

New UV light disinfection technology proven to eradicate the SARS-CoV-2 virus (Covid-19) from surfaces in daily life

Today, Swedish cleantech company LightLab Sweden is introducing a new UVC disinfection technology called PureFize[®], proven to inactivate bacteria and viruses, among them SARS-CoV-2. To test its effectiveness, LightLab Sweden partnered with SAES Group and the University of Siena, Italy. The study uses a prototype of a real consumer product and shows that PureFize can be used to inactivate any SARS-CoV-2 presence (>99.9999%) on items that consumers use every day. The results will be submitted to a scientific journal of public health.

The study was conducted by the University of Siena and will be submitted for publication in a well-recognized peer reviewed international journal. The study shows that PureFize is effective in inactivating 99.9% of the SARS-CoV-2 virus in the samples in less than three minutes and 99.9999% in less than ten minutes. This is the first time a scientific study has been conducted and published using a prototype of a real consumer product for UVC disinfection of surfaces.

– We are happy to present the first scientific evidence of this UVC disinfection technology. A very good result was obtained to inactivate SARS-CoV-2 by the tested prototype of a real consumer product. The PureFize UVC technology can play an important role in inactivating SARS-CoV-2 from objects in everyday life, says Professor Gabriele Messina, MD, Associate Professor in General and Applied Hygiene (Public Health), University of Siena, Italy.

The PureFize UVC disinfection technology is a completely new and sustainable technology developed by the Swedish cleantech company LightLab Sweden. PureFize has been developed to utilize a wider and more effective wavelength spectrum to inactivate bacteria and viruses. The PureFize technology is fast, effective and generates minimal thermal heating, making it energy efficient. It does not contain any mercury or chemicals and does not generate ozone.

– I am very proud that we now can present PureFize. Many companies on the market state that their products inactivate SARS-CoV-2 from surfaces, but few have actually conducted scientific tests with their products. Scientific validation is something that is very important to us. The effectiveness of PureFize has now been validated by the University of Siena. PureFize makes it possible to bring UVC into everyday life in a safe and sustainable way. We aim to raise the standard for UVC disinfection and show that PureFize can be effective in inactivating bacteria and viruses but also sustainable in minimizing the impact of the technology on the environment, says Rune Torbjørnsen, CEO at LightLab Sweden.

The PureFize technology is now being extensively launched and is ready to be shipped globally. The technology offers vast integration opportunities and can be used in a wide range of applications and installed in products without major redesigns or adaptations. LightLab Sweden has several ongoing projects with partners who want to integrate effective and sustainable UVC solutions into their products to provide added value to customers and consumers. PureFize is protected by 96 granted patents and another 47 patent applications are awaiting approval.

– This is just the first step for us in raising the bar on disinfection through UVC technology and proving that the PureFize technology is effective on bacteria and viruses. We will continue to explore the many possibilities to apply this technology to secure a healthier and safer everyday life, says Fredrik Forssell, CMO, LightLab Sweden.

For more information, please contact:

Rune Torbjörnsen, CEO, LightLab Sweden AB

Phone: +46 72 003 85 30

E-mail: rune.torbjornsen@lightlab.se

Prof. Gabriele Messina, MD, Associate Professor, University of Siena, Italy

Phone: + 39 0577 235423

E-mail: gabriele.messina@unisi.it

About the study:

The University of Siena has tested a new UVC technology called PureFize that is developed by LightLab Sweden. During the study the PureFize UVC light sources were placed in a surface disinfection box developed by LightLab Sweden for general demonstration purposes. Six PureFize light sources were used at a distance of > 7,5 cm from the Sars-Cov-2 samples. The sample was a solution containing SARS COV-2 at a concentration $10^{7.2}$ *TCID50%/ml, where TCID50% means a virus concentration such as to induce damage on 50% of infected cells. The result was a reduction of 99.9% (log3) of the virus in the samples in less than three minutes and 99.9999% (log6) in less than ten minutes.

About PureFize®:

PureFize is a safe and effective technology to disinfect surfaces, foods, water and air. Using a world-leading proprietary nanotechnology PureFize creates a unique and broad UVC light spectrum where all bacteria and viruses, including SARS-CoV-2, are destroyed beyond repair with exceptionally high degrees of germicidal reduction. PureFize is energy efficient, sustainable, mercury-free, or create any ozone and guarantees minimal thermal heating. PureFize is protected by 96 granted patents and another 47 patent applications are awaiting approval. The technology is developed by LightLab Sweden and designed with integration in mind for commercial and consumers applications and products.

www.purefize.com

About LightLab Sweden:

LightLab Sweden is a clean tech company that develops and manufactures a sustainable proprietary UVC light source system, PureFize, that can be used to sanitize surfaces, food, air and liquids. Our mission is to integrate disinfection into everyday life enabling more people access to better health and a better environment. LightLab Sweden is based in Uppsala, Sweden, and collaborates with global partners and leading universities globally to bring smart UVC into applications for industry and consumers.

www.lightlab.com

About SAES Group:

A pioneer in the development of getter technology, the SAES® Group is the world leader in a variety of scientific and industrial applications where stringent vacuum conditions are required. In 80 years of activity, the Group's getter solutions have been supporting technological innovation in the information display and lamp industries, in sophisticated high vacuum systems and in vacuum thermal insulation, in technologies spanning from large vacuum power tubes to miniaturized silicon-based microelectronic and micromechanical devices (MEMS).

Starting in 2004, by leveraging the core competencies in special metallurgy and in the materials science, the SAES Group has expanded its business into the advanced material markets, in particular the market of shape memory alloys, a family of materials characterized by super elasticity and by the property of assuming predefined forms when subjected to heat treatment. These special alloys, which today are mainly applied in the biomedical sector, are also perfectly suited to the realization of actuator devices for the industrial sector (domotics, white goods industry, consumer electronics, automotive and luxury sector). More recently, SAES has expanded its business by developing a technological platform that integrates getter materials in a polymeric matrix. These products, initially developed for OLED displays, are currently used in new application sectors, among which implantable medical devices and solid-state diagnostics imaging. Among the new applications, the advanced food packaging is a significantly strategic one, in which SAES is offering a range of new products for sustainable packaging and aims to compete with fully recyclable and compostable solutions. A total production capacity distributed in ten facilities, a worldwide-based sale & service network and over 1,000 employees allow the Group to form a truly global enterprise.

SAES Group is headquartered in the Milan area (Italy). SAES Getters S.p.A. is listed on the Italian Stock Exchange Market, STAR segment, since 1986. More information on the SAES Group is available in the website www.saesgetters.com.