



HYGIENE & DISINFECTION HANDS FLOORS & SURFACES INSTRUMENTS



FOR YOUR PEACE OF MIND

Our mission is to provide innovative, high quality and efficient products and services through a philosophy of continuous improvement. In order to achieve this, we pride ourselves on providing a healthy and rewarding working environment for our employees, which has been reflected in the total satisfaction of our customers.



CSR REPORT





A GLOBAL ACTOR WITH LOCAL SERVICE

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1946 Beginning of Christeyns (Belgium). Since, the company has become one of the major players in the global chemical market. Today, Christeyns is a reliable international partner in 3 different areas of expertise:

- Hygiene products,
- Engineering chemical products,
- Chemical products for construction.



PLIWA IS A CHRISTEYNS COMPANY SPECIALISING IN DISINFECTANTS AND CLEANING PRODUCTS FOR THE HEALTHCARE, DENTAL AND PHARMACEUTICAL SECTORS.

All PLIWA products are tested for efficacy by accredited and certified laboratories and institutes. PLIWA Hygiene is an ISO 13485 and GMP certified manufacturer.





www.christeyns.com



FOR YOUR PE



Skin Washing and Care



PHAGO

PHAGO'DERM SENSITIVE

HAND & BODY WASHING

PHAGO

SIMPLE AND FRED

PHAGO

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PHAGO

Fragrance-free solution for simple and frequent hand washing, general patient cleansing and pre-operative showering.

- Formulated with ingredients selected for their **gentleness** on on even the most sensitive skin
- **Demoprotective** due to a complex combination of a vegetable surfactant with a natural superfatting agent present in the skin's hydrolipid film
- Preserves the skin's protective barrier and provides **comfort**
- Formulated with moisturisers for instant hydration**
- Excellent cleansing performance, easily rinsed off
- Suitable for use on children under 36 months and pregnant/ breastfeeding women

PHAGO'DERM ASEPT*

DISINFECTANT HAND WASHING



PHAGO'DERM CARE

HAND CARE

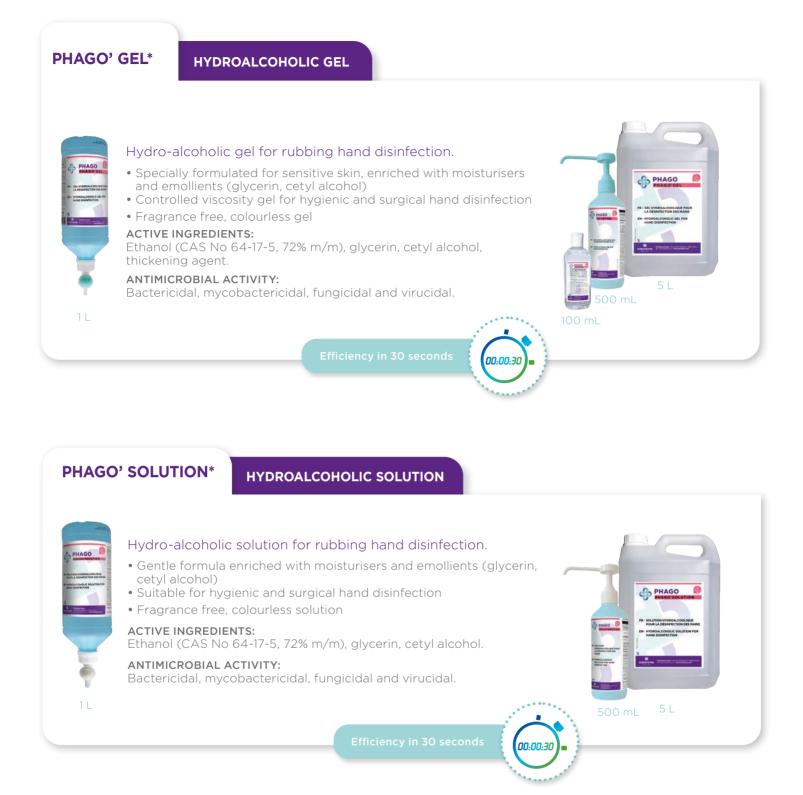


Skin care designed to provide comfort and protection to the damaged and vulnerable skin of the hands.

