

# Zentek Announces Final Results of HVAC Phase 2 Testing

written by Raj Shah | February 6, 2023

February 6, 2023 ([Source](#)) – **Zentek Ltd.** (“**Zentek**” or the “**Company**”) (Nasdaq:ZTEK)(TSX-V:ZEN), an intellectual property development and commercialization company, is pleased to announce, further to its press releases dated April 11 2022 and December 15, 2022, that it has received the final report for Phase 2 testing of ZenGUARD™ for use in Heating, Ventilation and Air Conditioning (“HVAC”) filtration from the National Research Council of Canada (“NRC”). ZenGUARD™-treated MERV 8 filters achieved 34.56% filtration efficiency of the Phi6 virus, a surrogate for COVID-19 during a single air exchange. This compares to 7.24% for uncoated MERV 8 filters, a 27.32% net improvement.

“We believe our patented technology platform, ZenGUARD™, is a disruptive technology for the HVAC industry, giving us the ability to help filter manufacturers significantly increase pathogen filtration efficiency of the most commonly used air filters. The ZenGUARD™ technology is a simple and practical way to improve one of the biggest problems facing workspaces, planes, trains, buses and other indoor spaces: indoor air quality. Many building and transportation system owners and operators do not have the ability or desire to bear the financial costs of upgrading to higher rated filters and HVAC systems. Additionally, avoiding the increased energy consumption and maintenance costs associated with higher rated filters provides a strong environmental and economic incentive, further supporting the ZenGUARD™ value proposition,” said Greg Fenton, CEO of Zentek. “For these reasons, we believe our patented ZenGUARD™ technology has the potential to not only protect

people's health by removing more pathogens from the air we breathe, but to do so in a way that reduces financial burden and environmental footprint.”

## **Phase 2 Testing**

Testing was conducted in NRC's unique bioaerosol facility, a purpose-built 173.3 m<sup>3</sup> (6,120 ft<sup>3</sup>) modular room intended to simulate a real-world classroom environment. The testing used Cystovirus Phi 6, a surrogate for enveloped viruses, including SARS-CoV-2, the causative agent of COVID-19. Importantly, the particle size distribution used for this study was representative of the size distribution expelled from the human respiratory tract (Morawska et al 2009) where 85% were in the E1 classification (0.3-1 micron) and 15% were in the E2 category (1-3 microns) and were at a concentration in line with ASTM E3273-21 – Standard Practice to Assess Microbial Decontamination of Indoor Air using an Aerobiology Chamber. MERV 8 filters were not designed to capture particles this size, which is reflected in their low 7.24% filtration efficiency. In contrast, the ZenGUARD™ technology had a meaningful effect on the viral filtration efficiency of the MERV 8 filter, increasing the efficiency by almost 5 times to 34.56% in a single air exchange.

## **Next Steps Toward Commercialization**

Zentek has shared the Phase 2 report with Federal and Provincial organizations for their review and analysis of the results. This is a step in the Innovation Solutions Canada commercialization pathway that could lead to potential agreements to sell ZenGUARD™ coated HVAC filters to governmental organizations.

Zentek is also continuing:

- To optimize the Company's product offerings by testing

various configurations of HVAC filter materials coated with patented ZenGUARD™ technology at LMS technologies in the United States.

- To work with the Pest Management Regulatory Agency and the Environmental Protection Agency for regulatory approvals in Canada and the United States respectively.

In addition, the company is reviewing a report from Intertek Group PLC that provides an overview of regulatory requirements in other geographies of interest to assess commercialization opportunities across the globe.

### **About Zentek Ltd.**

Zentek is an IP development and commercialization company focused on the research, development and commercialization of novel products using graphene and nanomaterials for use in the healthcare industry and beyond.

Zentek's patented ZenGUARD™ coating is shown to have 99% antimicrobial activity and to significantly increase the bacterial and viral filtration efficiency of both surgical masks and HVAC systems. Zentek's ZenGUARD™ production facility is located in Guelph, Ontario.

### **For further information:**

Mitch Swergold

Tel: (917) 930-8723

Email: [mswergold@zentek.com](mailto:mswergold@zentek.com)

To find out more about Zentek, please visit our website at [www.Zentek.com](http://www.Zentek.com). A copy of this news release and all material documents in respect of the Company may be obtained on Zentek's SEDAR profile at <http://www.sedar.com/>.

## **Forward-Looking Statements**

This news release contains forward-looking statements. Since forward-looking statements address future events and conditions, by their very nature they involve inherent risks and uncertainties. Although Zentek believes that the assumptions and factors used in preparing the forward-looking information in this news release are reasonable, undue reliance should not be placed on such information, which only applies as of the date of this news release, and no assurance can be given that such events will occur in the disclosed time frames or at all. Zentek disclaims any intention or obligation to update or revise any forward-looking information, whether as a result of new information, future events or otherwise, other than as required by law.

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**SOURCE:** Zentek Ltd.