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Alliance Laundry Systems and university researchers partner on N95 decontamination process

Tumble dryer method potentially quadruples useful life of certain N95 masks

RIPON, Wis., Aug. 11, 2020 /PRNewswire/ -- Alliance Laundry Systems, the world leader in the manufacture of commercial laundry equipment, has helped to develop a protocol for the viral decontamination of certain models of N95 masks utilizing UniMac 75-pound tumble dryers. The protocol potentially will quadruple the useful life of this important personal protective equipment (PPE). Research suggests masks could be decontaminated up to three times, while preserving fit and filtration.

This method of decontamination builds off evidence provided by the National Institutes of Health (NIH), which showed that submitting N95 masks to dry heating cycles (70C/158F), similar to those demonstrated by Alliance's dryer, reduces the SARS-COV-2 viral load by three orders of magnitude.

There are more than 100,000 of these specific UniMac tumble dryers installed and supported through UniMac's nationwide distributor network of factory-trained technicians, meaning many locations have on-site access. Most communities should have nearby access, opening up possible partnership opportunities to provide viral decontamination services. Tumble dryers already play a critical role in many laundry applications, including laundromats and on-premises laundries, using heat to help prevent the spread of infection.

"With the life-and-death importance of this protective equipment and its current scarcity, our company jumped at the chance to work collaboratively with graduate researchers on an N95 Decontamination task force at Stanford University to design a method that enables reuse of N95 masks," said Rick Pyle, President and Chief Commercial Officer of Alliance Laundry Systems. "Alliance Laundry Systems engineers and research lab staff worked tirelessly to help craft this repeatable decontamination protocol and supply test data supporting it. We could not be prouder to help research a way to protect the brave men and women in healthcare and first-responder roles, who are on the front lines of this COVID-19 fight every day."

Alliance Laundry Systems leveraged its state-of-the-art research and development lab to perform hundreds of hours of tests utilizing UniMac tumble dryers. The overarching goal was

to develop a repeatable decontamination process that would help safely reuse certain models of N95 masks. Testing suggests that specific masks can be decontaminated up to three times without excessive damage to their fit and filtration. The CDC/NPPTL (NIOSH) labs provided filtration and fit data on new masks which underwent the decontamination treatment. Lab results and test data have now been submitted to the FDA for emergency use authorization (EUA).

The UniMac dryer's unique heater box design and radial airflow pattern help, with proper programing and process validation, maintain the optimal decontamination temperature, while preserving the integrity of the specific N95 masks tested. Through a Stanford N95 Decontamination task force in the lab of Professor Manu Prakash, graduate student members, Edward Mazenc, Daniel Ranard, and Yuri Lensky, worked to study the viability of the temperature data findings for decontamination. Those findings are detailed in a final paper currently in peer review.

"These results indicate a significant leap forward in the reuse of N95 masks, and the availability of UniMac equipment not only in the United States, but also globally, brings unprecedented access to this repeatable process," Pyle said.

For more information, visit unimac.com/n95. To learn more about Alliance Laundry Systems, its products and world-class manufacturing and design/test labs, visit alliancelaundry.com.

About Alliance Laundry Systems
Leading Performance
Alliance Laundry Systems makes the world cleaner as the premier provider of laundry solutions. We deliver Leading Performance through our exceptional employees, unmatched quality and our commitment to innovation. Alliance leads the world in commercial laundry sales, reach and R&D investment. No competitor comes close. Our laundry solutions are available under five respected brands, sold and supported by a global network of select distributors. We serve more than 140 countries with a team of more than 3,500 employees. Our brands include Speed Queen®, UniMac®, Huebsch®, Primus® and IPSO®. Together they present a full line of commercial washing machines, dryers and ironers (with load capacities from 12–400 lb., or 6–180 kg.) and every essential support service necessary to keep your operation running at maximum efficiency. You can also enjoy the superior wash and fabric care of commercial-grade laundry equipment in your home through our legendary Speed Queen® washers and dryers. At Alliance, we aim to bring you laundry peace of mind with an award-winning customer experience that's unrivalled in our industry. For more information, visit www.alliancelaundry.com.

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