- Preserves the skin's natural barrier
- Moisturises**, penetrates quickly to leave hands soft and supple
- Airless packaging to reduce wastage and help reduce contamination

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*Biocidal product. Use biocides safely. Always read the label and product information before use. Please verify availability in your country, since biocide registration may vary by country. ** Moisturises the upper layers of the epidermis.



» Dispensers and accessories available on request.

BIOCLEANING AND DISINFECTION FOR FLOORS AND SURFACES

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Floor and surface cleaning CONCENTRATED DETERGENTS AND DISINFECTANTS



GREEN'R FLOORS



EU ECOLABEL: BE/020/011

Concentrated (dilutable) cleaner for floors and surfaces, no rinsing required.

- Cleans efficiently and leaves a brilliant, streak-free shine
- Suitable for all types of floors and washable surfaces, including treated floors and delicate surfaces
- Fresh and woody fragrance. Pomegranate flower scent
- Low foaming, dilutable for manual or industrial use



PHAGO'SURF 2D*

CONCENTRATED DISINFECTANT DETERGENT

Disinfectant detergent for floor, surface and equipment hygiene.

- Broad spectrum of disinfection due to the synergistic action of 2 active ingredients
- Fragrance free, EDTA free

ACTIVE INGREDIENTS:

Didecyldimethylammonium chloride (CAS N° 7173-51-5 ; 3,5% m/m), Alkylamine alkylamine (CAS N° 2372-82-9 ; 5,5% m/m).

ANTIMICROBIAL ACTIVITY (DIRTY CONDITIONS):

Bactericidal, tuberculocidal, fungicidal and active against enveloped viruses.



*Dangerous. Observe safety precautions. Use biocides with care. Read the label and product information before use. Ensure that it is safe to use before applying, especially in public areas. Wherever possible, use alternative methods and products that pose the least risk to human and animal health and to the environment. Please verify availability in your country, since biocidal registration may vary by country.





Treatment of floors and surfaces **OUR PERACETIC ACID RANGE**



	BACTERICIDAL		MYCOBACTERICIDAL	VIRUCIDAL ACTIVITY	FUNGICIDAL		SPORICIDAL
EFFICACY SPECTRUM	GRAM BACTERIA -	GRAM BACTERIA +	MYCOBACTERIA	VIRUSES	YEASTS	MOLDS	BACTERIA SPORES
ALCOHOLS							-
QUATS	+++		-				-
GUANIDINE		+++	-				-
ALDEHYDE	+++	+++	+++				+++
PERACETIC ACID	+++			+++	+++		+++



PHAGO'SPORE*

READY-TO-USE

Sporicidal disinfectant cleaner for high contact surfaces.

• Ready to use disinfectant cleaner.

ACTIVE INGREDIENTS:

Peracetic acid (CAS N° 79-21-0 ; 0.034% m/m), Hydrogen peroxide (CAS N° 7722-84-1 ; 3.26% m/m).

ANTIMICROBIAL ACTIVITY: Bactericidal, fungicidal, virucidal, mycobactericidal and sporicidal.

PHAGO'SPORE WIPES

Flowpa Size: 2





Cleaning and disinfection of high contact surfaces



PHAGO'SEPT QUICK & CLEAN WIPES

Container with 90 wipes Size: 300x300 mm Refills available

Dangerous. Observe safety precautions. Use biocides with care. Read the label and product information before use.

