188.20	3.00	36.70	54.43	8.70	1.80
EDC (7 days)	4.50	1.50	85.80	<LOD	19.95	15.30	<LOD	<LOD
Apollo (7 days)	22.07	7.83	442.80	4.65	74.35	116.1	3.90	16.73

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Clinical Trials

When conducting allergen immunotherapy clinical trials, it is important to perform allergen exposure measurements. Previously this has been performed by collecting settled dust samples with InBio's DUSTREAM collector. Now, using Apollo, aerosolised allergen can also be assessed.

The Apollo is currently being used in clinical trial settings in collaboration with two of the UK's largest universities, including the University of Manchester, assessing allergen exposure in patients' homes. This data is providing valuable insight for clinicians to determine what allergens patients are being exposed to in their homes and linking this information with symptoms scores.

Ongoing R&D

Scientists at InBio are currently working to expand the capabilities of the Apollo by investigating the effectiveness of the device for measuring microbes and are exploring potential collaborations with Cardiff Metropolitan University. Future R&D will focus on the detection of bacteria, molds and viruses.

In addition, early data suggests that the Apollo is an effective method for the capture of endotoxin. Through an optimized extraction method, we can measure endotoxin and InBio's full panel of allergens from a single sample.

Watch this space for upcoming developments!