DETECT & DISSOLVE
BIOFILM MATRIX

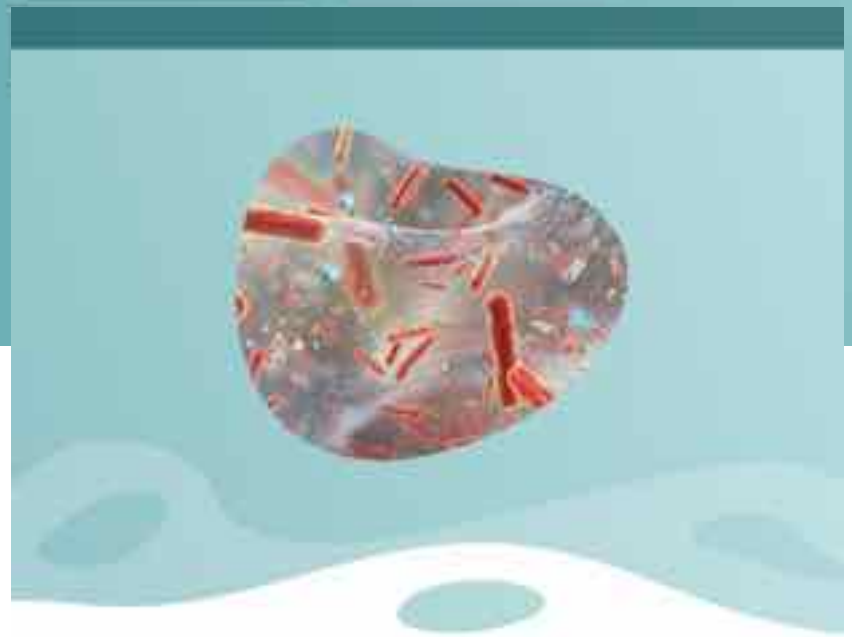
Enzymatic decontamination solutions

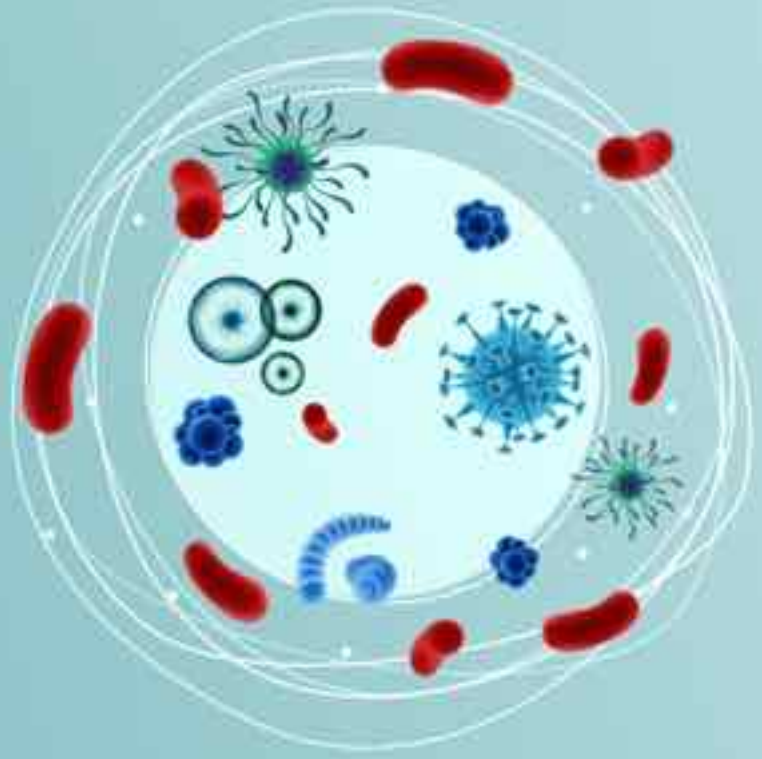
100% Natural
Biodegradable
Eco-friendly

Made in Belgium
www.onelife-bf.com
Enzymes for patients' safety

V20201022

Deep cleaning opens the way to an infection free healthcare





Topics

- Biofilms
- Enzymes
- Cleaning vs disinfecting
- OneLife solutions
- Summary

Made in Belgium

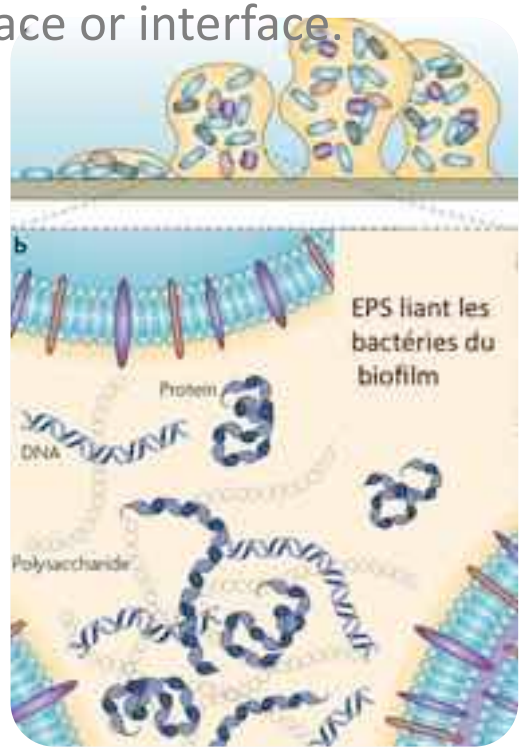
certified ISO13485

CE

What is Biofilm?

Definition :

- Biofilms are communities of micro-organisms, often multi-species, stuck inside a polymeric matrix that has developed on a surface or interface.
- EPS* Biofilm Matrix
- fulfills multiple roles:
  - Physical cohesion of the biofilm
  - Protection of micro-organisms
  - Retention of water and nutriments



Source : Flemming & Windenger, Nature Reviews Microbiology, 2010

1. EPS = Extracellular Polymeric Substances

Biofilm in 5 key points

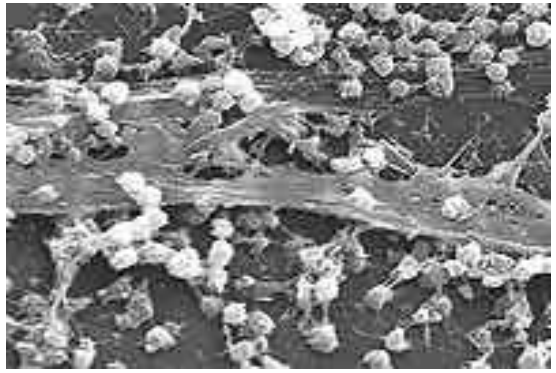
1. **90% to 99% of bacteria** exist in the form of biofilm. [1]

2. Bacteria in biofilm are up to **1000 times more tolerant of biocides, like disinfectants.** [2]

3. Most biocides are tested against free (planktonic) bacteria, **but not against biofilms.**

4. Biofilms are everywhere and develop frequently on Medical Devices *(instruments and intravenous catheters, endoscopes, endoscope washers, dialysis circuits etc.).* [3,4]

5. If the ***detergent action*** is not efficient against biofilm matrix, **bacterial biofilm can resist high level disinfection.** [5]

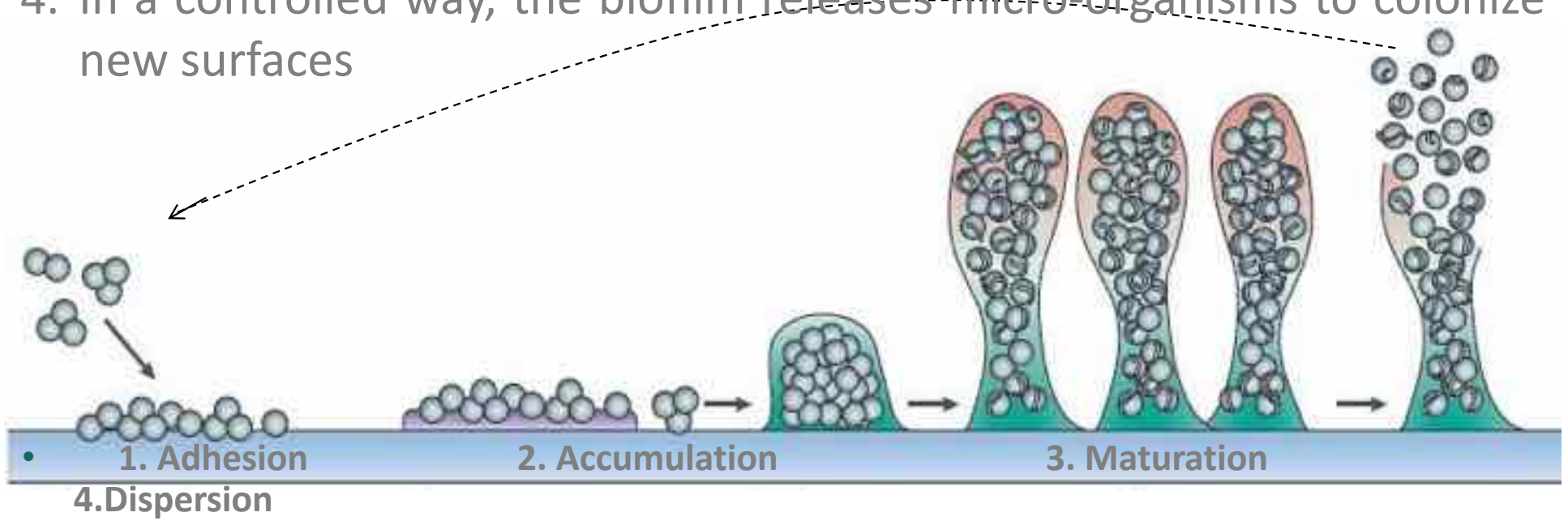


Biofilm de Staphylococcus aureus on catheter

1 BERK et al., SCIENCE, 2012
2 Rasmussen TB, Givskov M. Int J Med Microbiol 296(2–3):149–161 (2006).
3 Donlan R M : **Biofilm and Device-Associated Infections.** *Emerging Infectious Diseases, Vol. 7, No. 2, March–April 2001*
4 Marion, Freney, James, Bergeron, Renaud, Costerton : **Using an efficient biofilm detaching agent: an essential step for the improvement of endoscope reprocessing protocols.** *Journal of Hospital Infection (2006) 64, 136 – 142*
5 *Berry et al, 2009 ; Gagnon et al, 2008 ; Norton et al, 2004 ; Williams et Braun-Howland, 2003*

4 steps of Biofilm development

1. Microorganisms come in contact with a surface and cling to it
2. EPS matrix formation and micro-colony development
3. Complex 3D structures appear and the matrix grows
4. In a controlled way, the biofilm releases micro-organisms to colonize new surfaces



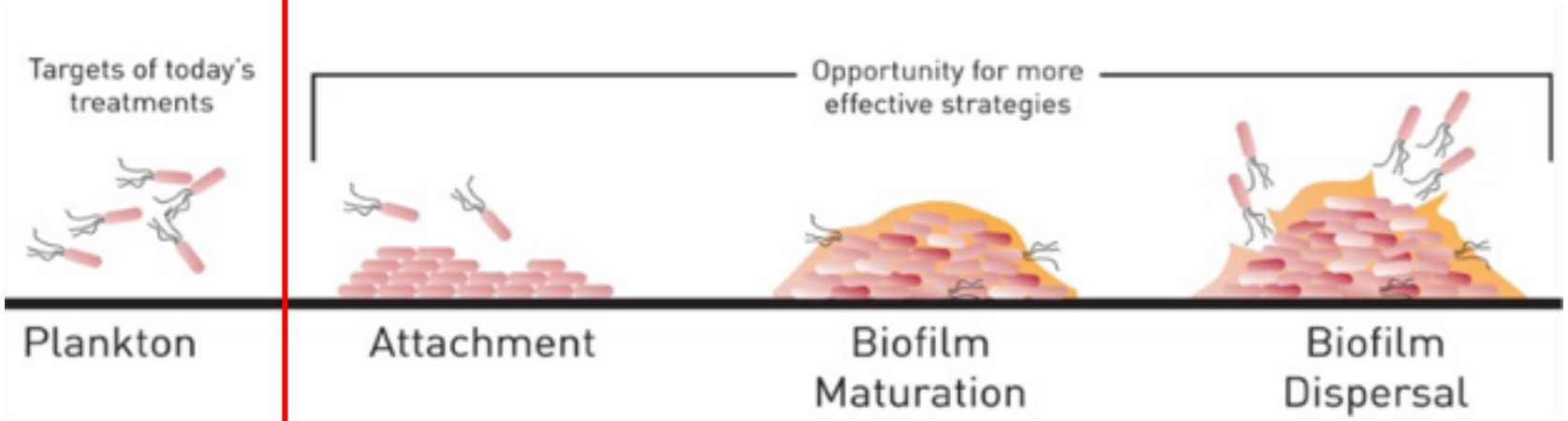
Source : Otto, Nature Reviews Microbiology, 2009

