

Aerobiology Research Laboratories established in 1992, operates **30 pollen and spore monitoring stations across Canada**, strategically located in both highly populated cities and diverse rural regions. This network allows us to provide accurate aeroallergen data and pollen and spore forecasts for the majority of Canadians.

Our Monitoring Process

We utilize **innovative aeroallergen rotation impaction samplers**, specifically our redesigned GRIPST-2009 models. These samplers capture pollen and spore specimens on plastic rods that spin at 2400 RPMs. These rods are collected daily by field associates and shipped weekly to our laboratory.



Upon arrival, our highly trained laboratory staff microscopically analyze the samples. Our staff undergo a rigorous **six-month training and testing program** to accurately identify and quantify over 80 pollen and spore types.

Advancements in Automation

In 2025, we introduced **automated samplers** to our network. These new units transmit digital images to our lab, allowing technicians to identify, quantify, and validate pollen counts more efficiently.

It's important to note that automated samplers are still in their early stages within our industry. Currently, only samplers costing **above \$80,000 CAD per unit** can provide reliable counts, and even these are limited in their identification capabilities, typically recognizing less than 10 pollen and spore types compared to our 80+. Less expensive automated samplers require significant

validation and human oversight to ensure accurate data which drives up the cost of analysis dramatically.

Data and Science-Driven Forecasting

We maintain an extensive **data warehouse with over 32 years of historical pollen and spore counts**. This robust database, which records the total number of particles per cubic meter of air for each identified type, enables us to efficiently query and summarize current and historical allergen levels.

This wealth of data is crucial for our research and forecasting operations, as well as for meeting our clients' data needs. Our forecasts consistently achieve an **accuracy rate of around 80%** for the season, a testament to our methodology, which combines current and historical data with weather variables.

In contrast, other companies claiming to provide pollen and spore forecasts in Canada often lack foundational data, resulting in accuracy rates below 30%. Without verifiable data, it's impossible to formulate and validate accurate forecasts. Relying on such forecasts is akin to guessing the weather without any scientific basis, especially since pollen is largely invisible to the naked eye.