



NEWS Release

SAES® Group announces remarkable results of a study to inactivate SARS–CoV-2 virus from surfaces with a new UVC technology

SAES Group announces the completion of a first study carried out with the University of Siena, demonstrating the effectiveness of a new UVC technology to inactivate the SARS –CoV-2 virus from surfaces. The new disinfection technology, based on innovative UVC sources and named PureFize®, has been developed by LightLab Sweden, a cleantech Swedish company, SAES has been working with for some time in the frame of specific cooperation agreement.

SAES Group considers innovation and technology diversification as key assets to build the future and is looking with high interest at the new UVC sources, where vacuum and advanced functional materials (both technology fields in which SAES is a leader) play an important role for the optimum performances. The cooperation with LightLab has the purpose to evaluate the potentiality of PureFize® technology in disinfection applications and to support further developments leveraging on SAES long-term expertise.

The study was coordinated by SAES and directed by Prof. Gabriele Messina (Associate Professor in General and Applied Hygiene -Public Health- University of Siena, Department of Molecular and Developmental Medicine), whose team is internationally recognized as a leader in microbiological analyses and disinfection tests with UV sources. The virucide activity tests were carried out using a product prototype for disinfection of surfaces, based on the new LightLab's UVC sources.

Results demonstrated that PureFize® technology is very effective in inactivating SARS-CoV-2 virus from surfaces. Six PureFize® UVC light sources were placed in a disinfection box developed by LightLab Sweden and were used at a distance of about 7,5 cm from SARS-Cov-2 samples. As a result of the generated UVC radiation, a strong viral inactivation was measured on samples inoculated with a solution containing high concentration of SARS-Cov-2*: viral charge reduction of 99,9% in the samples in three minutes, and of 99,9998% (Detection Limit in the tests) between six and ten minutes.

All the results of the scientific study carried out by Prof.Messina's team will be submitted for publication in a peer review International Journal of Public Health.

"We are very proud to have the chance to work with LightLab in this specific historical moment where the need for new solutions for disinfection strongly emerged, and the results we obtained. This interaction is most importantly, an example of our interest and drive to engage with innovative ventures in which high technologies play a crucial role and value for the future" says Ginevra della Porta, SAES Project Leader for innovative products.

PureFize® UVC sources exhibit high performances and unique features that make them particularly suitable for virus, bacteria and microorganisms disinfection. LightLab and SAES are cooperating to identify application opportunities where the integration of the new sustainable UVC solutions can bring a higher value for the development of advanced disinfection systems with respect to the existing technologies.



SAES will continue to work in order to fully exploit the potential of the new PureFize® technology and will report relevant advances as soon as they are achieved.

* SARS CoV-2 concentration of $10^{7.2}$ *TCID50%/ml, where TCID50% (Tissue Culture Infective Dose 50%) means a virus concentration such as to induce damage on 50% of infected cells.

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.

About LightLab Sweden:

LightLab Sweden is a cleantech company that develops and manufactures a sustainable proprietary UVC light source system, PureFize, that can be used to sanitize surfaces, food, air and liquids. LightLab 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 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.