We protect
your health.

Dr. Schumacher

Avoid Infections –
Protect Patients

DECONTAMAN PRE antimicrobial full body wash
ASEPTODERM 2 % CHG skin disinfection

Increase targeted infection protection

Every infection we can avoid makes a difference. This means that every single measure that contributes to reducing the risk of infection is important. Anti-microbial whole-body washing and skin antisepsis before surgical procedures reduce the germ load on patients' skin and thus prevent nosocomial infections.

Coming into contact with germs is part of being human. The skin in particular is densely populated with a wide variety of germs. Most germs on the skin are not dangerous, but they actually fulfill important functions there. However, some microorganisms can cause infections when they enter the human body.

To prevent this from happening, it is advisable to reduce the germ load on the patient's skin in certain situations.

Dr. Schumacher GmbH has the right solutions ready for this task: The products of the DECONTAMAN PRE range for antimicrobial whole-body washing and the skin antiseptics ASEPTODERM 2 % CHG are based on the proven active ingredient chlorhexidine. They work reliably, are kind to the skin, and are easy to use.

content

Microorganisms
on the skin

Natural skin environment

Human skin is densely populated with microorganisms. These germs belong to the natural skin environment, the so-called resident flora. These are mainly fungi and bacteria. These microorganisms do not have a pathogenic effect on healthy skin, but rather perform various protective functions, as well as other things.

Germ spectrum and germ density

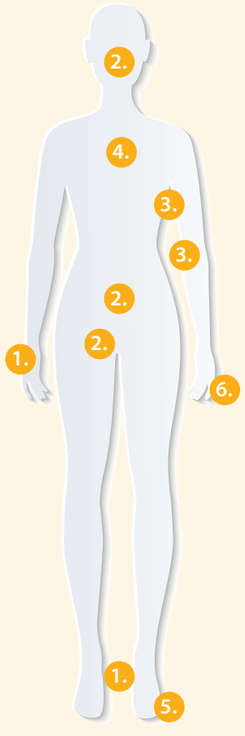
Germ spectrum and germ density on human skin differ according to age, gender, genetic predisposition, environmental conditions and skin region. In total, between 100 and 10 million microorganisms live on one square centimeter of skin.

Common germs on the skinflora

1. Staphylococci
often colonize moist and sebaceous skin areas where opposing surfaces touch, e.g. hands and feet

2. Corynebacteria
are found on large portions of the human skin. These germs colonize moist places such as the belly button, the inside of the nose, the groin and the crease between the buttocks particularly often

3. Proteobacteria
are often found in the armpits and the inside of the forearm



4. Propionibacteria
often colonize sebaceous skin regions, including, among others areas, the manubrium, the upper part of the sternum, and the back

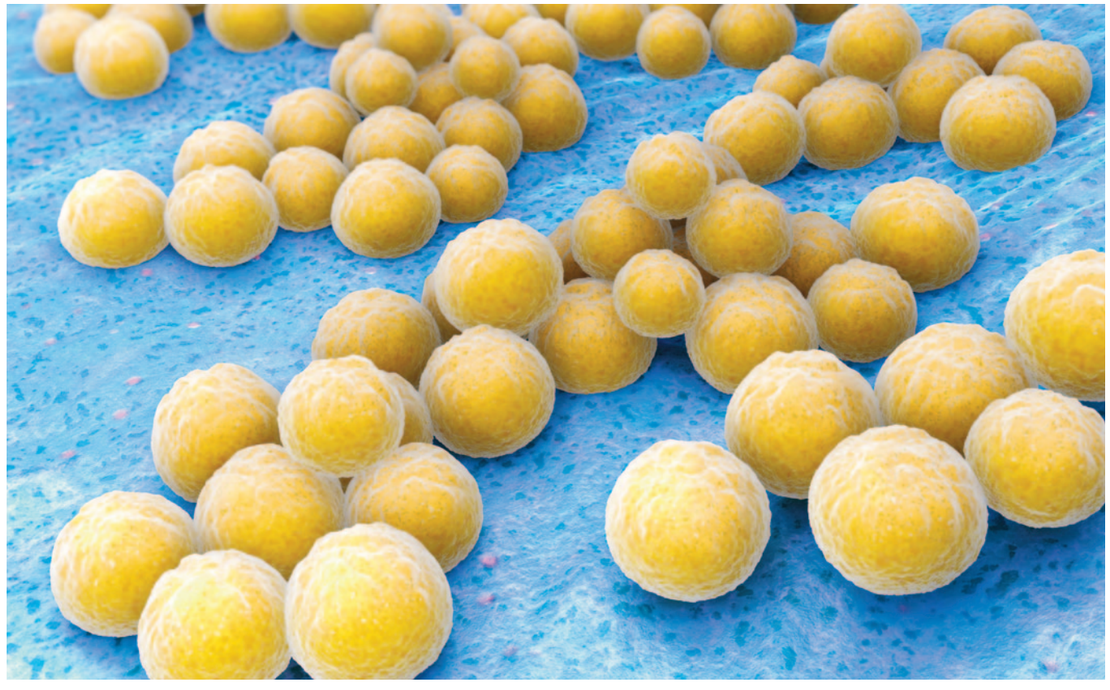
5. Micrococci
often colonize the spaces between the toes and the manubrium, the upper part of the sternum