Ensure that it is safe to use before applying, especially in public areas. Wherever possible, use alternative methods and products that pose the least risk to human and animal health and to the environment. Please verify availability in your country, since biocidal registration may vary by country. **Detergent certified by ECOCERT Greenlife according to the ECOCERT "Ecodetergent" standard available at http://detergents.ecocert.com/en

Christeyns Floors and surfaces

TREATMENT OF MEDICAL DEVICES

MANUAL AND AUTOMATIC CLEANING EQUIPMENT WASHING MEDICAL DEVICES AND ENDOSCOPES

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PHAGO'SCOPE APA HIGH-LEVEL DISINFECTANT



Automatic handling of the instruments **DETERGENT AND RINSING LIQUIDS**

PHAGO'WASH LD

DETERGENT

Liquid detergent for manual and automatic use for enhanced cleaning of medical and surgical instruments, medical devices and endoscopic equipment.

- Class I medical device
- Highly effective on organic soils
- Complies with Instruction 2016/220 of 4 July 2016 for the treatment of the treatment of heat sensitive flexible endoscopes
- NTA, EDTA and phosphate free
- Contains a readily biodegradable sequestering agent
- For use in ultrasonic tanks and automatic washers



ENZYMED DRY*

Rinsing agent to facilitate the drying phase in the automated reprocessing of surgical instruments

- Class I medical device
- Very good wetting properties for fast, streak-free drying and and streak-free drying of items to be processed
- Biodegradability ≥ 95 % (OCDE 302B) according to soil levels.
- Highly concentrated for economical use (0.05% to 0.5%).

16 Christeyns Treatment of medical devices

High-level detergents BIOFILM TREATMENT AND ENZYMATIC DETERGENTS



ONELIFE DETECT 2*

BIOFILM DETECTION

Quality control of the surgical instrument cleaning process.. Patented technology to detect biofilm and contamination on instruments.

- Class I medical device
- Evaluates the cleaning quality of instruments washer-disinfetors (WD) or ultrasound.
- Quick and easy to use : 5 minutes for a basket of instruments
- Biodegradability ≥ 90 % (OCDE 302B).







ONELIFE ENZIQURE*

CORRECTIVE CLEANING

Multi-enzymatic detergent for corrective cleaning of persistent microbial contamination & biofilms on medical devices..

- Class I medical device
- 1% dosage
- High enzymatic activity and stability.
- Biodegradability ≥ 97 % (OCDE 302B)
- Independent tests (available on request) prove superior efficacy on incrusted soil and biofilm matrix of multiple pathogens.







Multi-enzymatic pre-cleaning foam spray for medical devices.

- Class I medical device
- Ready to use
- Full material compatibility
- Prepares instruments for decontamination, without need for brushing.
- Biodegradability ≥ 95 % (OCDE 302B).



One Life

ONELIFE ENZIMED PREVENT MAX*



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

- Class I medical device
- Neutral pH, highly concentrated multi-enzymatic formula
- Biodegradability ≥ 99 % (OCDE 302B)
- Proven superior efficacy on incrusted soil and biofilm matrix of multiple pathogens (test results available on request)





* Before ordering, please contact us to check the availability of the One Life brand in your country.



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Dental range

PHAGO'DENT ROTO

CLEANING AND DISINFECTION

Disinfectant and detergent for rotating instruments.

- Class II b medical device.
- Good immediate effect.
- Ready to use solution.
- Excellent corrosion protection.
- Broad spectrum of activity.
- Listed by the Association for Applied Hygiene.

ANTIMICROBIAL ACTIVITY:

Bactericidal, yeasticidal, tuberculocidal, mycobactericidal and virucidal.



PHAGO'DENT ASPI



Disinfection for aspiration systems.

- Class II b medical device.
- Proven cleaning performance, free from aldehydes and phenols.
- Excellent material compatibility.

ACTIVE INGREDIENTS:

13.2g 2 aminoethanol, 8g Benzalkonium chloride, 5g 2, Propanol.

