



## Air purifying in a molecular diagnostics company

**Mobidiag Inc.** is a company developing and manufacturing molecular diagnostics platforms and test kits for detecting human pathogens. The products utilize PCR technology, where target DNA segments are amplified, generating thousands to millions of copies of a particular DNA sequence. Due to this, purity of the laboratory environment is extremely important.

“The challenge in air purification is not only the traditional particle purification, but for us the most critical part is the purification of the amplification product that we are making ourselves in the laboratory”, describes CEO **Tuomas Tenkanen** (photo).

“A contamination of our samples or products with amplification products could cause wrong positive results in our diagnostics tests. The PCR amplification products (amplicons) are

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**CEO Tuomas Tenkanen**

very difficult targets for air purification, since their size is small. The size of these is from 100 to 500 base pairs which equals 30–200 nanometers. Traditional HEPA filters are not capable to filter those amplicons or the capability is limited”, he adds.

The air brought to the laboratories is decontaminated by a Genano air purifier before entering the room. In addition, stand-alone Genano units are used to circulate and purify the air in critical spaces.

Ventilation was adjusted to achieve the right pressure differentials between laboratory spaces, to prevent airborne particles and contaminants to move towards cleaner areas.

### What was achieved?

According to ISO 14464-1 airborne particle measurements performed after installing Genano air purifiers:

- The laboratory has now two areas where the particle count is ISO 6 compliant.
- The air in these laboratories is 96 % cleaner compared to the central area (sampling of 0.3 µm particles).

“Genano system is a perfect solution for our needs”, summarizes Mr. Tenkanen.

More information on Genano air purifiers:  
[www.genano.com](http://www.genano.com)