6. Bacteroidetes
are often found in the interdigital spaces and on the inner side of the forearm.

Colonization
with MRSA and VRE

Decolonization measures

Multi-resistant pathogens often also colonize the skin and mucous membranes. Methicillin-resistant Staphylococcus aureus (MRSA) and vancomycin-resistant enterococci (VRE) are widely spread. Colonization with MRSA and VRE does not cause any symptoms in healthy people where their skin is intact. However, if the pathogens enter the body through entry points such as wounds or catheters, infections can occur.



Sources:

1. Grice EA, Segre JA. The skin microbiome Nat Rev Microbiol., 2011;9(4):244-253.
2. Empfehlungen zur Prävention und Kontrolle von Methicillinresistenten Staphylococcus aureus-Stämmen (MRSA) in medizinischen und pflegerischen Einrichtungen Empfehlung der Kommission für Krankenhaushygiene und Infektionsprävention (KRINKO) beim Robert Koch-Institut. Bundesgesundheitsbl 2014 · 57:696–732.

Antimicrobial
full body wash

Risk of vascular catheter-associated sepsis

Pathogens can enter the bloodstream from the skin via catheter access and this can lead to sepsis. Most of these vascular catheter-associated infections originate from central venous catheters (CVCs). At least 8,400 CVC-associated sepsis cases occur each year in intensive care units in Germany. [1]

Effect of antimicrobial
full body washing

Washing with chlorhexidine

Studies show that antimicrobial full body washing has a positive impact on reducing catheter-associated bloodstream infections (CABSI). Preparations based on the internationally widely used active ingredient chlorhexidine were used in the studies.

Study: Effects of daily chlorhexidine washes on hospital-acquired infections [2].

Patients:
7,727 across 6 intensive care units

Measure:
Daily full body washing with chlorhexidine cleansing wipes for six months

Result:
Daily washing with chlorhexidine wipes reduces the risk of bloodstream infections and lowers the nosocomial transmission rate of multi-resistant pathogens.

- **53%** fewer CVC-associated bloodstream infections
- **28%** fewer nosocomial bloodstream infections
- **23%** fewer multi-resistant pathogens overall
- **25%** less AER
- **19%** less MRSA

Study: Targeted vs. universal decolonization in intensive care units [3]

Patients:
74,256 across 74 intensive care units

Measure:
Classification of patients into 3 groups:
1. Group: MRSA screening + isolation
2. Group: MRSA screening + isolation + targeted decolonization
3. Group: Universal decolonization (no MRSA screening + decolonizing nasal ointment for 5 days + daily washing with chlorhexidine-saturated wipes).

Result:
Group 3 universal decolonization was more effective than targeted decolonization or screening and isolation.

- **37 %** fewer MRSA isolates
- **44 %** fewer bloodstream infections from any pathogens

Body washing with a chlorhexidine preparation reduces the germ load, including multi-resistant pathogens, on the skin and lowers the risk for dangerous bloodstream infections.

Sources:

1. Prävention von Infektionen, die von Gefäßkathetern ausgehen Teil 1 – Nichtgetunnelte zentralvenöse Katheter Empfehlung der Kommission für Krankenhaushygiene und Infektionsprävention (KRINKO) beim Robert Koch-Institut. Bundesgesundheitsbl 2017 · 60:171–206.
2. Climo MW et al. Effect of daily chlorhexidine bathing on hospital-acquired infection. N Engl J Med. 2013 Feb 7;368(6):533-42.
3. Huang SS et al. CDC Prevention Epicenters Program; AHRQ DECIDE Network and Healthcare-Associated Infections Program. Targeted versus universal decolonization to prevent ICU infection. N Engl J Med. 2013 Jun 13;368(24):2255-65.