Current belief = 1% of the problem

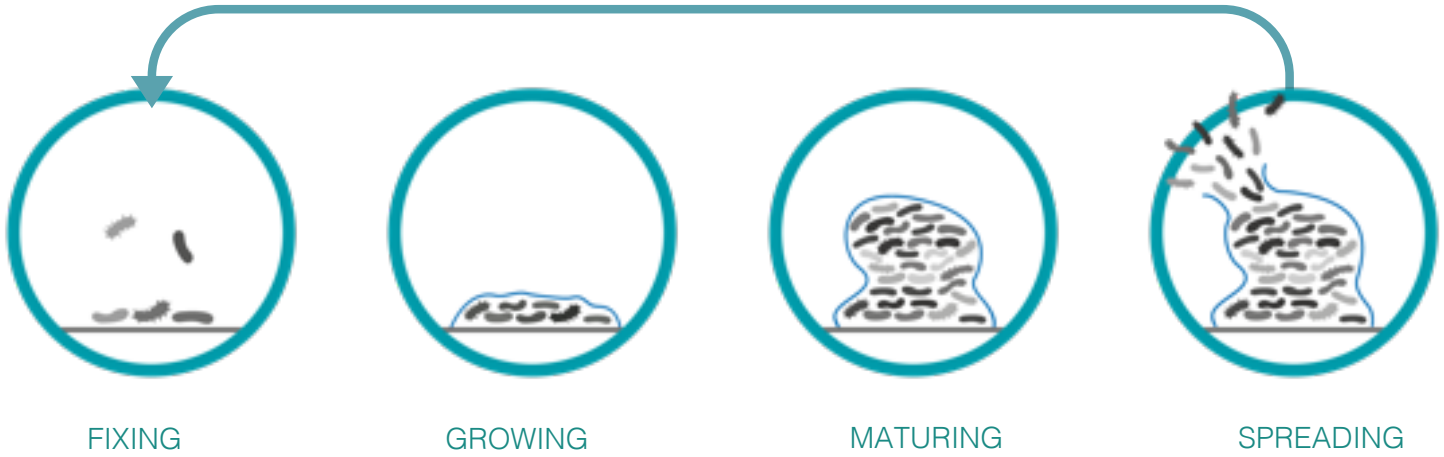
Belief ⟺ **Reality**

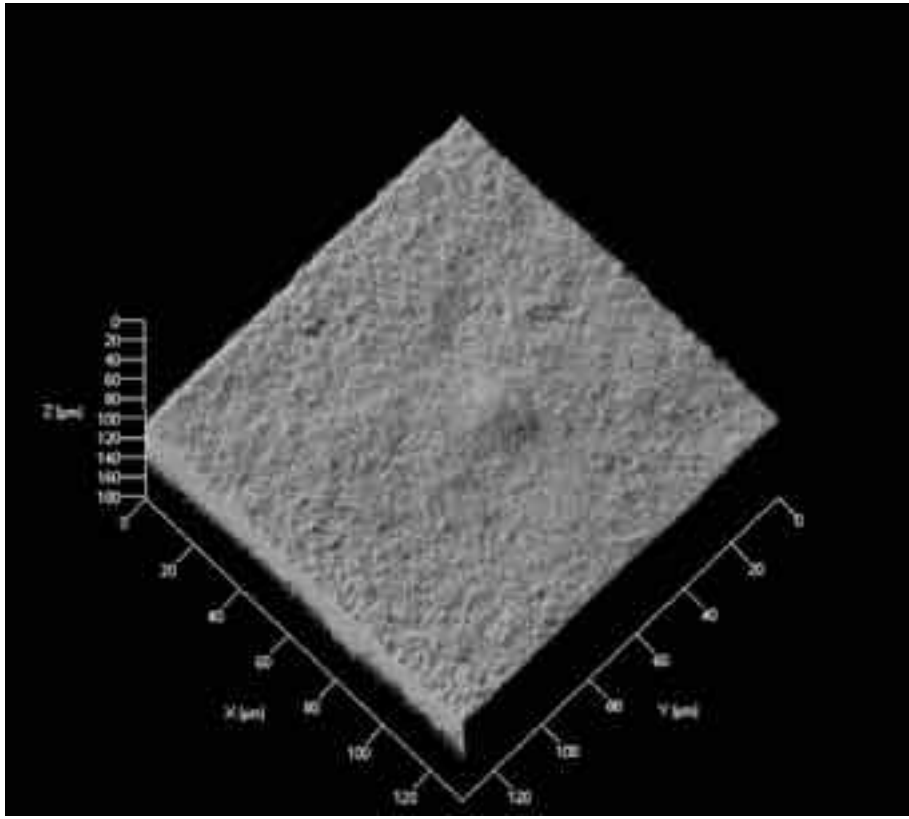
1% of bacteria

99% of bacteria in biofilm



Biofilm growth cycle





Examples of microorganisms (Viruses & bacteria) found in biofilms:

- COVID-19 (enveloped virus)
- SARS-CoV
- MRSA,
- Staphylococcus aureus
- Cronobacter sakazakii
- Escherichia coli
- Yersinia enterocolitica
- Legionella pneumophila
- Influenza, C. difficile
- etc

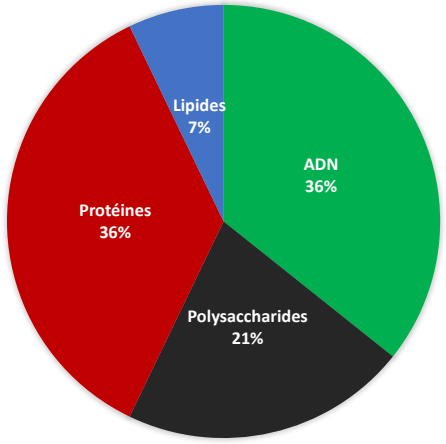
BIOFILMS grow just about anywhere. All it takes is:

- microorganisms
- moisture
- nutrients
- surfaces

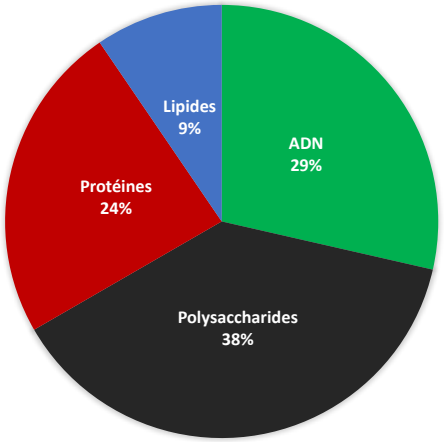
Biofilm ≠ Biofilm

- Biofilm cannot be compared to another Biofilm!
- The EPS matrix of a biofilm is composed of DNA, polysaccharides, proteins and lipids, whose proportions vary => the combinations are infinite

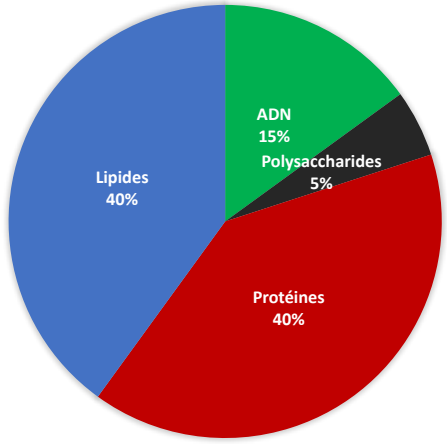
Biofilm 1



Biofilm 2



Biofilm 3



- Les combinaisons sont infinies!

The type of matrix depends on:
- species that make up the biofilm
- the environment (nutrients, water, temperature, external stress)

Decontamination: cleaning and/or disinfecting?

cleaning

- Detergents / Soap
  =>
  Remove inorganic and organic residues
- Cleaning lowers the number of germs and the risk of spreading infection.
- Cleaning is also the first step to disinfection.

disinfecting

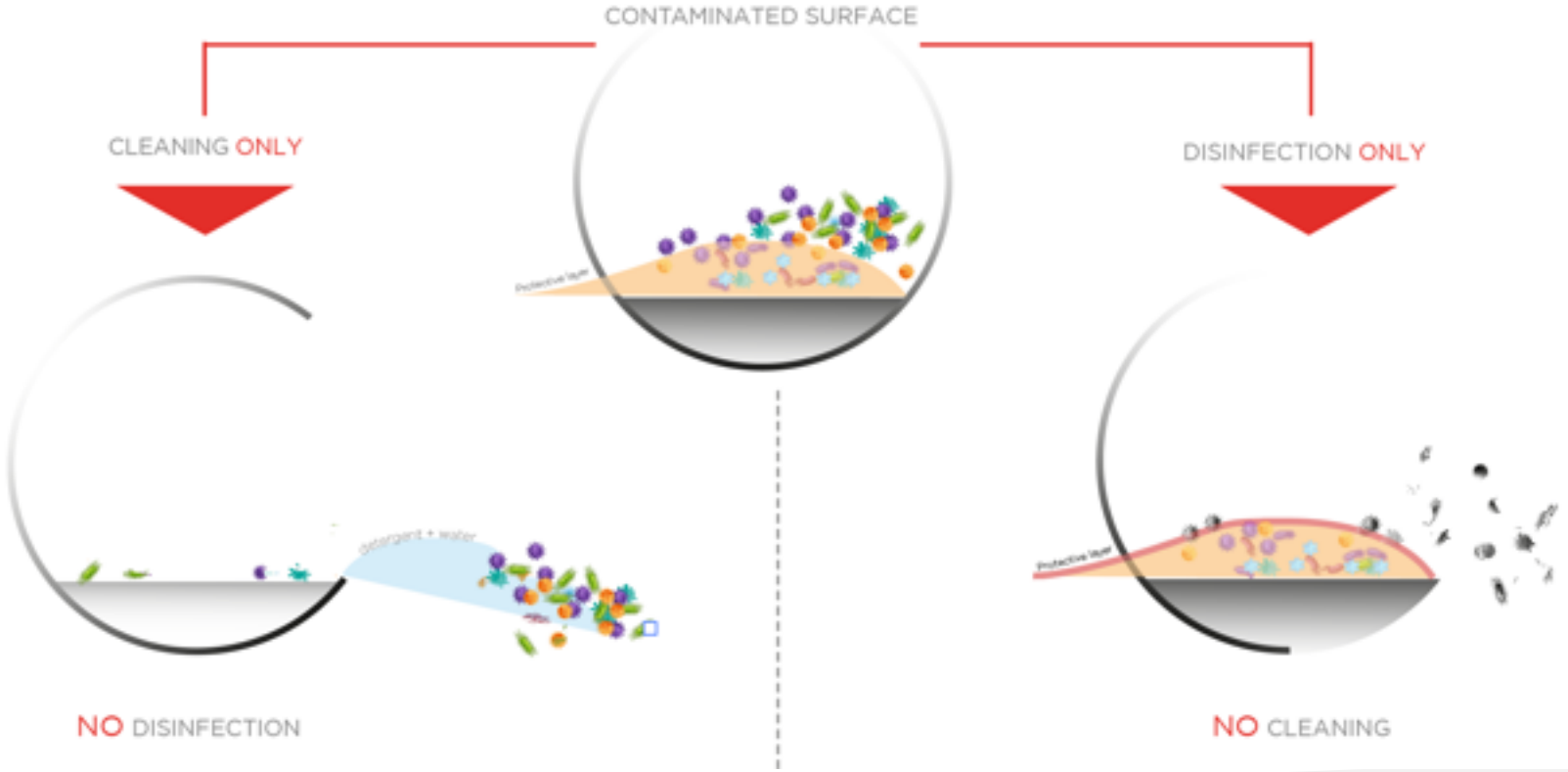
- Disinfectants
  => Reduce reachable microorganisms
- Disinfectants tend to fixate soils rather than remove them.
- Disinfection: kills germs only on the outer part of the dirt, without prior cleaning it reinforces the protective layer

If “cleaning then disinfecting” is the ideal scenario, what if you have to choose one or the other?

