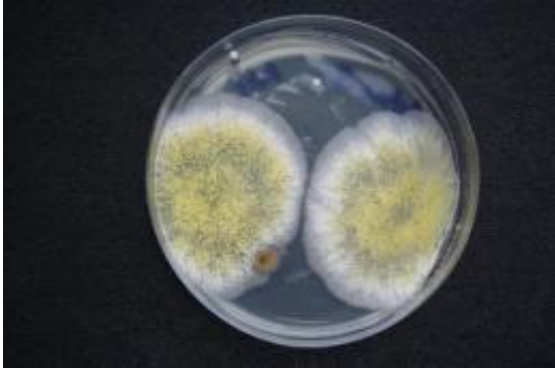


# Seal of quality for hygienic equipment

September 14 2009

---



These are various mold cultures on a nutrient solution. Credit: Fraunhofer IPA

The processing and packaging of food is governed by very strict hygiene rules. Researchers are now testing production equipment for cleanroom suitability and are listing qualified products in an online database.

Before entering the cleanroom, the researcher dons special protective clothing to avoid carrying [germs](#) or other impurities into the highly sensitive environment. But it's not only people who have to conform to the strict hygiene requirements. Every item of equipment in the room, from lithography units to swivel chairs, must also comply with international guidelines.

Equipment manufacturers can have their products inspected and certified at the Fraunhofer Institute for Manufacturing Engineering and Automation IPA in Stuttgart. "This service was initially aimed at the

[semiconductor industry](#), but it is now attracting many customers from other sectors such as pharmacy or the food-processing industry, where hygiene standards are very high," says Markus Keller. In the cleanroom manufacturing and microfabrication department he tests equipment for its cleanroom suitability - from wall and floor coverings to tools right through to complete interiors.

"To find out, for example, whether a surface can be easily disinfected we examine its surface finish under the microscope - the smoother, the better. The material must also be resistant to attack by certain chemicals," explains Keller. He also examines the design and assembly of furniture extremely closely - are there any inaccessible corners where dirt could settle? Are there any screws which are not tightened correctly? Badly designed pipe connections - including screw connections - could result in fat or protein residues being pressed into tiny hollow spaces, which at first sight are not visible at all - the best conditions for germs. The scientists must also measure whether materials emit particles or release gases at high temperatures. "Our testing devices are so precise that we can detect particle emissions in the sub-micrometer region," says Keller.

A certificate is issued for products that meet all the relevant criteria. The "Fraunhofer IPA TESTED DEVICE" is recognized as a reliable seal of quality in industrial circles. The Stuttgart-based institute publishes a list of certified products in an openly accessible online database. It is up to the customers themselves to decide whether and to what extent the test results for their products are disclosed. Keller sees benefits for both sides: "Potential buyers can easily search for suitable products, and for manufacturers the listing in the database is a good reference that they can use in their advertising."

The database [www.tested-device.com](http://www.tested-device.com) already contains over 600 products.

Source: Fraunhofer-Gesellschaft ([news](#) : [web](#))

Citation: Seal of quality for hygienic equipment (2009, September 14) retrieved 25 April 2024 from <https://phys.org/news/2009-09-quality-hygienic-equipment.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.