Preoperative full body wash

Risk of postoperative wound infections

If the skin layer is cut during surgical procedures, skin germs can enter the body and cause postoperative wound infections (surgical site infection = SSI).

In Germany alone, it is estimated that there are approx. 225,000 SSIs in the inpatient setting. [1] Therefore, postoperative wound infections are among the most common nosocomial infections

Effect of preoperative full body washing

Washing with chlorhexidine and use of decolonizing nasal ointment

Several studies have investigated whether the risk of SSI can be reduced by reducing the germ load. This involved full body washes with chlorhexidine preparations along with other measures such as the use of a decolonizing nasal ointment.

Study: Prevention of postoperative wound infections in carriers of Staphylococcus (S.) aureus [2]

Patients:
917 patients tested positive for S. aureus and of these, 808 underwent surgery

Measure:
Preoperative decolonizing nasal ointment and an antimicrobial body wash with chlorhexidine for 1 week were administered

Results:
The rate of SSI associated with S. aureus was significantly lower in the decolonized patient group, 3.4%, compared with 7.7% in the placebo group.

→ **Approx. 55 %** fewer SSI

Study: Relationship between concentrated intervention and postoperative wound infections [3].

Facilities:
20 hospitals over 39 months on average

Measure:
-Decolonizing nasal ointment + chlorhexidine full body wash for 5 days preoperatively in patients who tested positive for MRSA or MSSA.

-Decolonizing nasal ointment + chlorhexidine full body wash the evening before and day of surgery preoperatively in patients who tested negative for MRSA or MSSA

Results:
101 SSI in 28,218 surgeries before intervention vs. 29 SSI in 14,316 surgeries during intervention

→ Significant reduction of SSI cases associated with S. aureus

Body washing with a chlorhexidine preparation combined with additional decolonizing measures contributes to the prevention of SSI.
The WHO also recommends body washing with (antiseptic) soap to prevent SSI. [4]

Sources:

1. Wissenschaftliche Dienste, Deutscher Bundestag, Postoperative Wundinfektionen Häufigkeit, Art und Präventionsstrategien, 2018.
2. Bode LG et al. Preventing surgical-site infections in nasal carriers of Staphylococcus aureus. N Engl J Med. 2010 Jan 7;362(1):9-17.
3. Schweizer ML et al. Association of a bundled intervention with surgical site infections among patients undergoing cardiac, hip, or knee surgery. JAMA. 2015 Jun 2;313(21):2162-71.
4. Allegranzi B et al. WHO Guidelines Development Group. New WHO recommendations on preoperative measures for surgical site infection prevention: an evidence-based global perspective. Lancet Infect Dis. 2016 Dec;16(12):e276-e287.

Washing of mobile and immobile patients

Rinse-off and leave-on products

While mobile patients can usually wash themselves, immobile patients are washed by nursing staff. This in turn results in different requirements for the form of application. The following two forms of application are available for antimicrobial body washing:

Rinse-off products

Preparations that come into contact with the skin only briefly and are rinsed off again with water at the end of the contact time. This form of application is particularly suitable for mobile patients who can wash themselves

Leave-on products

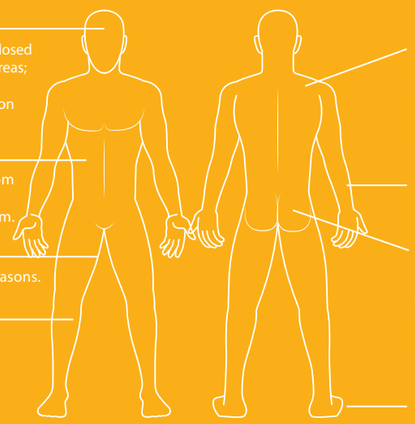
Preparations intended to be left on the skin. This form of application is recommended for washing immobile patients. These products impress thanks to the user-friendly application, as you don't need to use water or toiletries here.

Sequence during full body washing

Easy cleaning for immobile persons

FULL BODY WASHING

Patient washing and antimicrobial cleaning with ready-to-use wash wipes and gloves.