Cleaning is more important than disinfecting

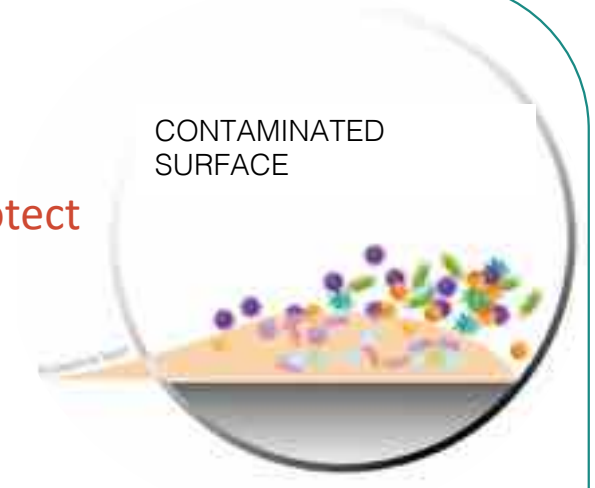
Crucial decontamination step:
CLEANING

Scenario to be avoided:
DISINFECTION ONLY



Standard cleaning is more efficient than disinfecting but should be improved

Challenge:



Biofilms and soil protect

- Virus
- Bacteria

Disinfectant

- Destroys only planktonic bacteria
- Reduces reachable microorganisms

Standard (non enzymatic) detergents have low to no effect on Biofilm

Improved Solution:

CLEAN with
Enzymatic detergents

- Dissolve bioflim matrix
- Destructure enveloped viruses
- Natural

then DISINFECT

Biochemistry

vs

Conventional chemistry

Preservation and renovation of equipment Superior performance, Reduced mechanical action, enzymes work for you		Lower results Material corrosion Mechanical action essential
Neutral or mild-alcaline		Acid or alcaline
Dermatologically tested Enzymes used correctly are safe for the respiratory tract		Product toxicity, skin irritation, risk of burns and falls (slippery floor). Risk of WRA among hospital workers especially among nurses exposed to quaternary ammoniums compounds ... in spray
Deep cleaning and disinfection Contamination risk reduced		Aggressive action on the surface layer of coatings and equipment Development of bacterial resistance

Biochemistry

vs

Conventional chemistry

Enzymes = 100% renewable
+ raw materials of plant origin
(oleochemistry)

Non-renewable raw material from
petroleum and derivatives

Enzymes are 100% biodegradables
Enzymatic detergents + 97 %

Chemistry: 60% Biodegradable
ECOLABEL: 60% Biodegradable
(regulatory standard)

Ultra concentrated compounds
Dosage less than1%

Diluted formulation
Dosage greater than 1%

Positive impact on the environment
Pre-purification of wastewater
Natural recovery of purification systems

Loaded wastewater
Limited or non-existent natural recovery of
purification systems

Enzymes,
a unique safe decontamination booster

PROFILE

- Non-living
- We find them naturally in the environment and in the body

ADVANTAGES

- Natural power
- 100% biodegradable

ASSETS

- Cut up to 3 million molecules per second
- Works in synergy with other cleaning products
- Dissolve organic soil and biofilms

Enzymes as catalysts

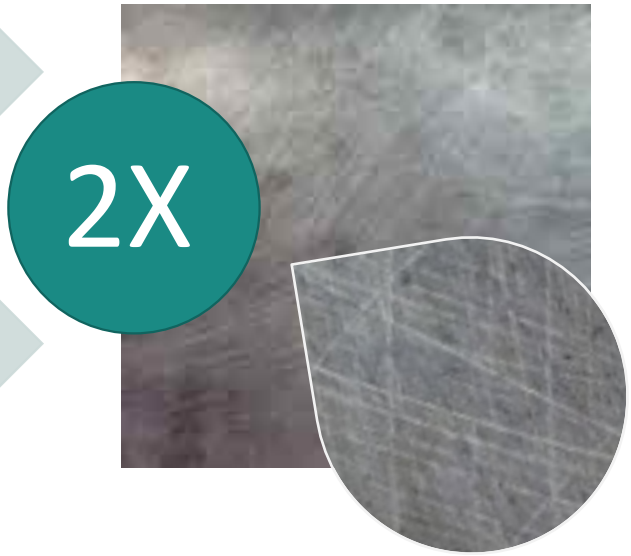
- Different enzymes on duty:
- Proteins –> Protéase
- Fats and oils –> Lipase
- Starch –> Amylase
- Polysaccharide –> Cellulase

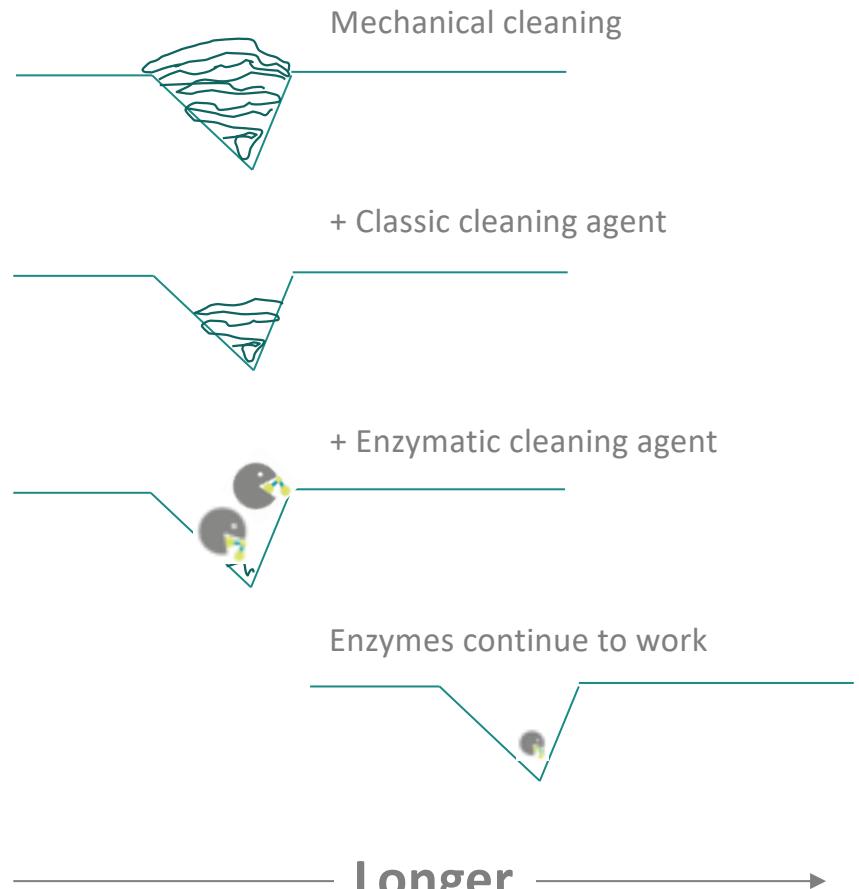



enzymatic detergents clean deeper and for a longer period

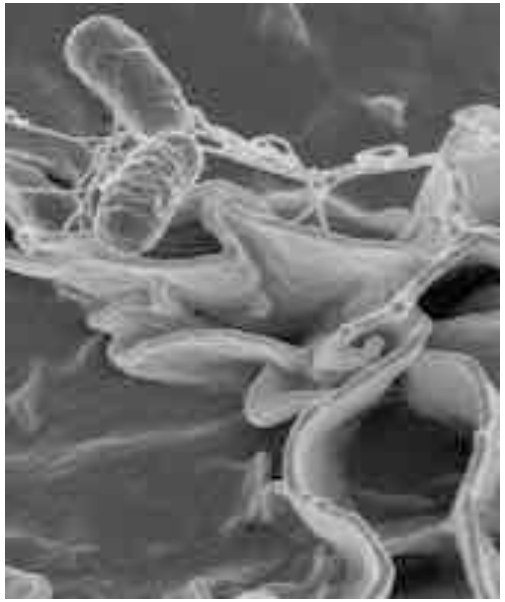
Enzymes
- Biofilms
- Organic soil

New Surfactants
- Organic soil
- Inorganic soil





Unlike traditional chemistry that lifts and holds soil particles in suspension, good enzyme detergents enable complete and irreversible dissolution of organic soil and biofilm



Why is enzymatic cleaning the best choice?

More efficient
Against soil & biofilms
Destructure COVID-19
Remove up to 99,99% of bacteria
In depth and longer lasting cleaning assured

Safer
For staff, patients and visitors

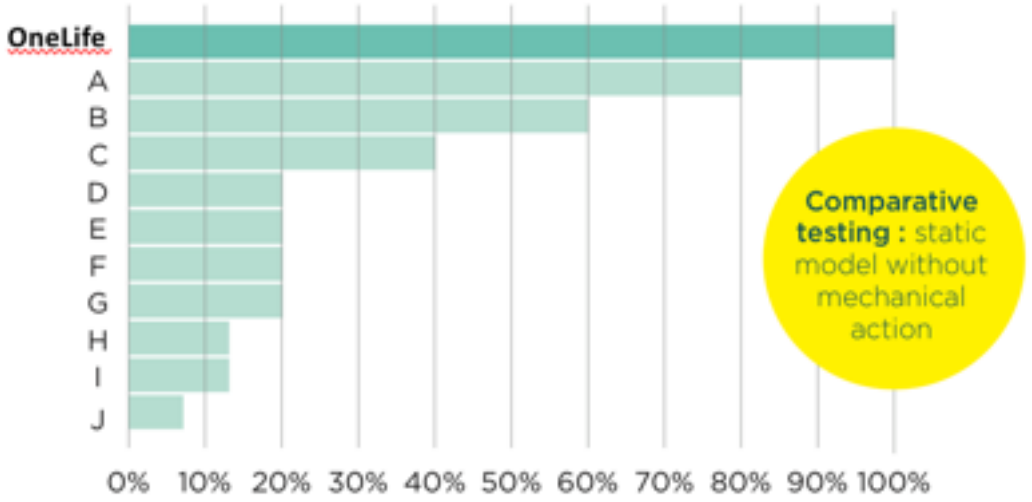
More sustainable
Materials, surfaces and environment

Cost saving
Direct and indirect costs

OneLife = Unique technology

Enzymes ≠ Enzymes:
Each type of enzyme has the property of being able to break the molecular chain of a given substance. As a result, OneLife's enzymatic products consist of different types of enzymes.

Broad spectrum of activities
Only OneLife cleaners are effective against 15 strains tested.



Source : Louvain Drug Research Institute of the *Université Catholique de Louvain*
Ability of 10 different Medical Device detergents to remove over 35% of biomass on 15 different strains of biofilm. Note : tests are conducted without mechanical action in order to achieve a direct comparison of detergent quality.

Dissolve of biofilm

- Biofilms and organic residues, including proteins, are very difficult to destroy without the help of enzymes.

- Enzymes are proteins made by living organisms and occur in all forms in nature.

detect

dissolve

prevent

Applications

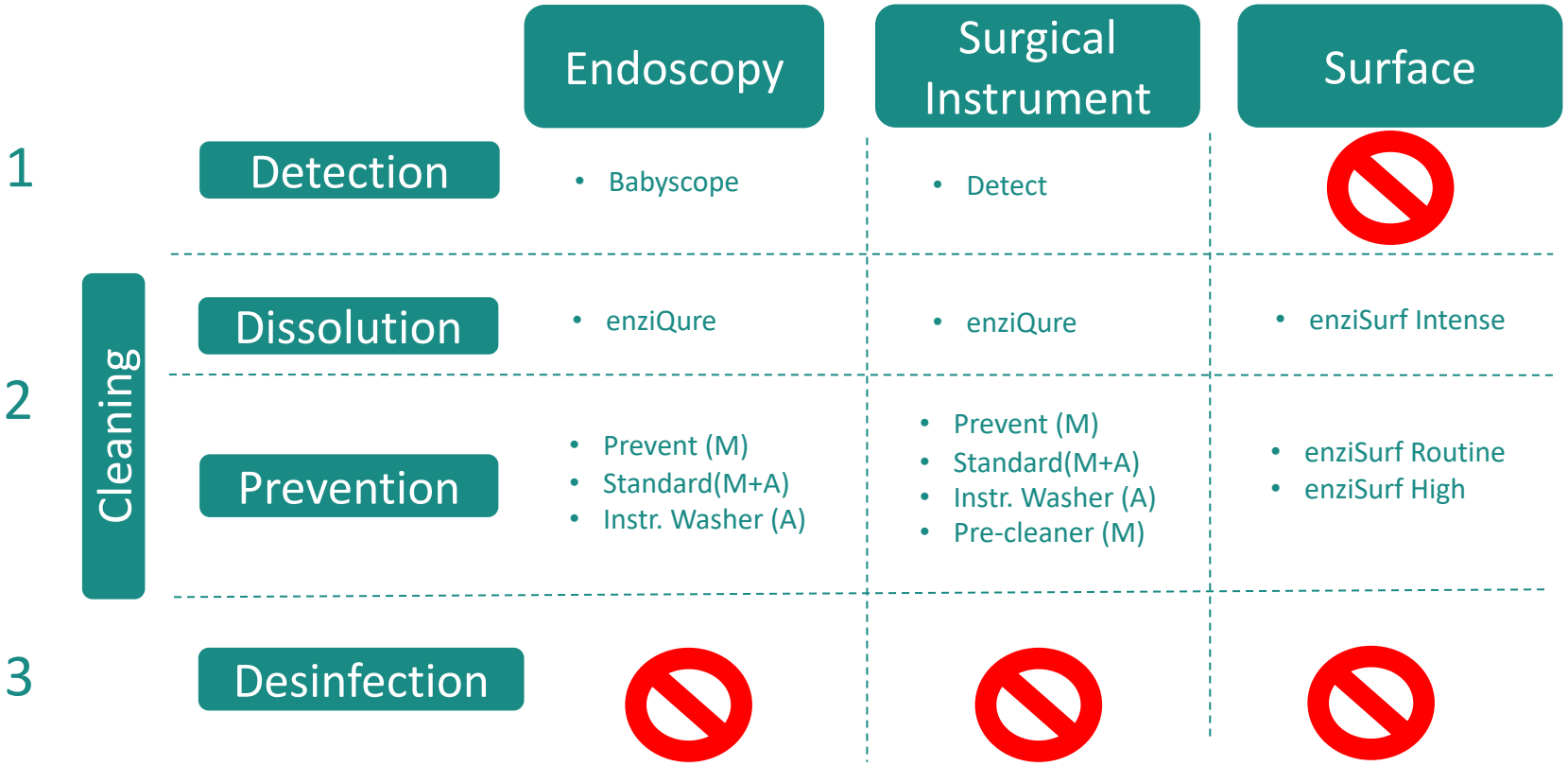
endoscopy

surgical instruments

surfaces

dental applications

Onelife Solutions



1. Detect

Superior control starts with

Detect bacteria, viruses & more

Take control

Visualize biofilm contamination

Detect 2

OL22329
6 x 950ml

OL22319
2 x 5L

OL22215
KIT

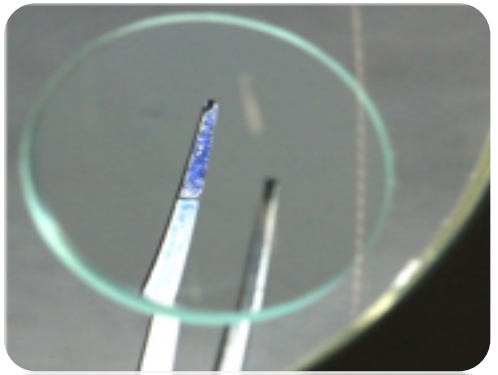
Quality control : DETECT 2®

DETECT 2® : Make organic soil visible

- Quick and efficiënt way to detect protein and biofilms on instruments
- 360° quality contol
- In situ methode
- No sampling
- Visible from 10 µg/cm2

DETECT 2® : 3 simple steps

- Immerge instruments in solution for 5 minutes
- Rinsing: Immersion in tap water
- Look for blue on the instruments



DETECT2 - unique advantages

- Analyses the whole instrument surface; no sampling bias (vs. swabbing)
- Quick and easy to use (under 5 minutes for DIN 1/1 tray)
- Rapid visual interpretation (<10 seconds per instrument)
- Detection sensitivity of 10µg protein per cm2
- Detection of organic soil and biofilm, validated by external laboratories
- Excellent for staff training and awareness tool
- Quality control tool of the cleaning process
- Cost-effective (around 50 DIN 1/1 trays, each containing 20-25 instruments)

OneLife's DETECT

Detection of residual organic contamination **DIRECTLY ON THE INSTRUMENT SURFACE**

Detect 2

360°

EN

Quality control of the surgical instrument cleaning process.

