HYLA International GmbH & Co.
KG Hornbergstraße 49 70794 Filderstadt - GERMANY

To the kind attention of Vice-president
Eng. Prof. Giuseppe Madonia

Milan, 26/04/2023

SUBJECT: HYLA EST DEFENDER device - Scientific validation 2023

This is to certify that the scientific tests conducted in February, March and April 2023 on the HYLA EST DEFENDER Device gave positive results. More specifically, Prof. Paola Fermo – Full Professor of Analytical Chemistry and Environmental Chemistry of the Department of Chemistry at University of Milan and Member of the SIMA Scientific Committee – **assessed the device's ability and efficacy to reduce the airborne particulate material**, finding out that the outgoing air - after the air intake process and its filtration through the device's water filtering system - was pure and free of polluting particles known to be potentially dangerous to human health. This was demonstrated by the presence of particles collected on the filters placed at the entrance of the device, i.e. before abatement. These particles, identified by electronic microscopy, were found to contain material of carbonaceous origin, silicates, carbonates, aluminum silicates as well as heavy metals such as iron and manganese. The particles identified on the inlet filters were instead not found on the outlet filters, thus demonstrating that **the HYLA EST DEFENDER device has been able to effectively remove the airborne particles thanks to its water filtration system**. Previous scientific tests conducted on the same device had demonstrated its effectiveness by evaluating the decrease in the concentration, in an indoor environment of both atmospheric particulate matter and volatile organic compounds (VOCs) and had also found the presence of various inorganic materials, including numerous metals (i.e. heavy metals dangerous to human health such as Chromium, Manganese and Lead), as well as chlorides, nitrates, sulphates, and organic materials such as carbonaceous substances, whose concentration by mass was similar to that found in atmospheric particles.
It is important to underline that airborne polluting particles in an indoor environment, if inhaled, can have negative consequences on human and animal health. The smaller these particles are, the more their action is considered dangerous because they are able to penetrate the respiratory tract more deeply, being able also to reach the pulmonary alveolar system and then passing into the bloodstream to reach various parts of the body. Specifically, the potentially toxic-harmful particles for human health that the HYLA EST DEFENDER device was found to be able to break down (according to the preliminary results of the scientific tests conducted on it to date) are: Manganese, Chromium, Lead, Iron , carbonaceous particles, fine dust and Volatile Organic Compounds (Vocs).

I enclose the scientific report of Prof. Paola Fermo, drawn up on 04.15.2023, and I send best regards and best wishes for your work.

Yours Sincerely,

Prof. Alessandro Miani
President
Italian Society of Environmental Medicine (SIMA)