Face
Clean the face completely. The eyes must remain closed during washing. Please avoid the mouth and eye areas; do not allow the solution to flow into the eyes. During cleaning the ears, make sure that the solution does not flow into the ear.

Chest/stomach
Undress the upper body and wash the chest from the neck down to the belly button. At the same time, make sure that the lower body is kept warm.

Intimate area
The intimate area is then washed for hygienic reasons.

Legs
Undress the lower body. Wash the legs up to the thighs in the direction of the heart.

Recommended products:
DECONTAMAN PRE WASH,
DECONTAMAN PRE WIPES,
DECONTAMAN PRE CAP

Back
Sit the patient/resident up or turn them to the side and wash the neck and back from outer body area to inner body area. Dress upper body and position patient/resident on their back.

Arms
Starting with the fingertips, wash the hands, arms (paying special attention to the armpits) up to the shoulders.

Buttocks
Turn the patient/resident onto their side and wash the buttocks and anal area. Please avoid mucous membrane areas

Feet
Starting with the toes, wash the feet.

It's also important to remember:
The wipes must always be used on a patient-specific basis, i.e. one pack of **DECONTAMAN PRE WIPES** per patient.

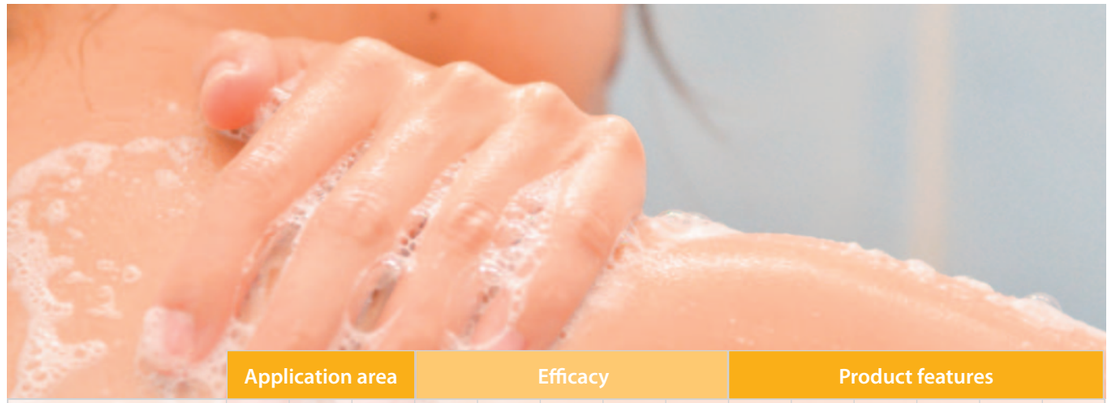
After washing as part of MRSA sanitation or postoperative washing, personal hygiene is also critical. A moisturizing care cream such as **DESCOLIND PURE LIGHT CREAM** from Dr. Schumacher is recommended for this.

DECONTAMAN range

for antimicrobial body washing

The compact **DECONTAMAN** range from Dr. Schumacher GmbH offers everything you need for antimicrobial full body washing of patients. The antimicrobial wash lotion **DECONTAMAN PRE SOFT** is an effective and particularly skin-friendly rinse-off product. The antimicrobial cleansing wipes **DECONTAMAN PRE WIPES** and the antimicrobial wash cap **DECONTAMAN PRE CAP** are practical leave-on products. They make washing easy and don't require water.

All **DECONTAMAN** products are based on the proven active ingredient chlorhexidine. The preparations are excellently effective against bacteria, especially also against multi-resistant bacteria such as MRSA, VRE and MRGN. An additional benefit is that the chlorhexidine that remains behind on the skin develops a long-lasting effect against pathogens.