PATENTED

- Quality control tool of the surgical instruments' cleaning process
- Patented and validated technology to detect biofilm and organic soil on instruments
- Quick result, visible directly (only 5 minutes) on the instrument surface

Exclusive Applications

Dental & surgical instruments

Product Characteristics

- Quick and simple to use: 5 minutes for a basket of instruments (DIN 1/1)

5'

- Evaluates the cleaning quality of instruments washer-disinfectors (WD) or ultrasound
- High sensitivity (from 10µg/cm² protein
- A single reagent for detecting residual proteins (dye process).
- Compatible with stainless steel, PP, PTFE, POH, aluminium, titanium.
- Registered Medical Device Class I.
- Biodegradability ≥ 90 % (OCDE 302B).
- Very low toxicity (Ecotox available on demand).
- Odorless.

Instructions for use

1. Immersion of instruments: **5 minutes** in the COLORANT solution.
2. **Rinsing**: immersion in tap water
3. Visual interpretation of results: Blue stains are indicative of residual proteins/biofilms

Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations. Product/Packaging disposal recommendations: Do not empty into drains; dispose of this material and its container at special waste collection point.

Chemical Properties

Appearance:	dark blue liquid
Density:	1.013 +/- 0.01
pH:	2.28 +/- 0.25

The color is natural and may vary from one batch to another with no impact on the performance of the product.

Main Components*

Citric acid: 1-5%
COLORANT/Dye: 0.1-1%
Alcohol free

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Precautions

- **Wear gloves and a protective clothing against the dye.** Refer to the safety data sheet before use.
- **Protect** the working area.
- **Store** in the original container, closed, between +4°C and +25°C.
- **End of life:** 36 months after production.

Delivery Units

Ref OL22329
6 x 950ml

Ref OL22319
2 x 5L

Ref OL22215
KIT

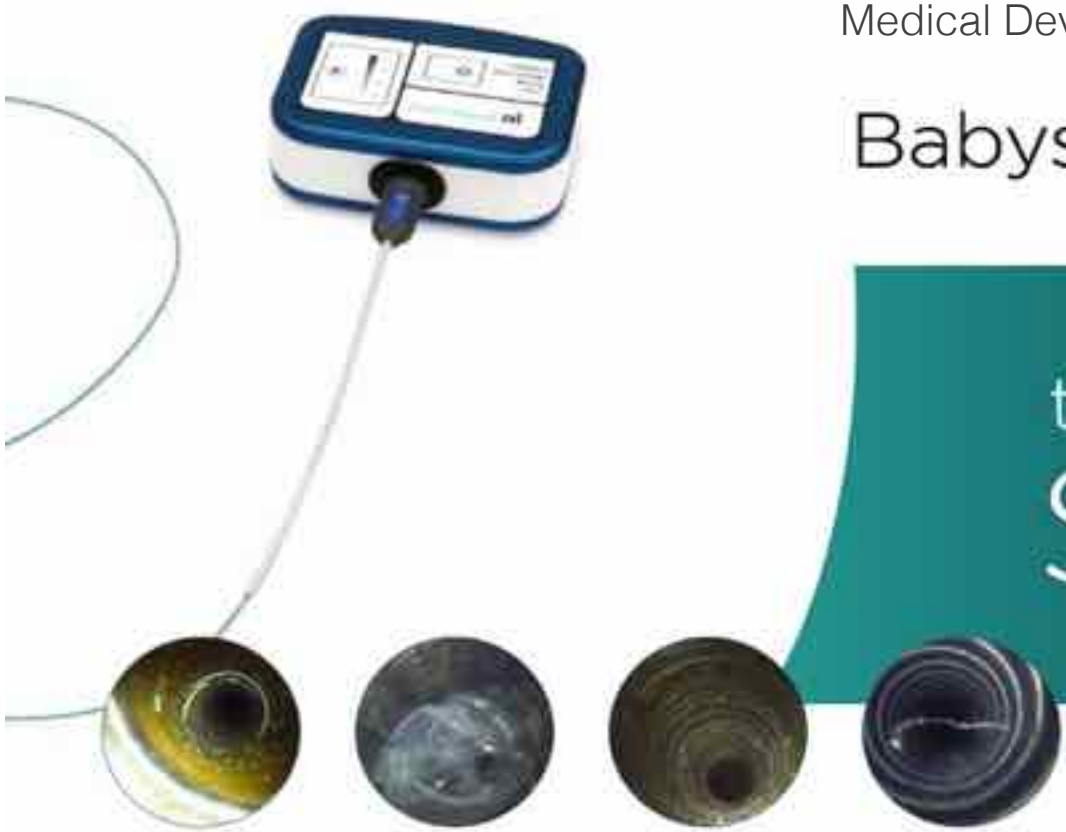
Natural | Biodegradable | Eco-friendly

Made in Belgium

Enzymes for patients' safety

Contact:
OneLife s.a.
Avenue Albert Einstein, 9
1348 Louvain-la-Neuve (Belgium)
+32 10 48 34 21 info@onelife-bf.com

onelife-bf.com



Digital fiber optic camera for inspection of Medical Devices with lumens.

Babyscope 2.0

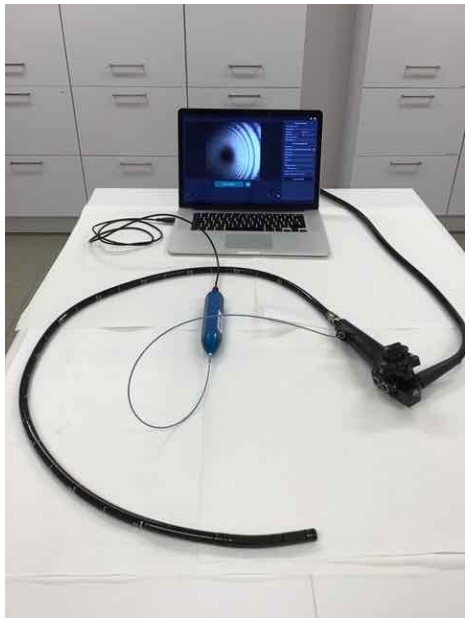
tool to see

BABYSCOPE 2.0

- **Ergonomic:** New compact & easy to use design (enhanced light, vision, & magnification)
- **Modular:** Interchangeable flexible inspection scope attachments available for small diameters devices such as: pediatric bronchoscopes & cystoscopes (diameters 1.06mm & 1.9mm).
- **Smart:** Offers the option to document & share what they see, enabling immediate corrective action.
- **Cost efficient:** Helps keeping repair cost & infection risks down

Inspect endoscope chanels & lumens with Babyscope®

- Visualize damage and contamination
- Prevent costly repairs



Examples of deviations

Biofilm

Contaminated scratch

structure damage in the chanel and waterdrops

oxydation

Visual Check

Bioburden/ biofilm :







Visual Check

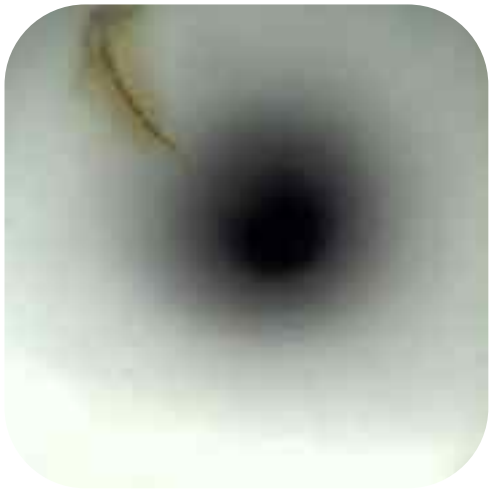
Scratch





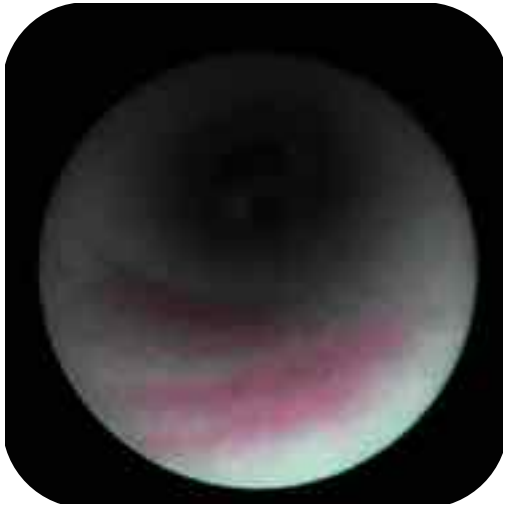
Visual Check

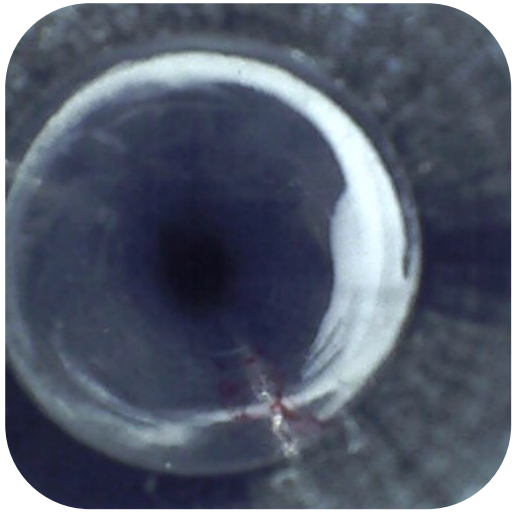
- **Contaminated scracth**



Visual Check

Blood





Visual Check

Brush :

Brush Head :

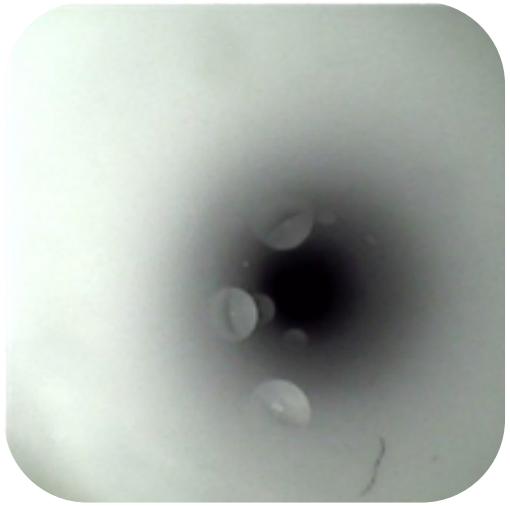
Visual Check

Kink



Visual Check

Water Drops

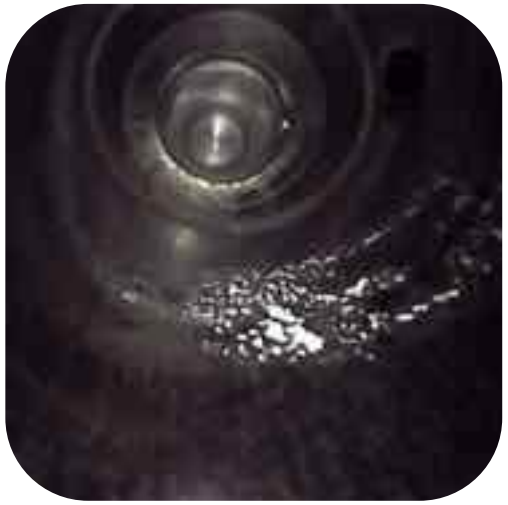


Visual Check

Oxydation :

Visual Check

- **Mineral Soils**



D&D-MATRIX®
TECHNOLOGY
DETECT & DISSOLVE BIOFILMS

videos

2. Dissolution

100% decontamination starts with

Dissolve biofilm

Infection control

Fast & safe, unique patented technology

enziQure®

High Level enzymatic detergent for corrective cleaning of persistent microbial contamination & Biofilms on Medical Devices.

