

Take a **closer** look at your process line



## Organic Residue Test

- Preventive periodic validation
- Troubleshooting - hygienic condition
- Optimizing



Residue



Residue

Organic residues in closed flow systems can be a source to microbiological problems. Bactoforce detects and locates residues without opening the equipment.

Bactoforce offers unique know-how due to more than 20 years of experience in the food safety industry.

We recognize the need to work effectively to reduce equipment downtime - without compromising safety. Our inspectors are trained for working in confined spaces, in heights and for proper use of equipment for performing inspections effectively and safe.

Advantages include:

- **Preventive periodic validation:** Performing the Organic Residue Test on a periodic basis, allows you to validate/document the hygienic condition in your processing equipment. Furthermore, the test can be used to document the effect of CIP optimization measures to ensure that the process line is clean.
- **Troubleshooting - hygienic condition:** The organic residue inspection is an effective tool to inspect flow systems for insufficient cleaning. Combined with inspections such as endoscopy and heatexchanger leakage test to inspect for mechanical defects or hygienic design errors.
- **Easy access to documentation:** We document all inspections and make them available on-line. Easy access for internal and external audits and analysis of equipment status.

# Procedure - Organic Residue Test

## Organic Residue Test

The Organic Residue Test is a non-destructive test for detecting/measuring organic residue in closed equipment. The level of organic residues in closed systems, e.g. heat exchangers, is measured as the content of Total Organic Carbon-level (TOC-level).

To release the residue, a solution of oxidising liquid (persulfate) is circulated into the system; the amount of released organic material is reflecting the level of organic residue the system.

The sample is measured in a photochemical oxidation process where the organic carbon is broken down to

CO<sub>2</sub>. With a special detector, the amount of CO<sub>2</sub> can be decided and calculated to an equivalent amount of organic material.

## Content of the Organic Residue Test

- Cleaning validation in closed systems like heat exchangers.
- Developed and tested together with the Hochschule Hannover.
- Functions as add-on to the Leakage Test (Integrity test of Heat Exchangers and Pasteurizers).

# Other Bactoforce Services

## Heat exchanger/pasteurisers

- Leakage test
- Organic residue test
- Energy side cleaning
- Calibration
- Holding time test
- Holding tube measurement
- Diverter valve reaction time

## Tanks

- Tank integrity test
- Validation of new tanks
- Riboflavin test / CIP validation

## Sensors

- Temperature
- Flow (on-site /off-site inspection)
- Pressure
- Conductivity

## Pipes

- Hygiene inspection
- Welding control

# R-force - working with Bactoforce



REPORT. READ. REACT.

## Web-based reporting system

Bactoforce is using an on-line reporting system, R-Force, which allows our customers to have full access to current and historic inspection reports.

The system also gives a systematic overview of equipment, planned inspections and agreed inspection frequency.



Department	Equipment	Type	Inspection	History	Next
UF	UF 5600 Kaler, loop 9 5669.50	Heatexchanger	PastSafe	2015-03-02	2
UF	Alfa Tank 4752 (gl. nr. 729)	Tank	TankSafe	2015-10-29 2013-08-27 2011-06-06	2
UF	Alfa tank 4751 (gl. nr. 728)	Tank	TankSafe	2015-08-15 2013-08-28 2011-06-16	2
UF	Alfa tank 4093	Tank	TankSafe	2014-08-12 2014-05-20 2011-06-06	2
UF	Batchtank	Tank	TankSafe	2015-06-23	2

Inspection overview

Inspection Report: Organic residue test

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Organisation: Demo - Dairy, Date: 24-01-2017

Location: Test Dairy SH

Contact person: Mr. John Doe, Inspectors name: Lars Fløjgaard Baller

Customer order no.: , Bactoforce order no.: 0

Equipment: X-Test HE, Year of manufacture: 2016

Equipment ID: 1234, Manufacturer: Bactoforce

Department: Research and developme

Inspection: 430 - Organic Residue Test

Approved  Not approved

Blind value  No defects found  Defects found

Difference measuring  No defects found  Defects found

Diverter  No defects found  Defects found  Other

Report - on-line available