	Application area			Efficacy					Product features						
	Antimicrobial cleansing	Hygienic hand washing	Antimicrobial hair washing	Bactericidal	Yeasticidal	Limited virucidal	MRSA	MRGN (z. B. Acinetobacter baumannii)	Microwave suitable	Alcohol-free	pH-skin neutral	Refatting	Perfume-free	Colorant-free
DECONTAMAN PRE SOFT	●	●	●	●	●	●	●	●		●	●	●	●	●
DECONTAMAN PRE WIPES	●			●	●		●	●	●	●	●			●
DECONTAMAN PRE CAP	●		●	●	●		●	●	●	●	●			●

DECONTAMAN PRE SOFT

Antimicrobial wash lotion

- **Short contact time: 60 seconds**
- **Fully effective against bacteria including multi-resistant pathogens, e.g. in MRSA sanitation**
- **bactericidal, yeasticidal, limited spectrum virucidal acitvity**

Fully effective and skin-friendly

DECONTAMAN PRE SOFT is ideal for simultaneously cleaning and decontaminating the skin and hands. The antimicrobial wash lotion is fully effective against bacteria, especially multi-resistant pathogens such as MRSA, VRE and MRGN. Mild surfactants and moisturizing substances ensure very good skin compatibility. The pH skin neutral wash lotion is free of fragrance and dyes.

Hygienic hand washing according to VAH/EN 1499

Wet hands using water and wash with 3 ml **DECONTAMAN PRE SOFT** for 60 seconds. Then rinse thoroughly with clean water.

Full body wash

Apply **DECONTAMAN PRE SOFT** either directly onto damp skin or onto a moistened sponge / washcloth. Clean skin thoroughly and rinse thoroughly with clear water after at least 30 seconds of contact time..

Benefits for practice

- **Can be used even with high fat or protein loads such as in the food industry**
- **Very economical to use**
- **Skin feels well cared for**

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Spectrum of activity and contact times			30 s	60 s
Bacteria & Yeast				
application recommendation for hygienic handwash*	EN 1499/VAH			•
iruses				
activity against enveloped viruses	EN14476	dirty conditions		•
Supplementary test results				
Bactericidal	EN 13727	dirty conditions	•	
Yeasticidal (C. albicans)	EN 13624	dirty conditions		•

**including phase 2 step 1 and phase 2 step 2 tests (quantitative suspension tests and quantitative carrier tests)

Use disinfectants safely. Always read label and product information before use.

100 g solution contain: 2 g chlorhexidine digluconate. 1,5 g 2-phenoxyethanol

Single unit	Delivery unit	Content	REF
Bottle	30	100 ml	00-532-001
Dosage bottle	20	500 ml	00-532-005
Dosage bottle	12	1 L	00-532-010
Canister	3	5 L	00-532-050

DECONTAMAN PRE WIPES

Antimicrobial cleansing wipes

- **Practical and quick to apply thanks to high-quality non-woven fabric, no rinsing necessary, microwave-safe**
- **For washing and disinfecting without water**
- **Fully effective against bacteria, including multi-resistant pathogens, MRSA-effective in 1 minute**

Cleaning without water

DECONTAMAN PRE WIPES allow antimicrobial cleaning of the body and is also kind to the skin. The large, ready-to-use wash wipes are made of durable, skin-friendly non-woven fabric. Rinsing with water is not necessary when using the wipes saturated with 2% chlorhexidine. This leaves a film of active ingredient on the skin, which achieves a 24-hour lasting effect against bacteria. The wipes can be stored at up to +40°C for up to 7 days to warm them up before use. **DECONTAMAN PRE WIPES** are particularly suitable for full body washing of immobile patients.

Full body wash

Remove wipes from the package and rub the skin area to be cleaned. Use a new wipe for each skin region here.

Benefits for practice

- **Can be used in the microwave (600 watts - 20 seconds)**
- **Immediately ready for use and therefore time-saving**
- **No reprocessing of washing keys, washcloths, etc.**

Spectrum of activity and contact times			1 min	3 min	5 min
Bacteria and yeasts					
application recommendation for antimicrobial patient wash*	EN 1499 (modified)	dirty conditions			•
bactericidal	EN 13727	clean conditions	•		
		dirty conditions			•
yeasticidal (C. albicans)	EN 13624	clean conditions		•	
		dirty conditions		•	

including phase 2 step 1 and phase 2 step 2 tests
(quantitative suspension tests and quantitative carrier tests)

Use disinfectants safely. Always read label and product information before use.

100 g solution contain: 2 g chlorhexidine digluconate.