- Patented enzymatic complex with broad spectrum of action against biofilms.
- For corrective cleaning of highly-soiled Medical Devices.
- Dissolves biofilm matrix of multiple pathogens.
- Alternative to expensive repairs / maintenance.

Exclusive Applications

Endoscopes & surgical instruments

manual or ultrasound cleaning

Product Characteristics

- Neutral pH, multi-enzymatic.
- Restores Medical Devices to their original condition.
- Independent tests (available on request) prove superior efficacy on incrusted soil and biofilm matrix of multiple pathogens.
- Full materials compatibility.
- High enzymatic activity and stability.
- Registered Medical Device Class I.
- Biodegradability ≥ 97 % (OCDE 302B).
- ISO/TS standard 15883-5: 2006, Annex F: «Test soil and method for flexible endoscopes (France)».

EnziQure® – concentrated biofilm cleaning

Corrective action for incrusted contamination

7 Enzymes

Packaging	Product reference
2 x 1L	OL20707
6 x 1L	OL20708

<u>Endoscopes</u>

One-off pre-cleaning before AER:

60 minutes soak time
40 to 45°C / 103 to 114 °F
1% dilution

Use for corrective cleaning of endoscopes:

Flush all channels correctly
Temperature is important
Brushing helps to remove macro bioburden

enziQure® is compatible with endoscope materials, as well as with disinfectants used in reprocessing

enziQure®

EN

High Level enzymatic detergent for corrective cleaning of persistent microbial contamination & Biofilms on Medical Devices.

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- Biodegradability ≥ 97 % (OCDE 302B).
- ISO/TS standard 15883-6: 2006, Annex F «Test soil and method for flexible endoscopes (Franoli)».

Instructions for use

For complete removal of soil and biofilms use enziQure® on Medical Devices such as flexible endoscopes* or surgical instruments during manual or ultrasound cleaning.

1. Standard dosage: **1%** (two doses of 28ml per 6L).
2. Contact time:
   Instruments: **15 minutes** for manual or ultrasound.
   Endoscopes: **60 minutes** (according to manual protocol).
3. Ideal temperature: **40 to 45°C** (minimum 30°C and maximum 55°C).

* a specific protocol is available for the cleaning of flexible endoscopes

Endoscope specifics:
Flush enziQure® solution through all endoscope channels. Use appropriate endoscope brushes according to protocols in place in your establishment.
- Rinse with clear water before disinfecting/sterilizing medical devices.
- The enzymatic activity of the solution is maintained for 8 hours provided that temperature is maintained.
- Respect recommended temperatures for optimal performance; efficacy is not guaranteed > 55°C.
- Change detergent solution after each Medical Device.
- After cleaning with enziQure® followed by high-level disinfection, it is mandatory to conduct microbiological analysis prior to release of scopes for use on patients.

In the case of highly-incrusted bioburden, if the first cleaning with enziQure® is not sufficient, then the procedure should be repeated until such time as the microbiological safety of the endoscope is assured. OneLife will not be held responsible for any failure to respect this procedure.

Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations. Sewage disposal recommendations: May be discharged to wastewater treatment installation.
Product/Packaging disposal recommendations: Do not empty into drains, dispose of this material and its container at specialwaste collection point.

Chemical Properties

Appearance:	orange liquid
Density:	1.07 +/-0.05 kg/l
pH of undiluted product:	7.5 +/- 0.5
pH diluted at 1% in distilled water:	6.75 +/- 0.5

The color is natural and may vary from one batch to another with no impact on the performance of the product.

Main Components*

Non-ionic surfactants: 1-15%
Anionic surfactants: 1 - 5%
Sequestrants: 1 - 5%
Enzymes: <25%

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors

Multi-enzymatic compound:

1. Protease
2. Lipase
3. Amylase
4. Cellulase
& 3 others

Precautions

- **Wear gloves.** In case of prolonged use, gloves covering forearms are recommended. Refer to full safety data sheet before use.
- **Store** in the original container, closed, between +4°C and +25°C.
- **End of life:** 36 months after production.

Delivery Units

Ref OL20707
2 x 5L

Ref OL20709
6 x 1L

Ref OL20734
6 x 200ml

Natural · Biodegradable · Eco-friendly

Made in Belgium

Enzymes for patients' safety

Contact:
OneLife n.v.
Avenue Albert Einstein, 8
1348 Louvain-la-Neuve (Belgium)
+32 10 48 84 27 info@onelife-bf.com

onelife-bf.com

3. Prevention

0% Infections starts with

Prevent infection transmission

Deep cleaning

The first essential decontamination step.

enziMed® Pre-Cleaner

Ready-to-use multi-enzymatic foam spray

3 Enzymes

Medical Devices, such as endoscopes and surgical instruments

Pre-cleaning of medical devices, prior to disinfection
Ready-to-use
15 minutes contact time
72h efficacy after spraying

Product reference	Packaging
OL20506	1 × 5L
OL20510	1 × 10L
OL20512	25L canister

enziMed® Pre-Cleaner is compatible with materials used for medical devices, as well as with disinfectants used in reprocessing

enziMed® Pre-Cleaner

EN

Multi-enzymatic foam spray for surgical instruments and rigid or flexible endoscopes.

- Prevents drying of bio-burden.
- Enzymes break down organic matter.
- Pre-cleans without intervention: let the enzymes do the work!

Exclusive Applications

Endoscopes & surgical instruments

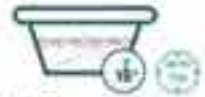
Product Characteristics

- Neutral, multi-enzymatic compound.
- Prepares instruments for decontamination without need for brushing.
- Directional foam spray covers instrument surface; high efficiency, reduced waste.
- No spills during transport.
- Full material compatibility.
- Ready to use.
- Odorless.
- High enzymatic activity and stability.
- Registered Medical Device Class I.
- Biodegradability ≥ 98 % (OCDE 302B).

Instructions for use

Use enziMed® Pre-Cleaner each time instruments need to be pre-cleaned.

1. Use for **manual pre-cleaning** of surgical instruments and scopes.
2. Contact time: **15 minutes**
3. **Rinse** in clear water before passing through automated washer-disinfector in order to avoid foam forming.
4. **Duration** of activity: up to 72 hours in closed container.



Regional legislation (waste): Disposal must be done according to official regulations.
Product/Packaging disposal recommendations : Do not empty into drains, dispose of this material and its container at special waste collection point.

Chemical Properties

Appearance:	pale yellow liquid
Density:	1.006 +/- 0.06 kg/l
pH:	8 +/- 0.8

The color is natural and may vary from one batch to another with no impact on the performance of the product.

Main Components*

Non-ionic surface agents: <5%
Phosphonates: <5%
Enzymes: <5%

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Multi-enzymatic compound:

1. Protease
2. Lipase
3. Amylase

Precautions

- **Use of gloves** is recommended.
- **Store** in the original container, closed, between +4°C and +25°C.
- **End of life:** 24 months after production.

Delivery Units

Ref OL203004
6 x 750 ml
(EN, NL, FR, DE)

Ref OL203044
6 x 750 ml
(EN, PT, ES, IT)

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Avenue Albert Einstein, 16
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+32 10 48 34 27 info@onelife-bf.com

onelife-bf.com

NEW

OneLife launch:

enziMed® Prevent MAX

High-level enzymatic deep cleaning formula
targeting biofilms' matrix DNA.

- Targets the e-DNA (extracellular DNA) constituting the biofilm matrix
- Highly concentrated multi-enzymatic formula containing DNase enzyme which is capable of targeting and degrading free, sticky e-DNA, abundantly found on endoscopes after clinical procedures.
- For optimal deep cleaning of Medical Devices such as: endoscopes and surgical instruments.
- Patented enzymatic complex that dissolves biofilm matrix of multiple pathogens.

More characteristics

- PH neutral, highly improved detergent enhancing the subsequent disinfection process. Can help reduce the costs of expensive endoscope repairs.
- High enzymatic activity and stability.
- Proven superior efficacy on incrusted soil and biofilm matrix of multiple pathogens
- Outstanding materials compatibility
- Registered Medical Device Class I.
- Biodegradability ≥ 99 %
  (OCDE 302B).

Study: Evaluation of biofilm removal

VS

We pushed the limits

With study: “Evaluation of biofilm removal encountered in the hospital environment using different cleaning solutions with and without DNase”.

Tested 3 pathogens

Gram-Negative Gram-Positive

In a repeatable & reproducible way

- Inside the same plate 6 repetitions.
- Each plate was tested 4 times.

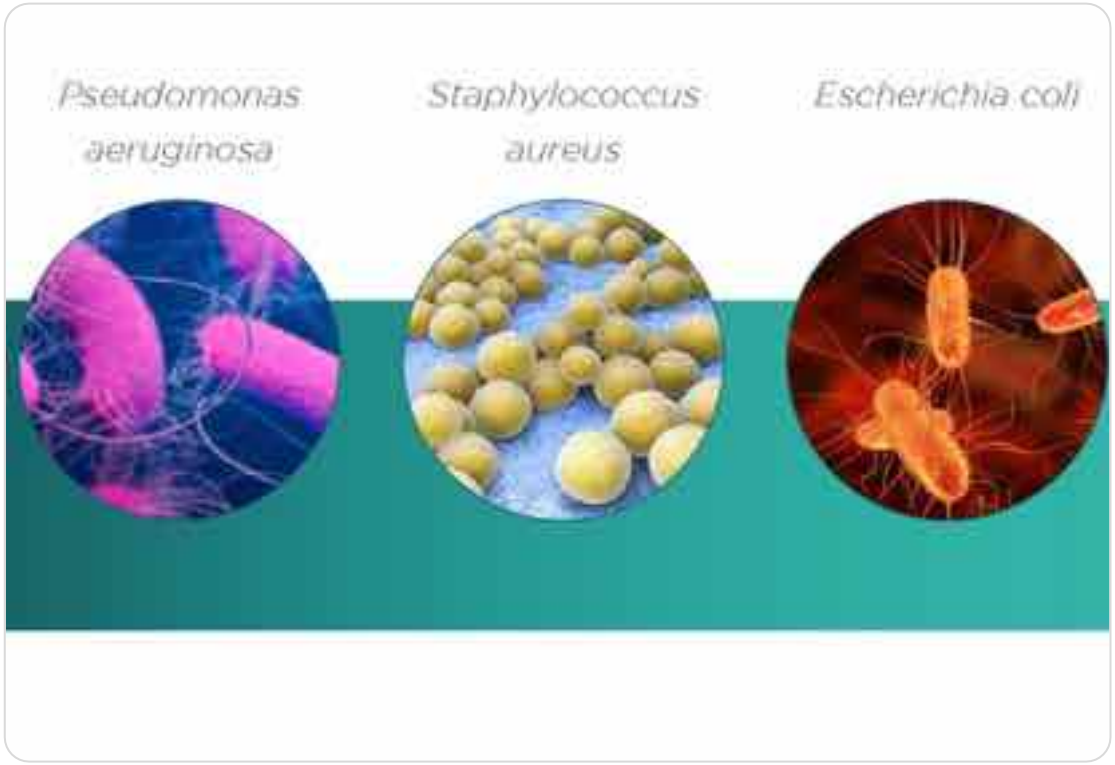
Standard ISO 15883-5:2021

Performance requirements and test method criteria for demonstrating cleaning efficacy

Tests only 1 pathogen: Pseudomonas aeruginosa

(Gram-Negative)

Study: Evaluation of biofilm removal



Method used

The model used to assess biofilm removal was described by Iglesias* and al. (2019) and adapted to include other bacterial strains encountered in healthcare environments

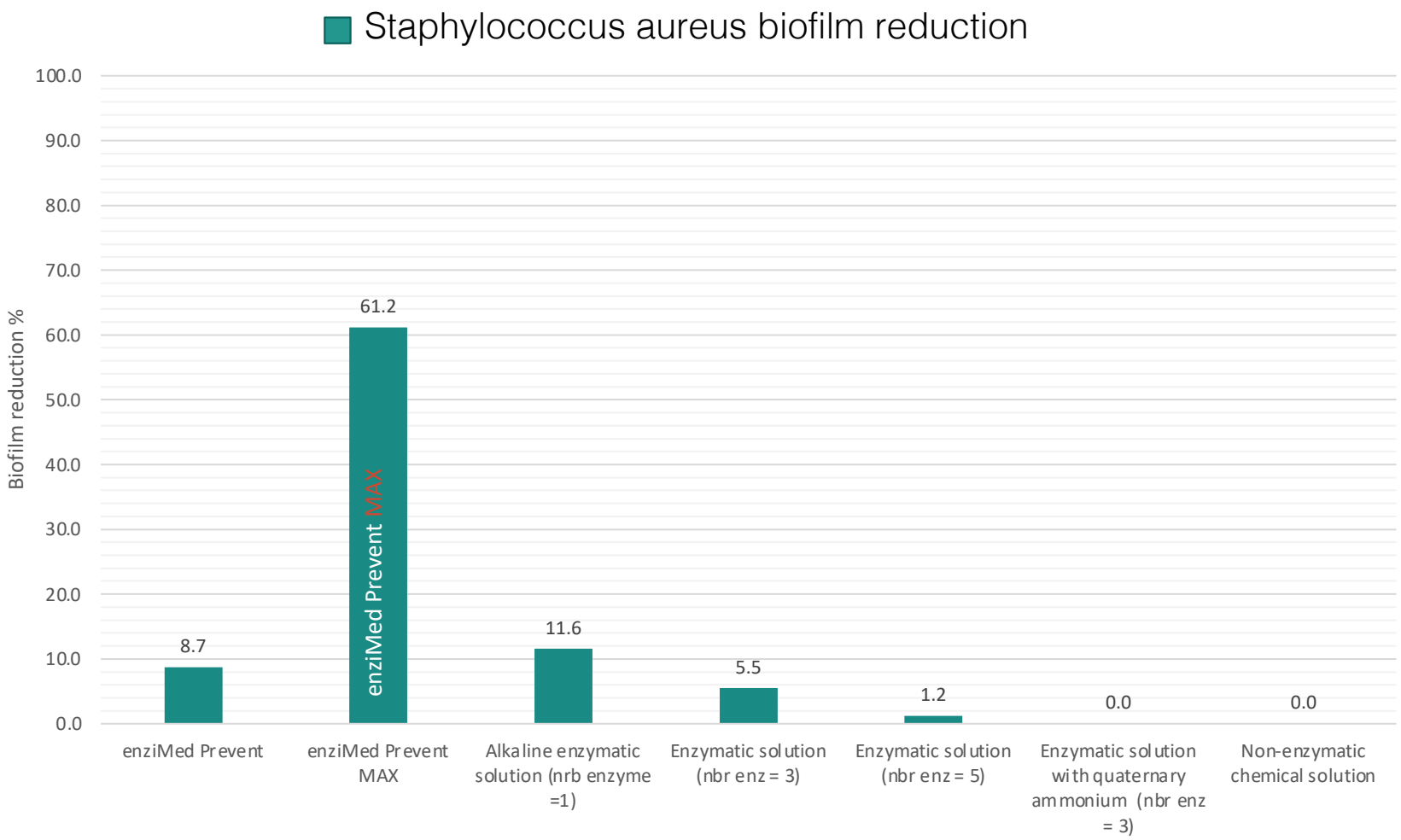
Strains were grown for 24h or 48h :

