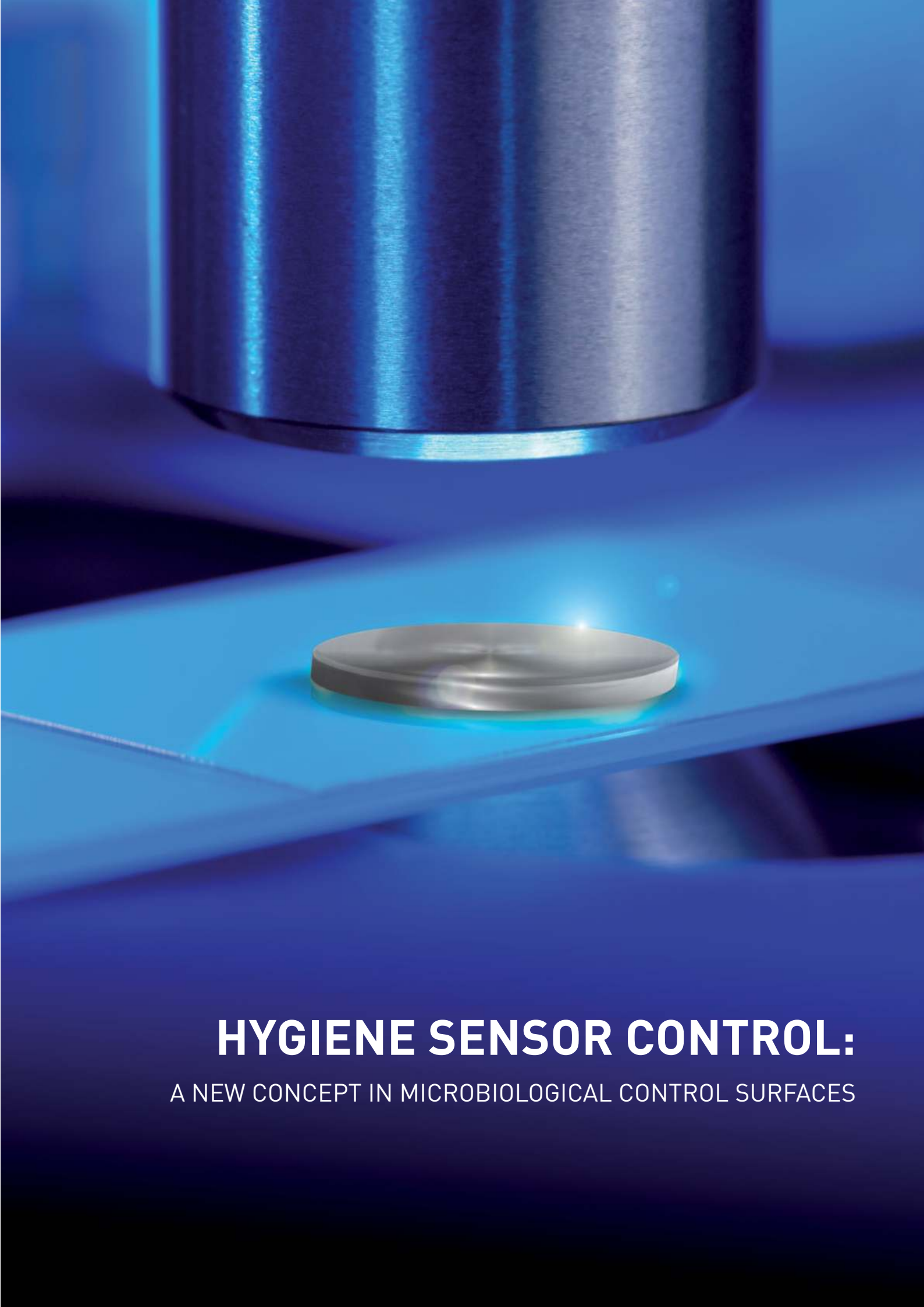


HYGIENE SENSOR CONTROL:

A NEW CONCEPT IN MICROBIOLOGICAL CONTROL SURFACES

HYGIENE CONTROL SENSOR

Since the spread of the application of HACCP system it is essential to implant a suitable hygienization schedule, which is considered to be a prerequisite of the system. The purpose of cleaning and disinfection procedures is destruction of pathogenic microorganisms and decrease of those ones making food go off on surfaces and the environment surrounding them.

It is essential that surfaces in contact with food are hygienic. This helps reduce the level of contamination in end-user products while contributing to lower the amount of batch returns. This also ensures product quality and consumer safety.

However, it is not enough to apply a hygienization procedure only but to evaluate it. Because of that, it is becoming more and more important within the food industry to have quick and reliable systems to detect microbial contamination as well as presence/absence of pathogens. Microbiological control in several stages of the production process is a key factor as well as crucial for the quality control. An innovative solution is the new surface sensors.

It is a recent application which will help solve standardization problems when taking samples. Hygiene control sensors offer a quick, simple, economical and reliable solution to monitor biological contamination of surfaces. These are a really helpful tool when guaranteeing and doing research on product safety and quality. They also protect its customers, brand and reputation.

Hygiene control sensor is an easy and effective alternative to traditional methods.

EFFECTIVE DETECTION AND BIO-FILM ANALYSIS

It enables to analyze bio-films formed in facilities, while detecting the kind of microorganism and providing the solution for its disposal.

