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## Realzyme's Biofilm Detection Kit

- A patented technology -

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Today it is possible to detect and visualize a contamination related to a **biofilm** thanks to a new process of coloring developed by Realco (for open surfaces). This technology is available now with our **Biofilm Detection Kit**.



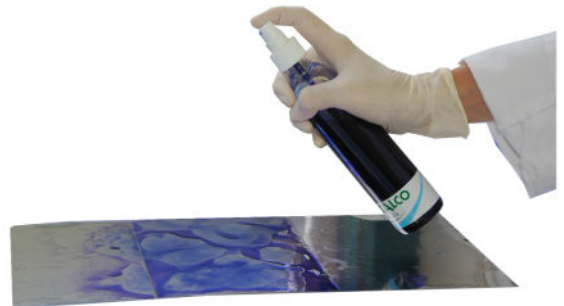
Every day the food and beverage industry sees finished products being recalled because of contamination. Most of this contamination is the result of the limitations of current cleaning methods or solutions.

*According to Phil Stewart, Center for Biofilm Engineering, Montana State University, 2014, "Biofilms are hard to kill with antibiotics or biocides" and this is an "Opportunity for novel anti-biofilm products" and their research shows that commonly used sanitation chemicals such as Quaternary ammonium (50mg/l, 60 minutes) and free chlorine (50mg/l, 60 minutes, 7pH) are ineffective against biofilm.*

### Contamination detection

The biofilm detection kit is used right after a facility's regular cleaning and sanitation protocol and will reveal the presence of any build-ups that are responsible for recurring contaminations, including:

- Minerals/limescale
- Stubborn organics
- Biofilm contamination



## A Patented Technology

To combat the growth of such contamination, Realco has developed a **Biofilm Detection Kit**. It is a simple-to-use tool composed of (2) products, a coloration reactive and a cleaning reactive. *It provides visual results in just minutes.* The blue staining of the reactive adheres specifically to the organic substances of EPS (Extracellular Polymeric Substances) forming a protective matrix of biofilm. The blue staining that is not removed by the cleaning reactive product quickly reveals the presence of a biofilm (nest of bacteria). In addition, other results that can be interpreted are *stubborn organic build-ups that aren't removed by current cleaning products* as well as the identification of limescale build-up, indicating the need to increase the strength or frequency of acid detergents.

Biofilm coloration has been tested on many types of organic matters that can be present on surfaces during application. Blood residues, meat, dairy-based items, greasy matter, etc and they do not interfere with the biofilm coloration. Also, unlike other 'detection' methods, our 2-step coloration method doesn't give false positives in heavy protein environments and suggest a biofilm is present when one is not.



*Strong blue coloration, indicating a definite presence of biofilm*



*Very light coloration, indicating organic residues remain following the cleaning process (a shortcoming of the existing detergent).*

The detection kit developed by Realco is a unique tool enabling users to show biofilm presence on equipment in food processing industries.