- Staphylococcus aureus (Gram-Positive)
- Pseudomonas aeruginosa (Gram-Negative) and
- Escherichia coli (Gram-Negative)

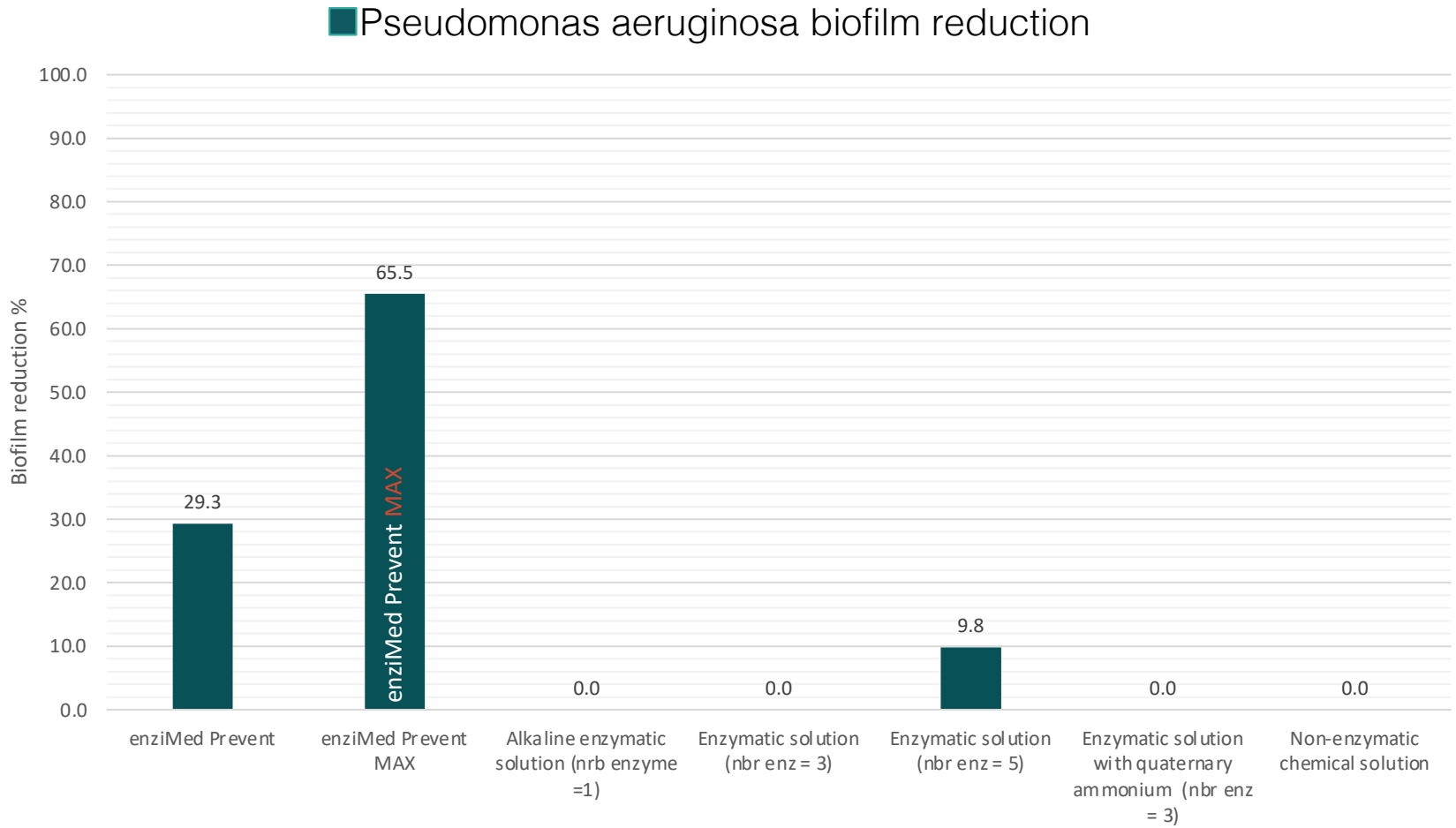
at 37°C in 96-well microplates

Six cleaning solutions, one of which including DNase, were then applied to selected wells

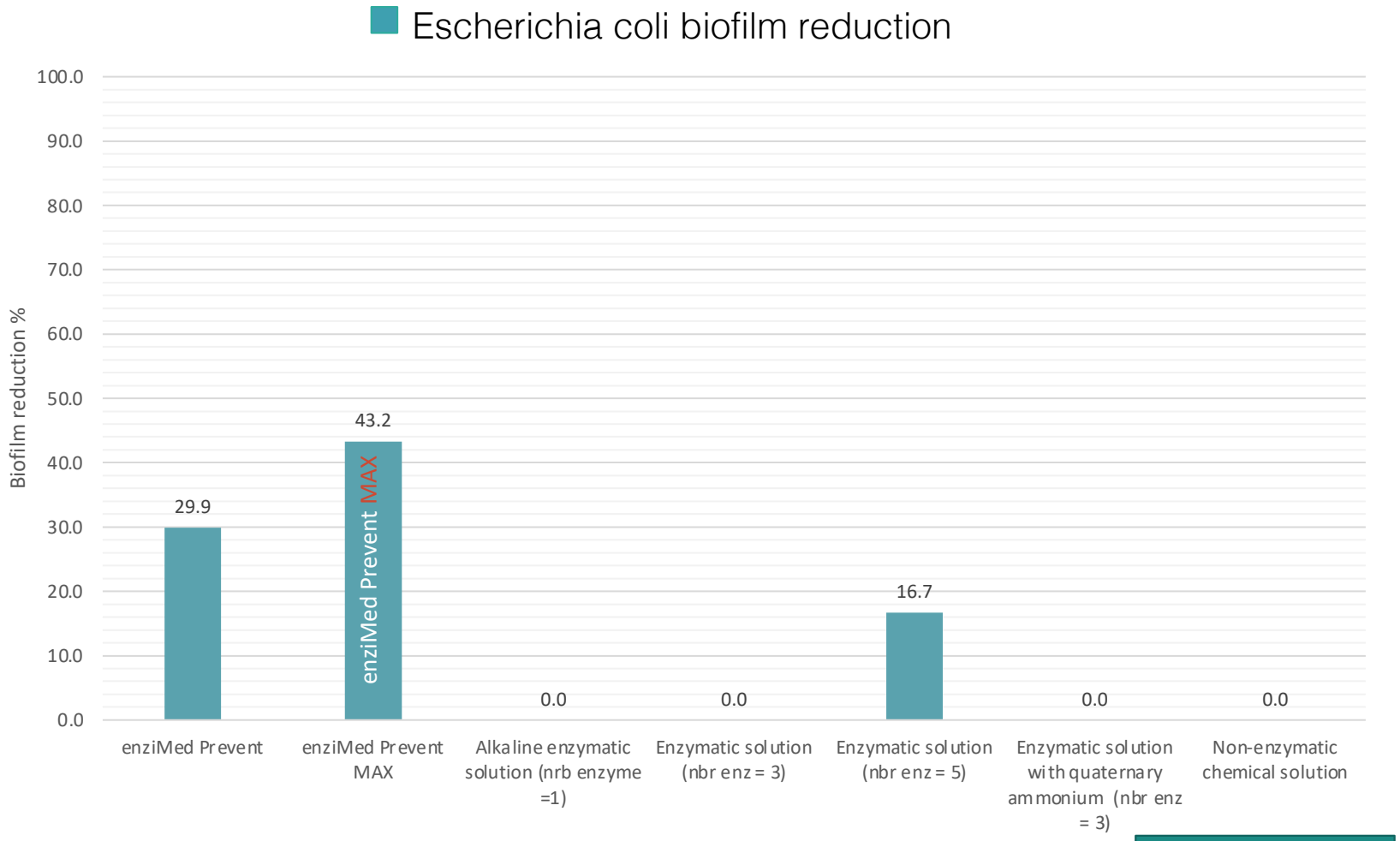
*Iglesias, Y. D. (2019) Antimicrobial Agents and Chemotherapy, 63(7)



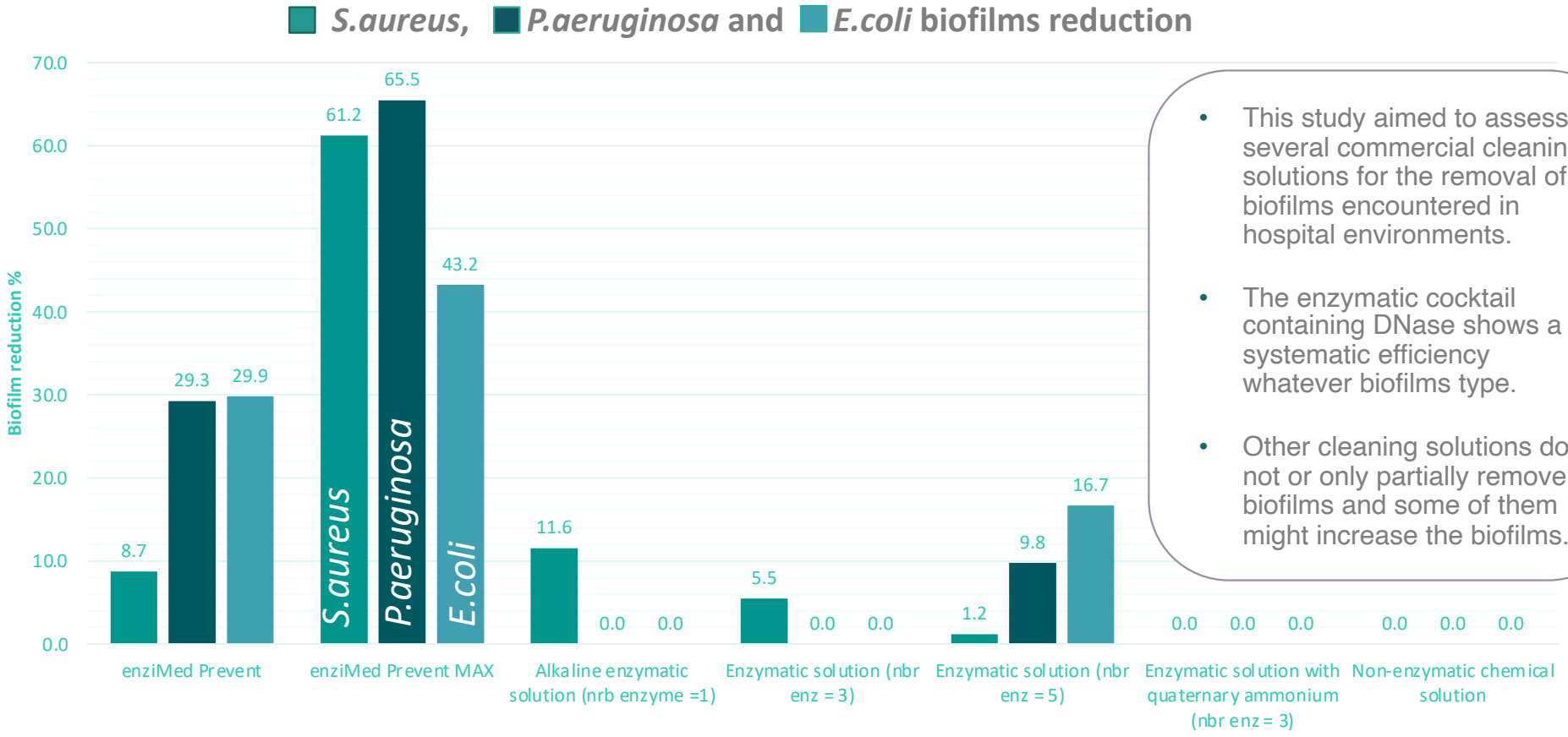
Treatment
Time: 1h
Dosage: 0,5%
Water temp.: 37°C