INCORPORATION INTO THE FACILITY

Hygiene control sensors are installed by fixating them onto surfaces in contact with food. Sensor exposure in the facility is advantageous with respect to the rest of applied methodologies, since it allows evaluating surfaces after these undergoing industry's real conditions –that is contamination of the environmental process and on-site cleaning.

MULTIPLE ANALYSIS METHODS ACCORDING TO NEED

Hygiene control sensors can be analysed by several methods for detection or count of all kinds of microorganisms:

- Microbiological culture
- ATP detection by bioluminescence
- Quick culture methods
- ELISA
- Direct epifluorescence microscopy
- PCR...

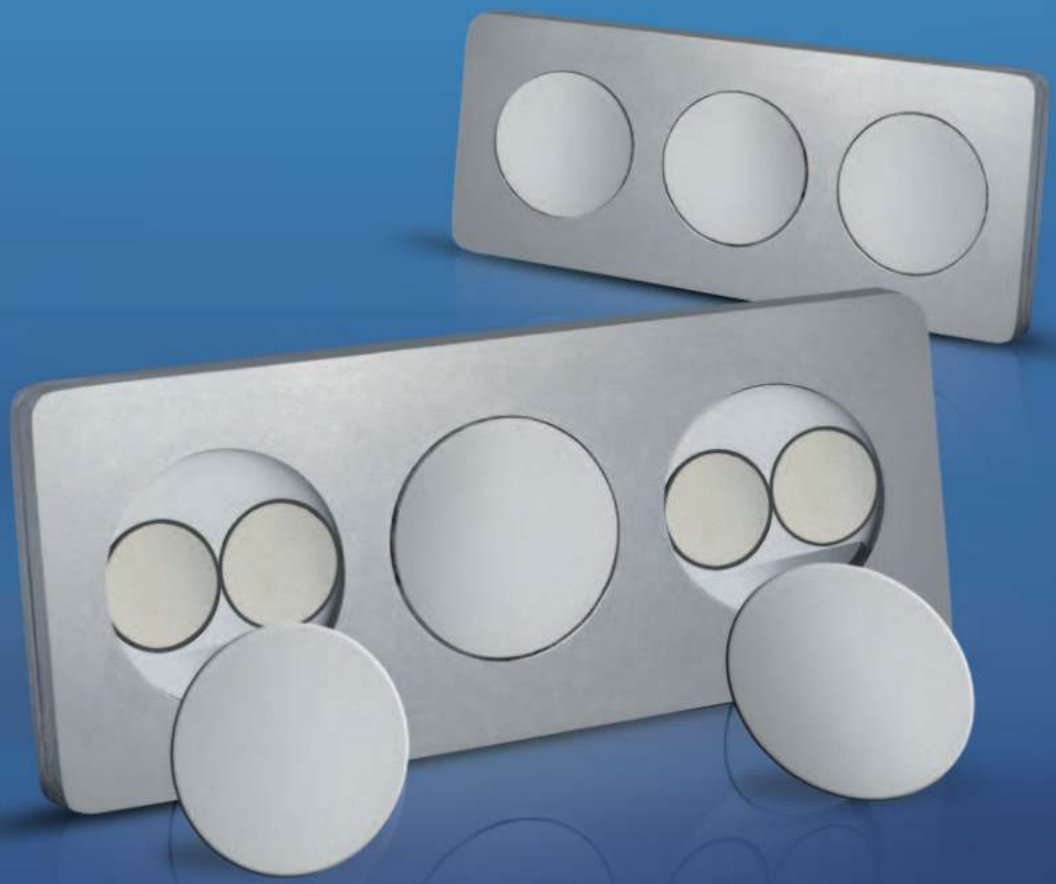
When required, ITRAM HYGIENE offers the possibility of analyzing sensors through direct epifluorescent microscopy. Since this method doesn't need any culture for getting back microorganisms, the obtained result is not influenced by several factors, such as environment composition, incubation time and temperature.

Therefore, it is a 100% reliable method which will allow us to establish the real contamination of surfaces.

RESULTS ABOUT ACTUAL CONTAMINATION LEVEL

Unlike the rest of surface analysis methods, adhesion of the sensor to the surface allows us to carry out an identical analysis to the one of surface itself. It is not an estimate but a real measure.

Sensors are placed onto a surface which is going to get dirty; receive the same amount of contamination; be cleaned and disinfected jut like the rest of the production plant.



EASY INSTALLATION SYSTEM, SAMPLE-TAKING AND MONITORING

Sensors are fixed onto a three-sensor support which is made of stainless steel and integrates with the installation. These are placed in the points with highest risk of microbiological contamination and difficult-access areas. Since we have three sensors on each support, we can obtain three samples. This makes it possible to monitor the temporary evolution regarding control of the same point or to have a starting sample; a control sample in order to verify the starting result and, in case it is not satisfying, a third sample to analyse af- ter applying suitable corrective measures.

FOR PROCESSING SURFACES

It is designed to be used on food and beverage-processing surfaces as well as in catering businesses, kitchens, hospitals, laboratories and all kind of installations which require regular microbiological control. It can be easily detected by metal detectors in order to ensure safe use of it in food-manufacturing plants.

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