

Happy Teeth

ESA Spark Funding Germany

Space Technology

Technological expertise for cold plasma on ISS.

The technological expertise for cold plasma was gained in the context of the ISS space laboratories PK-3, PK-3plus, and PK-4. Especially the miniaturisation of components, quality control, reliability of cold plasma sources and plasma design and diagnostics, were instrumental in developing cold plasma applications on earth.

Non-Space Application

Bactericidal properties and bleaching of teeth.

Whereas the ISS laboratories worked with Argon plasmas, here on earth we now work with plasmas ignited in ambient air. We further transferred the technology into a completely new field by activating water with cold atmospheric plasma and using its bleaching and bactericidal properties.

Benefits

Environmentally friendly and instead of chemicals.

With the ESA SF project “Happy Teeth” we created a device for gentle teeth bleaching without harming the dental enamel or mouth flora. It is environmentally friendly and instead of chemicals only needs a glass of fresh water for a treatment.



Contractor:

terraplasma GmbH

Space Technology Provider:

terraplasma GmbH



Year of Contract: **2022**

→ THE EUROPEAN SPACE AGENCY