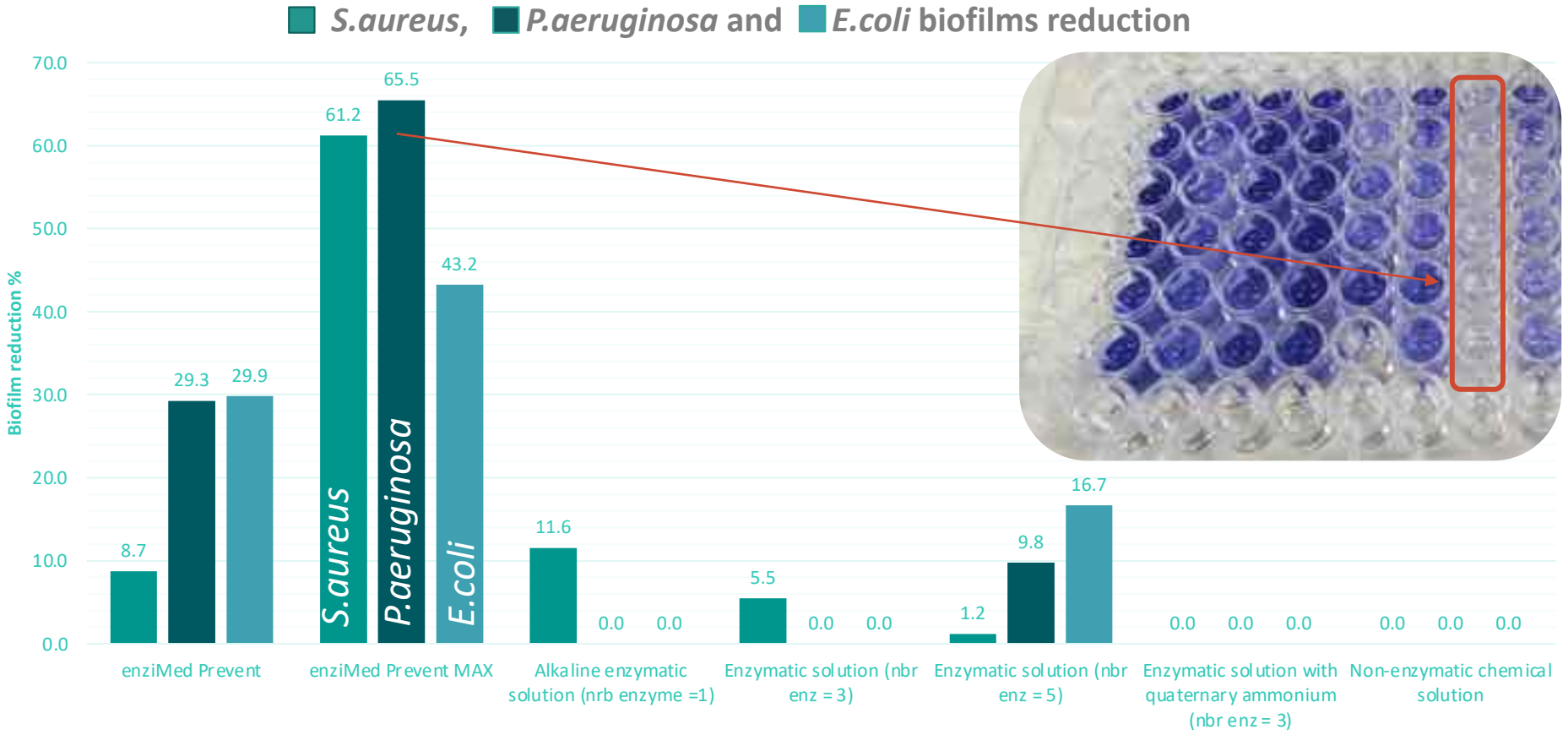
Treatment
Time: 1h
Dosage: 0,5%
Water temp.: 37°C



Treatment
Time: 1h
Dosage: 0,5%
Water temp.: 37°C



- This study aimed to assess several commercial cleaning solutions for the removal of biofilms encountered in hospital environments.
- The enzymatic cocktail containing DNase shows a systematic efficiency whatever biofilms type.
- Other cleaning solutions do not or only partially remove biofilms and some of them might increase the biofilms.


S.aureus, P.aeruginosa and E.coli biofilms reduction
Biofilm reduction %
70.0
60.0
50.0
40.0
30.0
20.0
10.0
0.0
8.7
29.3
29.9
61.2
65.5
43.2
11.6
0.0
0.0
5.5
0.0
0.0
1.2
9.8
16.7
0.0
0.0
0.0
0.0
0.0
0.0
S.aureus
P.aeruginosa
E.coli
enziMed Prevent
enziMed Prevent MAX
Alkaline enzymatic solution (nrb enzyme =1)
Enzymatic solution (nbr enz = 3)
Enzymatic solution (nbr enz = 5)
Enzymatic solution with quaternary ammonium (nbr enz = 3)
Non-enzymatic chemical solution

enziMed® Instrument Washer

High-level non-foaming enzymatic detergent

5 Enzymes

Automated cleaning of medical devices, such as surgical instruments

Use in automated washer-disinfector:

Validated at 45°C
0.3% - 0.5% dilution
Validated by WFK Laboratories, Germany, at 0.4% in a cleaning phase of 10 minutes, according to ISO15883-5
Adjust parameters according to individual machine callibration

Packaging	Fragrance	No Fragrance
6 x 1L	OL20108	OL21508
2 x 5L	OL20109	OL21509

enziMed® Instrument Washer is compatible with materials used for surgical instruments, as well as with disinfectants used in reprocessing

enziMed® Dry

Rinse aid to facilitate the drying phase

Automated cleaning of medical devices, such as surgical instruments

Use in automated washer-disinfector:

0.05% - 0.1% dilution

Adjust parameters according to individual machine calibration

Product reference	Packaging
OL20609	2 x 5L
OL20610	1 x 10L

enziMed® Dry is compatible with materials used for surgical instruments, as well as with disinfectants used in reprocessing

enziMed®
Instrument Washer

EN

Low foaming enzymatic detergent for automated cleaning of surgical instruments.

- Enzymatic compound concentrated in hydrolases with specific action against organic matter (blood, tissue, biofilm).
- Superior enzymatic activity over time.
- Proprietary enzymatic formula with mild pH.

Exclusive Applications

Endoscopes & surgical instruments

Automated cleaning

Product Characteristics

- Passes ISO/TS 15883-5, Annex N and validated against soil tests (TDS,...).
- Energy savings (use at 45°C).
- concentrated for economical use (0.4%)
- Mild pH.
- Compatible with all materials used for surgical instruments.
- Single rinse cycle in Washer-Disinfector.
- Registered Medical Device Class I.
- Biodegradability ≥ 98 % (OCDE 302B).

Chemical Properties

Appearance:	colourless, transparent liquid
Density:	1.04 +/-0.05 kg/l
pH of undiluted product:	9 +/- 0.5
pH solution at 0.4%:	9 +/- 0.5

The color is natural and may vary from one batch to another with no impact on the performance of the product.

Main Components*

Non-ionic surfactants: 1-15%
Sequestering: 1 - 5%
Corrosion inhibitor: <1%
Enzymes: <5%
Multi-enzymatic compound

1. Protease
2. Lipase
3. Amylase
4. Cellulase

& 1 other

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Precautions

- **Wear gloves.** In case of prolonged use, gloves covering forearms are recommended. Refer to full safety data sheet before use.
- **Store** in the original container, closed, between +4°C and +25°C.
- **End of life:** 36 months after production.

Delivery Units

Ref OL20308
1 x 5L
[Stackable]

Ref OL20310
1 x 10L

Ref OL2021
1 x 20L

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Enzymes for patients' safety

Contact:
OneLife S.A.
Joseph Albert Einstein, 10
Ghlin Louvain-la-Neuve (Belgium)
+32 10 48 84 27 info@onelife-bf.com

onelife-bf.com

enziMed® Standard

Standard enzymatic low-foaming detergent

4 Enzymes

Medical Devices, such as endoscopes and surgical instruments

Automated and manual cleaning of surgical instruments and endoscopes:

Manual: 40 to 45°C / 103 to 114 °F (temperature is important)
Automated: 50°C
0.5% dilution according to level of soiling
Contact time: minimum 1 minute; ideally 5-10 minutes
Adjust parameters according to individual machine calibration

Product reference	Packaging
OL20609	2 x 5L
OL20610	1 x 10L

enziMed® Standard is compatible with materials used for medical devices, as well as with disinfectants used in reprocessing

enziMed® Standard

EN

Low-foaming liquid enzymatic detergent for cleaning of reusable Medical Devices.

- Neutral, low foaming enzymatic detergent
- For effective cleaning of surgical instruments and endoscopes
- Offers excellent applications flexibility and cost effectiveness

Exclusive Applications

Endoscopes & surgical instruments

Manual, ultrasound & automated cleaning

Product Characteristics

- Suitable for manual and automated cleaning of Medical Devices.
- High materials compatibility.
- Suitable for ultrasound cleaning.
- No neutralization step is needed in washer-disinfector.
- Clear liquid without perfume or colorants.
- Enzymatic activity is maintained for 8 hours after dilution. Renew the solution according to soil levels.

Instructions for use

Suitable for automated and manual cleaning of surgical instruments and endoscopes.

1. Standard dosage: **0.3% to 1%** (3 ml to 10 ml per liter) according to the degree of soiling.
2. Contact time: minimum **1 minute**, ideally 5 to 10 minutes.
3. Ideal temperature:
   Manual: **40 to 45°C** (minimum 30°C and maximum 55°C)
   Automatic: **50°C** (maximum 55°C)

40-45°C

55°C

Waste treatment methods: Dispose in a safe manner in accordance with local/national regulations.
Product/Packaging disposal recommendations: Do not empty into drains; dispose of this material and its container at special waste collection point.

Chemical Properties

Appearance:	pale yellow liquid
Density 20°C:	1.005 +/- 0.015 kg/l
pH of undiluted product:	8.5 +/- 0.5
pH diluted at 1% in distilled water:	8.00 +/- 0.5

The color is natural and may vary from one batch to another with no impact on the performance of the product.

Precautions

- **Wear gloves.** Refer to full safety data sheet before use.
- **Store** in the original container, closed, between +4°C and +25°C.
- **End of life:** 24 months after production.

Main Components*

Non-ionic surfactants: 1-5%
Anionic surfactants: 1 - 5%
Sequestering agents: 1 - 5%
Enzymes: <5%

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors

Multi-enzymatic compound

1. Protease
2. Lipase
3. Amylase
4. Cellulase

Delivery Units

Ref OL20808
5 x 1L

Ref OL20808
1 x 5L
(Stackable)

Ref OL20810
1 x 10L

Ref OL20650
1 x 20L

Ref OL20612
1 x 25L

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Enzymes for patients' safety

Contact
OneLife s.a.
Avenue Albert Einstein, 19
1348 Louvain-la-Neuve (Belgium)
+32 10 48 54 21 info@onelife-bf.com

onelife-bf.com

NEW

enziMed® ALLKLEAN

Alkaline surgical instruments' cleaning solution, mainly for automated reprocessing

- For optimal cleaning of Medical Devices such as surgical instruments
- Solution containing proteases
- Alkaline pH, concentrated formula for a better efficiency
- Outstanding materials compatibility
- Non foaming detergent

- Alkaline (pH range 10,0 – 11,0)
- Enzymatic (proteases)
- Low foaming
- Density: 1.060 g/cm3
- Application and dosage:
  5 mL/L (0.5 %) – 10 mL/L (1.0 %) *
  35°C – 60°C

enziMed®

ALLKLEAN

OL22706
1 x 5L

OL22710
1 x 10L

OL22711
1 x 20L

OL22713
1 x 200L

Autres*

* également disponible en plus grands conditionnements sur demande

enziMed® ALLKLEAN

Alkaline surgical instruments' cleaning solution, mainly for automated reprocessing.

- For optimal cleaning of Medical Devices such as surgical instruments
- Enzymatic solution with a preventive action against deposition of organic residues
- Tested on most used automatic washers in CSSD
- Suitable for manual and ultrasound cleaning of thermostable instruments

Exclusive Applications

Surgical instruments

Automated & manual or ultrasound cleaning

Product Characteristics

- Alkaline pH, concentrated formula for a better efficiency
- Outstanding materials compatibility
- Prevents corrosion
- Non-foaming detergent
- Registered Medical Device Class I
- Biodegradability ≥ 97 % (OCDE 302B)
- No hazard label according to the CLP Regulation (EC) No. 1272/2008
- Does not contain aldehydes, phenols, chlorine or EDTA

Instructions for use

		Cleaning	
		Surgical Instruments / Robotic surgical instruments	
		automated	ultrasound/manual
A.	Recommended dosage	0.5% (5 ml/l)	0.5% - 2% (5 - 20 ml/l)
B.	Contact time:	15 mins	1 - 5 mins
C.	Ideal temperature	35 - 55 °C	20 - 40 °C

*A neutralizing step is recommended by using enziMed® Dry

Precautions

- Refer to full safety data sheet before use.
- For professionnal use only
- Keep container closed when not in use
- Store in the original container, closed, between +4°C and +25°C.
- End of life: 24 months after production.
- Sewage disposal recommendations: May be discharged to wastewater treatment installation.
- Product/Packaging disposal recommendations: Dispose of contents/container to hazardous or special waste collection point. When totally empty, containers are recyclable like any other packing.

