

# Tackling contamination with minimal water and energy consumption

30 April 2012

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EU-funded researchers developed technology for a dry pre-cleaning as an alternative to the water- and energy-intensive decontamination process currently used by the medical and food industries.

Many industries purify or decontaminate using water forced at very high pressure through a membrane, a process that wastes a tremendous amount of water and energy and produces [aerosols](#) or small droplets of water that may actually disperse [bacteria](#).

Given the huge global market for agricultural and medical products, increased cleaning efficiency with reduced water consumption is an EU priority. Researchers working on the 'Ney hygienic cleaning technique - for food production - reducing aerosol problems and [water consumption](#)' (Aerosol Reduction) project sought to develop a dry pre-cleaning system for the European food and medical industries to replace existing water-intensive ones.

Investigators developed a vacuum system for separation and filtration, eliminating the use of water and capable of cleaning the air with very promising results. In addition, the novel pump system minimised energy losses due to friction and vacuum flow. Technology for minimisation of aerosols in food processing plants was also developed, particularly applicable to small volume situations such as filter units.

Successful laboratory and field tests support the rapid commercialisation of project results for the food and pharmaceutical industries and the subsequent significant global reduction in water and energy consumption.

Provided by CORDIS

APA citation: Tackling contamination with minimal water and energy consumption (2012, April 30) retrieved 28 February 2021 from <https://phys.org/news/2012-04-tackling-contamination-minimal-energy-consumption.html>

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