ANTIMICROBIAL ACTIVITY:

Bactericidal, yeasticidal, mycrobactericidal, limited spectrum virucidal activity and virucidal activity against enveloped viruses







PHAGO'PREN AF

DISINFECTION

Concentrate based on quaternary ammonium compounds and amine for the preparation of a working solution for manual immersion disinfection of invasive medical devices.

- Medical device class II b.
- Broad spectrum of activity.
- Concentrated product.

ANTIMICROBIAL ACTIVITY : Bactericidal, yeasticidal and virucidal against enveloped viruses



PHAGO'TRAY CLEANER

DETERGENT

Concentrate for the preparation of a working solution for the cleaning of moulds and trays.

- Suitable for cleaning stainless steel and plastic moulds.
- Does not corrode or attack material residues.

ACTIVE INGREDIENTS :

Isopropyl alcohol, 1-heptanol, 2-propyl-,7eo, Propylene glycol, Sodium coceth-30 sulfate, Glycolic acid benzotriazole





REGULATIONS

All health, hygiene, care and disinfection products must undergo a benefit and/or risk assessment before being placed on the market. Depending on the nature of the product, this assessment will cover different criteria and levels of requirements and may be carried out by the manufacturer or by a regulatory authority.

Medical device regulation

<u>Definition</u>: An instrument, apparatus, appliance, software, implant, reagent, material or other article intended by the manufacturer to be used, alone or in combination, for in human beings for one or more of the following purposes

- Diagnosing, preventing, monitoring, prognosticating, compensating, controlling, treating or alleviating disease, injury or disability.
- To investigate, replace or modify anatomy or a physiological or pathological process or condition.
- Provide information through in vitro examination of specimens derived from the human body, including organ, blood and tissue donations.

Assessment criteria:

- Safety of patients and users (caregivers).
- Efficacy and reliability of medical devices in diagnosing, preventing, controlling, treating or reducing the effects of a pathology.

Applicable standards: norms ISO 13485, ISO 14971, EN 62366, ISO 1041, ISO 15223...

Marketing authorisation holder: the manufacturer and/or the notifying body and the competent authority according to the risk class of the medical device.

Medical device vigilance and post market surveillance:

- Reporting medical device incidents to the competent authority, collection of information.
- Collecting, evaluating and using this information for the periodic reassessment of devices.
- Implementing of actions to improve product safety and performance.

Regulation concerning biocides - (UE) 528/2012

Definition: Preparations intended to destroy, repel or render harmful organisms harmless, prevent the action of or exert a controlling effect on harmful organisms by chemical or biological means.

Product categories:

- Group 1: disinfectants and general biocidal products including:
 - Type 1: products intended for human hygiene.
 - Type 2: disinfectants for the private and public health sectors.
 - Type 3: veterinary hygiene.
 - Type 4: disinfectants for surfaces in contact with foodstuffs and animal feed.
 - Type 5: disinfectants for drinking water.
- Group 2: protective products (wood, mildew, etc.).
- Group 3: antiparasitic products.
- Group 4: the biocidal products (protection of foodstuffs, embalming, etc.).

Assessment criteria:

- User safety through toxicological studies.
- Environmental safety through eco-toxicological studies.
- Disinfectant efficacy of biocidal products via European disinfection standards

Applicable standards: N/A.

Marketing decision-maker: Minister of the Environment.

Toxicovigilance :

• To respond to immediate risks of poisoning, submit product information to INRS.

Regulation concerning cosmetics - (EC) 1223/2009

<u>Definition</u>: Any substance or mixture intended to be placed in contact with the external parts of the human body (epidermis, hair system, nails, lips and external genital organs) or with the teeth and the mucous membranes of the oral cavity with a view, exclusively or mainly, to cleaning them, perfuming them, changing their appearance, protecting them, keeping them in good condition or correcting body odours.

Assessment criteria:

- Safety for the user through studies and assessment by an independent toxicologist.
- Effectiveness to be proven based on the allegations mentioned.

Applicable standards: ISO 22716 : "Good Manufacturing Practices for Cosmetics".