Single unit	Delivery unit	Content	REF
Package	24	10 wipes 20 x 30 cm	00-530-T010

DECONTAMAN PRE CAP

Antimicrobial wash cap

- **Practical and time-saving thanks to need-based cap application Cap application, no rinsing necessary, microwave-safe**
- **For antimicrobial hair washing without water**
- **Fully effective against bacteria, including multi-resistant pathogens, MRSA effective in 1 minute**

DECONTAMAN PRE CAP allows easy and thorough antimicrobial cleaning of the hair and scalp. The washing cap is particularly suitable for washing immobile patients. Rinsing with water is not necessary after using the cap saturated with 2% chlorhexidine. **DECONTAMAN PRE CAP** is made of latex-free, durable material and can be pre-warmed if necessary.

Cleaning the hair and scalp

Remove the cap from the package and unfold. When positioning the cap, make sure that all the patient's hair is covered. Then carefully massage the solution and leave it in for at least 5 minutes.

Benefits for practice

- **Pleasant application makes patients feel more comfortable**
- **No use of running water necessary**
- **User-friendly application facilitates workflows for staff**

Spectrum of activity and contact times			1 min	3 min	5 min
Bacteria and yeasts					
application recommendation for antimicrobial hair wash*	EN 1499 (modified)	dirty conditions			•
bactericidal	EN 13727	clean conditions	•		
		dirty conditions			•
yeasticidal (C. albicans)	EN 13624	clean conditions		•	
		dirty conditions		•	

including phase 2 step 1 and phase 2 step 2 tests
(quantitative suspension tests and quantitative carrier tests)

Use disinfectants safely. Always read label and product information before use.

100 g solution contain: 2 g chlorhexidine digluconate.

Single unit	Delivery unit	Content	REF
Package	30	1 cap	00-530-H001

Infection prevention
before invasive procedures

The severing of the natural skin barrier during invasive procedures carries the risk that germs located on the skin will reach deeper tissue layers. The consequence: infections with sometimes life-threatening consequences. Disinfection of the skin area before the procedure, in conjunction with other barrier measures, can significantly reduce the risk of infection.

Minor procedures

In principle, minor procedures such as injections, incisions, punctures, blood sampling and the insertion of vascular catheters also pose a risk of infection. For example, during injections or blood sampling, microorganisms of the skin flora can enter the body with the punch cylinder..

Use disinfectants safely. Always read label and product information before use.

Example skin antisepsis for blood collection

Spray disinfectant onto the selected puncture site. The exposure time recommended by the manufacturer must be observed. Optionally, the skin antiseptic can also be spread with a cellulose swab. The corresponding skin site must be completely dry before blood collection. Caution: Do not palpate the skin site after disinfection.

The colorless version of the skin antiseptic ASEPTODERM 2 % CHG is recommended for use in minor procedures.

Ward off
surgical site infections

The risk of infection increases with the type and duration of the procedure. Postoperative wound infections (SSI) are among the most common infections associated with medical treatment.

The European Center for Disease Prevention and Control (ECDC) estimates that the proportion of postoperative wound infections ranges from 0.5 to 10.1%, depending on the type of surgical procedure. To prevent these nosocomial infections, the effect of preoperative skin antisepsis should be prolonged, and if possible, throughout the entire procedure from covering the surgical field to wound closure.

WHO recommends 2% chlorhexidine chlorhexidine-isopropanol solution

Meta-analyses of the efficacy of various antiseptic solutions show that an alcohol base containing chlorhexidine gluconate (CHG) achieves a remanence effect that is clearly superior to other alcoholic solutions containing, for example, povidone-iodine.

The World Health Organization therefore recommends the use of a 2% chlorhexidine-isopropanol solution such as **ASEPTODERM 2% CHG** prior to surgical procedures.

The advantages of ASEPTODERM 2 % CHG:

- **Complies with WHO guideline for prevention of SSI**
- **Comprehensive spectrum of activity**
- **Very good remanence effect of up to 3 hrs. according to EN 12791**
- **Short exposure times**
- **Very good biocompatibility***
- **In colored version additional marking of the surgical field**

*No negative influence on metabolism in direct contact with living tissue

Sources:

1. European Center for Disease Prevention and Control (ECDC). Healthcare-associated infections: surgical site infections. Annual Epidemiological Report for 2017
2. Kramer A, Heidecke CD. Präoperative Hautantiseptik und Hautschutz. Trauma Berufskrankh 2015.[Suppl 2]: 17:322–329
3. World Health Organization. Surgical site infection prevention. Key facts on surgical site skin preparation. https://bit.ly/37KXFWi. Last access 12-04-2022

Products for skin disinfection

3 h
sustained effect

ASEPTODERM® 2 % CHG

Ready-to-use alcoholic skin disinfectant

- **Colourless skin disinfection**
- **Based on 70 % alcohol and 2 % chlorhexidine**
- **Free from perfume, aldehydes, phenols and QAC**
- **Gentle to the skin**

100 g solution contain: 63,1 g 2-Propanol (70% Isopropanol v/v), 2,26 g Chlorhexidine Digluconate (CHG).