Chemical Properties

Appearance:	Light, transparent liquid
Density:	1.050 +/- 0.010 kg/l
pH of undiluted product:	11.0 +/- 0.5
pH diluted at 1% :	10.7 +/- 0.5

The colour is natural and may vary from once batch to another with no impact on the performance of the product.

Main Components

Anionic surfactants:	< 5%
Sequestrants:	< 5%
Enzymes:	< 5%
Phosphonates:	< 5%

Enzymatic compound

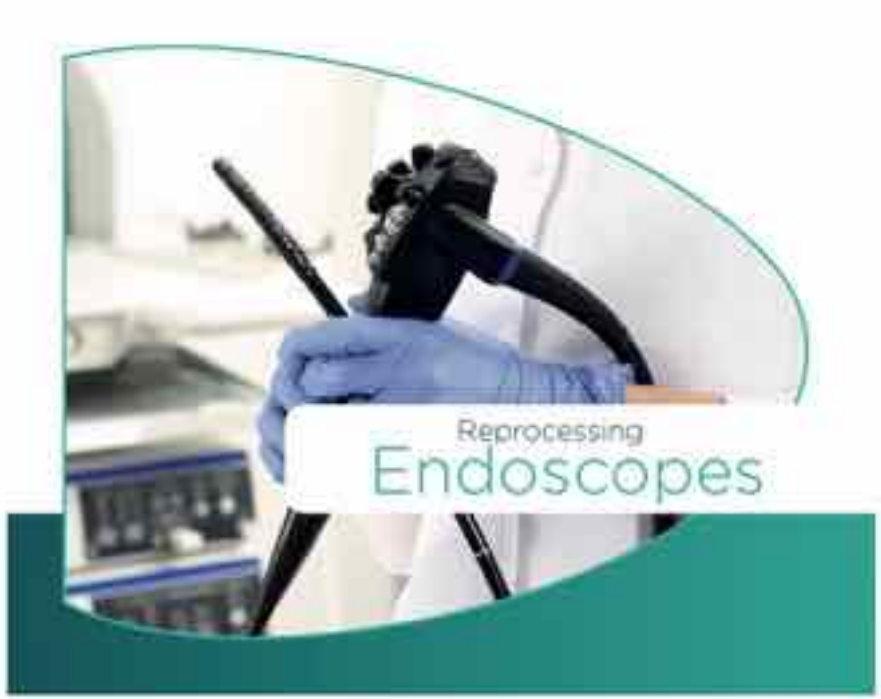
Proteases

Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Contact:

Prevention solutions

Prevention solutions



enziDent®

EN

High-level enzymatic detergent with biofilm treatment for dental instruments

- Patented multi-enzymatic compound
- Enzymes dissolve organic soil and biofilm matrix
- Prepares instruments for efficient sterilization

Exclusive Applications

Dental rotary & non rotary instruments, implant healing caps

For manual or ultra-sound cleaning

Product Characteristics

- Neutral, multi-enzymatic compound
- Restores instruments to their original condition
- Independent tests (available on request) prove superior efficacy on incrusted soil and biofilm matrix
- Full materials compatibility
- Concentrated for economical use
- High enzymatic activity and stability
- Registered Medical Device Class I
- Biodegradability ≥ 95 % (OCDE 302B)

Instructions for use

Use enziDent® each time instruments are cleaned for complete removal of soil and to prevent build-up of incrusted soil and biofilm matrix.
A. Standard dosage : 1%*. Increase dosage to 2%* in case of hard water or heavy soiling or temperature of water < 30°C
B. Contact time : 15 minutes
C. Ideal temperature : 40 to 45°C (minimum 30°C and maximum 55°C)
*See dilution table below

Bath volume (l)	0.5	1	2	3	4	5	10	15
enziDent® 1%-2% (in ml)	5 - 10	10 - 20	20 - 40	30 - 60	40 - 80	50 - 100	100 - 200	150 - 300

Waste treatment methods: Remove to an authorized waste treatment plant.
Sewage disposal recommendations: May be discharged to wastewater treatment installation.
Product/Packaging disposal recommendations: Dispose of contents/container to special waste collection point. When totally empty, containers are recyclable .

Chemical Properties

Appearance : Yellow liquid
pH unverdünnt: : 8.5 +/-0.5
pH verdünnt 1%: 7.8 +/-0.5
Density: 1.053+/-0.01

The color is natural and may vary from one batch to another with no impact on the performance of the product
• Instruments should be rinsed prior to immersion in enziDent® only if product used for initial soak has an extreme pH (>10) or contains oxidizing agents (peracetic acid, hydrogen peroxide or chlorine-based products) or phenols.
• Respect recommended temperatures for optimal performance; efficacy is not guaranteed > 55°C.
• Rinse abundantly with water before disinfection and/or sterilization.
• Enzymatic activity is maintained for 8h following dilution.
• Renew baths frequently according to soil levels.

Precautions

- **Wear gloves**. In case of prolonged use, gloves covering forearms are recommended. Refer to full safety data sheet before use.
- **Store** in the original container, closed, between +4°C and +25°C. For optimal performance respect the « Best Before » date on the label.
- **End of life:** 36 months after production

Main components*

1 - 5% non-ionic surfactants;
1 - 5% anionic surfactants;
<1% sequestrants;
<5% corrosion inhibitors;

* Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Multi-enzymatic compound

1. **Protease**
2. **Lipase**
3. **Amylase**
4. **Cellulase**
5. **+ 2 more**

Delivery Units

Ref OL20807 2 x 1L
Ref OL20808 6 x 1L

Ref OL20806 5L
Ref OL20809 2 x 5L

Natural · Biodegradable · Eco-friendly

20/11/2021

Made in Belgium

Enzymes for patients' safety

Kontakt
OneLife s.a.
Avenue Albert Einstein, 15
1348 Louvain-la-Neuve (Belgium)
+32 10 48 34 27 info@onelife-bf.com

onelife-bf.com

enziDent® FLOW

High-level detergent with biofilm treatment for the cleaning and maintenance of dental unit, waterlines and suction systems.

PATENTED

- Patented enzymatic compound
- Breaks down organic soil and biofilm matrix for a more effective decontamination
- Enables in-depth cleaning of waterlines and suction systems preventing plugs formation on filters
- Fresh menthol fragrance

Exclusive Applications

Dental units & suction systems

Product Characteristics

- Neutral, multi-enzymatic compound
- Independent tests (available on request) prove superior efficacy on incrusted soil and biofilm matrix
- Full materials compatibility
- Highly concentrated for economical use
- High enzymatic activity and stability
- Registered Medical Device Class I
- Biodegradability ≥ 95 % (OCDE 302B)
- Suitable for the cleaning of dental units: waterlines and suction system
- Refer to full Instructions for Use and Safety Data Sheet before using.
- Respect recommended temperature for optimal performance; efficacy is not guaranteed > 55°C.
- Rinse abundantly with water after use and before disinfection.
- Enzymatic activity is maintained for 8h following dilution.
- For automatic systems, respect the instructions for use of the manufacturer.

EN

Instructions for use - 1x/day (evening)

Use enziDent® Flow each time dental waterlines and suction systems must be cleaned, for complete removal of soil and to prevent the build up of microbial biofilms.

PREPARE: Dilute 25ml in 2.5L of warm water (Ideal temperature: 40 à 45°C - min. 30°C & max. 55°C)
CLEAN:
1. Pour approx. 0.5 to 1L of detergent solution into the sink
2. Immerse the suction hoses in the bath to drain completely*
3. Install the hoses back to its system

WASH/RINSE:
1. Contact time for routine use: 10 minutes minimum (ideally overnight)
2. Following morning, drain approx. 1L of water and rinse the sink

DISINFECT: 1x/Week at least - Disinfect with a disinfectant of your choice** and follow the instructions for use. Clean the installation with water

* Do not immerse fully -> to create a mixture of air/detergent solution. Compatible with Orotol cup and other suction cleaning systems.
**Complies with standards: EN 13727, EN 13624, EN 14348, EN 14476, EN 14561, EN 14562, EN 14563

Waste treatment methods: Remove to an authorized waste treatment plant.
Sewage disposal recommendations: May be discharged to wastewater treatment installation.
Product/Packaging disposal recommendations: Dispose of contents/container to special waste collection point. When totally empty, containers are recyclable .

Chemical Properties

Appearance :	Transparent, green
Density:	1,158 +/- 0,010
pH undiluted product:	8,5 +/- 0,5
pH diluted at 1% :	8,0 +/- 0,5

Main components

- 1 - 5% non-ionic surfactants;
- <1% anionic surfactants;
- <1% sequestrants;
- <1% perfume;
- Patented multi-enzymatic compound

Does not contain carcinogens, mutagens, reproductive toxicants or endocrine disruptors.

Patented multi-enzymatic compound

1. **Protease**
2. **Lipase**
3. **Amylase**
4. **Cellulase**
5. **+ 2 more**

Precautions

- **Wear gloves.** In case of prolonged use, gloves covering forearms are recommended. Refer to full safety data sheet before use.
- **Store** in the original container, closed, between +4°C and +25°C. For optimal performance respect the « Best Before » date on the label.
- **End of life:** 36 months after production

Delivery Units

Ref OL20907 2 x 1L
Ref OL20907A 2 x 1L
Ref OL20908 6 x 1L
Ref OL20908A 6 x 1L

Ref OL20909 2 x 5L
Ref OL20909A 2 x 5L

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15/05/2021

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Enzymes for patients' safety

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Avenue Albert Einstein, 15
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+32 10 48 34 27 info@onelife-bf.com

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RESULTS

OneLife vs standard detergents

This document presents the results of detergent efficacy tests using STF Load Check (Browne) as soil test. STF Load Check strips were exposed to the detergents diluted to their recommended dilution in demineralized water at 40°C under agitation.

	OneLife enzymatic detergents	**Leading** enzymatic detergent	**Alkaline** detergent	**2in1*** Detergent-disinfectant
contact time: 10'				
	Complete removal	**********	Discoloration, but soil remains	**********

*both enzymatics and non-enzymatics provide the same results

Enzymes,
a unique safe decontamination booster

PROFILE

- Non-living
- We find them naturally in the environment and in the body

ADVANTAGES

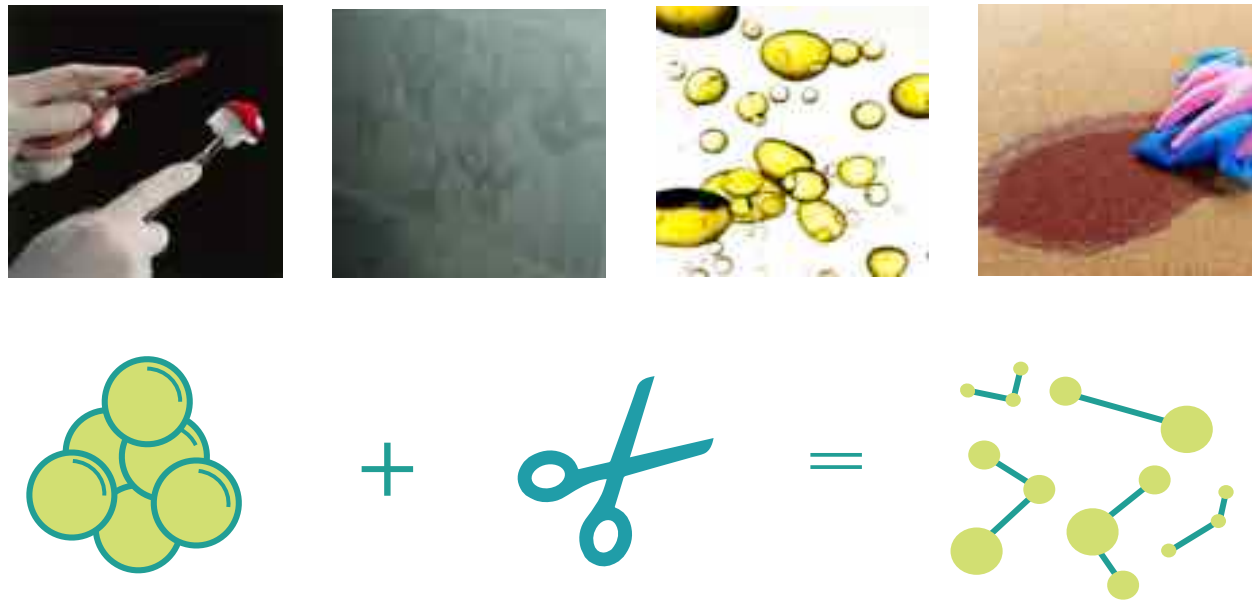
- Natural power
- 100% biodegradable

ASSETS

- Cut up to 3 million molecules per second
- Works in synergy with other cleaning products
- Dissolve organic soil and biofilms

Enzymes as catalysts

- Different enzymes on duty:
- Proteins –> Protéase
- Fats and oils –> Lipase
- Starch –> Amylase
- Polysaccharide –> Cellulase



Thank you