Marketing decision-maker: the manufacturer.

Cosmetovigilance:

- RReporting of adverse events to the ANSM or the DGCCRF (General Directorate for Competition Policy, consumer affairs and Fraud control).
- Recording, assessment, use of this information.
- Implementation of actions: changes to information for healthcare professionals, users, suspension, withdrawal from the market.



DISINFECTION STANDARDS

Sectors	Phases, Steps	Microorganisms						
		Bacteria	Fungi/Yeast	Mycobacteria	Virus	Spores		
General	Phase 1	EN 1040	EN 1275			EN 14347		
Human Medicine	Phase 2 Step 1	EN 13727 + A2	EN 13624	EN 14348	EN 14476 + A2	EN 17126		
	Phase 2 Step 2	Hands: EN 1499 EN 1500 EN 12791 Instruments: EN 14561 Surfaces: EN 17387 EN 16615	Instruments: EN 14562 Surfaces: EN 17387 EN 16615	Instruments: EN 14563	Instruments: EN 17111 Surfaces: EN 16777			
Industries Community Centers General Public	Phase 2 Step 1	EN 1276	EN 1650		EN 13610	EN 13704		
	Phase 2 Step 2	Surfaces: EN 13697 ADS: EN 17272	Surfaces: EN 13697 ADS: EN 17272	ADS: EN 17272	ADS: EN 17272	ADS: EN 17272		

• Phase 1 : Basic standards: 1st step to be taken, demonstrates the existence of activity in the most favourable conditions for the product.

• Phase 2:

Application standards: trying to reproduce, for each use, the conditions close to thereal conditions of use Phase 2/step 1. In vitro application standard. Phase 2/step 2. Application standard that models usage

• Phase 3:

EN 1040 - Basic bactericidal activity - Phase 1. Microbial reduction ≥105 against 2 strains: Pseudomonas aeruginosa, Staphylococcus aureus.

Field tests in practical conditions.

EN 1276 - Assessment of the bactericidal activity - Phase 2, step 1. Microbial reduction ≥105 against: Pseudomonas aeruginosa, Escherichia coli, Staphylococcus aureus, Enterococcus hirae

EN 13727 + A2 - Assessment of the bactericidal activity - Phase 2, step 1. Microbial reduction ≥105 against: Pseudom as aeruainosa Staphylococcus aureus, Enterococcus hirae, Escherischia coli (hands only)

EN 1499 - Assessment of the activity of hygienic hand washing products under practical conditions of use - Phase 2, step 2. Artificial contamination of the hands of 12 to 15 volunteers by *Escherichia coli*. Comparison of the reduction factor obtained during the test, to the one obtained under the same conditions with a reference washing (mild -soap).

 ${\sf EN}$ 1500 - Assessment of the activity of hygienic hand treatment products under practical conditions of use -Phase 2, step 2. Artificial contamination of the hands of 18 to 22 volunteers by Escherichia coli Comparison of the reduction factor obtained during the test, to the one obtained under the same conditions with a reference product (60% 2-propanol solution).

EN 12791 - Assessment of the activity of surgical hand disinfectants Phase 2, step 2. Treatment of the clean hands of 23 to 26 volunteers. Assessment of an immediate effect after surgical hand disinfection and a residual effect after wearing surgical gloves for 3 hours after disinfection. Reference = 60% propan-1-ol (v/v).

EN 13697 - Assessment of the bactericidal and/or fungicidal; activity - Phase 2, step 12 For bactericidal activity: Microbial reduction ≥104 against: Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus hirae, Escherichia coli.

EN 14561 - Assessment of the bactericidal activity as per the germ method - Phase 2, step 2. Microbial reduction ≥105 against: Pseudomonas aeruainosa, Staphylococcus aureus, Enterococcus hirae

EN 16615 - Assessment of the bactericidal and yeasticidal activity on non-porous surfaces, with mechanical action using wipes - Phase 2, step 2. Microbial reduction ≥105 against: *Staphylococcus aureus and* Enterococcus hirae. Microbial reduction ≥104 against: Pseudomonas aeruginosa and Candida albicans.

