WORLD SCIENTISTS
International Scientific & Research Journal

Conclusion – The results of evaluation of the Innovative Steam Generator ‘MediCleanTec Micro Cleaner’

Conclusion

on the results of evaluation of the Innovative Steam Generator ‘MediCleanTec Micro Cleaner’ of the research laboratory of integrative medicine –

Department ‘ECOCONTROL’.

at the International University of Fundamental Studies &

National Institute of Health

The research laboratory of integrative medicine – ‘ECOCONTROL’ department at the International University of Fundamental Education, Inter-University Higher Academic Council, Paris, as well as at the National Institute of Health analyzed the efficiency, harmlessness to humans and animals, hypoallergenicity of the innovative steam generator ‘MediCleanTec Micro Cleaner’.

The sample of the innovative steam generator ‘MediCleanTec Micro Cleaner’ came from the developer – MEDECO CLEANTEC GMBH, AUSTRIA.

The author of the discovery is Dr Friedrich (Fritz) Pattis, AU,

Patent user : IPOH GmbH, Austria.

Discovery – innovative steam generator ‘MediCleanTec Micro Cleaner’ refers to the field of eco-technologies, namely to devices, the principle of operation of which is based on the impact on the object of micro dry steam, which has high cleaning and disinfecting properties, promising both for effective cleaning and for combating bacterial, viral, mite and fungal infestations. The author presents the device as a tool for deep cleaning, disinfection, and deodorisation.

The micro-dry steam at the outlet of the ‘MediCleanTec Micro Cleaner’ steam generator reaches a temperature of more than 100° (depending on the accessories used, distance and surface condition) and, therefore, can contribute to the reduction of microbes during basic cleaning.

The developer claims the following applications for the device:

– Reduction/elimination of germs, bacteria, moulds

– Cost reduction and amortisation through savings in cleaning agents

– Effective and fast loosening and removal of grease and stubborn dirt.

– Hygienic mattress cleaning and mite eradication

– Hygienic, deep cleaning of all smooth and rough surfaces.

– Elimination of unpleasant odours from textiles, bathrooms, kitchens, etc.

– Gentle cleaning (with little moisture using micro vapour) of sensitive machines and devices, wooden/parquet floors, textiles, etc.

– Highly effective removal of stains from carpets, upholstery, smooth floors, etc.

– Smooth and rough surfaces (natural stone floors, plastic floors, wooden floors, non-slip floors, glass panels, tiles, etc.).

– Easy and extremely effective cleaning in hard to reach places in the kitchen, bathrooms, toilets, furniture, heaters, machines, appliances, joints, kerbs, edges,

corners, blinds, drains, grills, vents, crevices. , cars, bicycles, motorbikes, wheelchairs,.

– Fast defrosting and hygienic cleaning of cold rooms, refrigerators, chests.

In the course of the research the compliance of the efficiency and safety of the steam generator ‘MediCleanTec Micro Cleaner’ with the requirements of the European Union standards for deep cleaning and disinfection devices has been verified.

Evaluation of the effectiveness of ‘MediCleanTec Micro Cleaner’ was carried out in order to determine whether it has antimicrobial, insecticidal, acaricidal, rodenticidal, repellent action, as well as effective modes (modes of operation, energy consumption rate, exposure time), methods and methods of application, which achieves the corresponding action.

Safety assessment of ‘MediCleanTec Micro Cleaner’ was carried out in order to establish optimal conditions of use, under which the device under study, its structural elements, or the effects arising from its use do not have a harmful effect on humans, treated objects and the environment.

No deviations from the requirements of normative documents were revealed.

The following test microorganisms were selected to study the bactericidal efficiency of ‘MediCleanTec Micro Cleaner’:

– Staphylococcus aureus (pc 906) or (pc ATCC N 6538-P), Listeria monocytogenes (pc 766) – to evaluate the bactericidal activity against Gram-positive bacteria;

– Escherichia coli (Pcs. 1257) or (Pcs. ATCC 10536),

– Pseudomonas aeruginosa (w/w ATCC 27853 (F-51) or (w/w ATCC 15442),

– Salmonella typhimurium (pc ATCC 13311) – to assess bactericidal activity against Gram-negative bacteria.

The test microorganisms were cultured on the following nutrient media: E. coli, S. typhimurium, P. aeruginosa and S. aureus – on casein broth, meat-peptone broth, Endo agar, casein agar, meat-peptone agar (hereinafter – MPA), etc. at the temperature plus (37±1)°C for 18-24 hrs.

It was established that the innovative disinfectant ‘HB Solution’ can be used as a ready-to-use solution for the steam generator ‘MediCleanTec Micro Cleaner’. To use it is sufficient to place the solution in a special accessory bottle and connect it directly to the steam hose of the device, having first made sure that the surfaces have been thoroughly cleaned of dirt and germs using dry steam.

Confirmation of the effectiveness of the invention.

At the Research Laboratory for Integrative Medicine – ECOCONTROL Department at the Inter-University Higher Academic Council, Paris, medical and engineering studies were carried out to determine the effectiveness and safety of the ‘MediCleanTec Micro Cleaner’ device and statistical analyses of the results of the studies were carried out.

When using the steam generator ‘MediCleanTec Micro Cleaner’ statistically and clinically significant reductions in the level of pathogenic microorganisms, viruses and fungi contamination of control surfaces were determined.

It is established that in the process of using the steam generator ‘MediCleanTec Micro Cleaner’ it does not have a harmful effect on humans and their environment.

AISI 304 steel, used in the manufacture of the boiler of the steam generator ‘MediCleanTec Micro Cleaner’, has a number of significant advantages:

– High resistance to degradation from corrosion when used in aggressive environments;

– Ability to work under the influence of salt, fresh, tap water;

– Increased resistance to oxidising processes, alkaline solutions;

– Good plasticity, tolerance of significant temperature fluctuations, which allows the operation of steel AISI 304 in the temperature range from -200 °C to +650 °C;

– Resistance to highly concentrated acids – acetic, formic, nitric and others;

– Low degree of magnetism;

– Environmental safety – the alloy does not absorb any substances, including toxic substances.

Austenitic structure of the stainless alloy of this steel grade is given by alloying with chromium, nickel, copper and manganese. These elements significantly affect the corrosion resistance of 304 AISI steel, its strength.

Conclusion.

The innovative micro dry steam generator ‘MediCleanTec Micro Cleaner’ is an efficient, safe, economical and high-tech device. Its discovery can be evaluated as a breakthrough in improving devices, methods and means of deep cleaning, disinfection and enhancing their antimicrobial action, reducing toxicity, improving solubility, opening additional unique consumer properties.