EN 17387 - Quantitative test for the evaluation of the bactericidal and/or fungicidal activity of chemical disinfectants used in medicine on on non-porous surfaces without mechanical action. - Phase 2, stage 2. Reference strains: Pseudomonas aeruginosa, Staphylococcus aureus, Enterococcus hirae

EN 17272 - Chemical disinfectants and antiseptics - Methods of airborne room disinfection by automated process -Determinat of bactericidal, mycobactericidal, sporicidal, fungicidal, veasticidal, virucidal and phagocidal activities.

EN 14348 - Assessment of the mycobacterial activity - Phase step 1. Microbial reduction ≥104 against: Mycobacterium avium. Mycobacterium terrae (tuberculocidal = M.terrae alone)

EN 14563 - Assessment of the mycobactericidal activity as per the n cell method - Phase 2, step 2. Microbial reduction ≥104 against: Mycobacterium avium, Mycobacterium terrae.

EN 1275 - Basic fungicidal activity - Phase 1, step 1. Microbial reduction ≥104 against: Candida albicans. Asperaillus brasiliensis or C. albicans alone (yeasticidal).

 $EN\ 1650$ - Assessment of the fungicidal activity - Phase 2, step Microbial reduction ≥104 against Candida albicans, Aspergillus brasiliensis or C. albicans alone (yeasticidal).

EN 13624 - Assessment of the fungicidal activity - Phase 2, step 1. Microbial reduction ≥104 against: Candida albicans, Asper brasiliensis or C. albicans alone (veasticial or hand disinfection)

EN 14562 - Assessment of the fungicidal activity as per the germ cell Phase 2, step 2. Microbial reduction ≥104 against Candida method albicans, Aspergillus brasiliensis or C. albicans alone (yeasticidal).

EN 14347 - Basic sporicidal activity - Phase 1. Microbial reduction ≥104 against: Bacillus subtilis, Bacillus cereus.

EN 13704 - Assessment of the sporicidal activity - Phase 2, step 1. Microbial reduction ≥ 103 against: Bacillus subtilis

EN 17126 - Quantitative suspension test for the evaluation of the al activity of chemical disinfectants used in the medical field (phase 2, step 1). Test on C. difficile or B. subtilis & B. cereus.

EN 14476 + A2 - Assessment of the virucidal activity - Phase2, step 1. Microbial reduction ≥ 104 against: *Poliovirus*, Adenovirus, Murine Norovirus and Parvovirus (only for tests at $\geq 40^{\circ}$ C and for textiles) and Vaccinia virus (only for hand disinfection)

EN 16777 - Quantitative test of non-porous surface without mechanical action for the evaluation of the virucidal activity of chemical disinfectants used in the medical field (phase 2/Step 2). Enveloped virus vaccinia virus. Non-enveloped virus Adenovirus & Norovirus.

Limited spectrum virucidal activity - The ability of a product to reduce the number of infectious virus particles using certain non-enveloped viruses as test organisms, specified in the relevant standard(s), under defined conditions, thus covering virucidal activity against these test organisms and, in addition, defined other nonenveloped virus(es) and all enveloped viruses.

Virucidal activity against enveloped viruses - The ability of a product to reduce the number of infectious virus particles using relevant enveloped viruses as test organisms, as specified in the relevant standard(s), thus covering activity against all enveloped viruses

EN 17111 - Assessment of the virucidal activity, Phase 2, step 2. Quantitative germ-holder assay for the evaluation of virucidal activity for instruments used in medicine. Enveloped virus: Vaccinia virus. Non enveloped virus: Adenovirus & Norovirus

EN 13610 - Assessment of the virucidal activity - Phase 2, step 1 Microbial reduction ≥104 against: Lactococcus lactis P001 & P008.







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