Container size	DU	REF
150 ml pocket-sized bottle	30	00-520-001EXP
250 ml spray bottle	20	00-520-0025EXP
1 l bottle	12	00-520-010EXP

Use disinfectants safely. Always read label and product information before use.

3 h
sustained effect

ASEPTODERM® 2 % CHG COLOURED

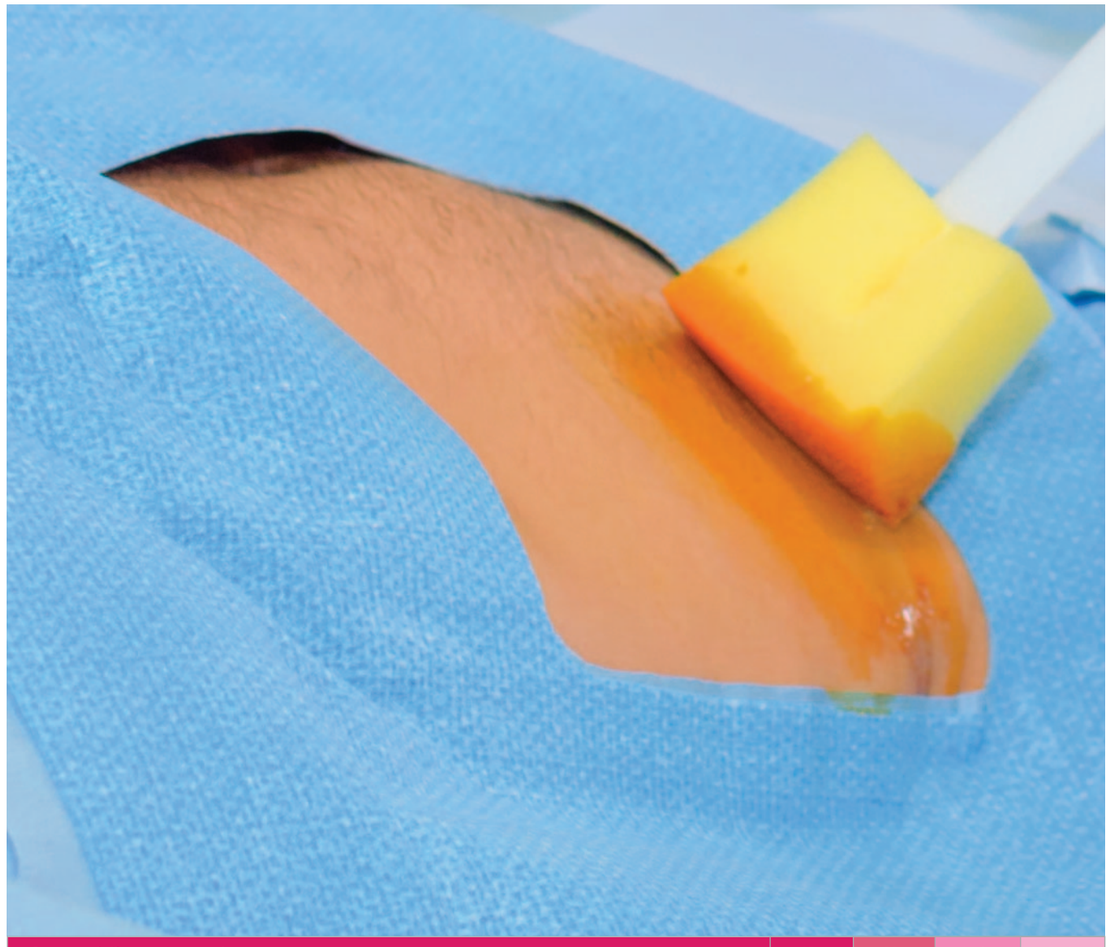
Ready-to-use alcoholic skin disinfectant

- **Based on 70 % alcohol and 2 % chlorhexidine**
- **Marks the area on the skin that has been disinfected**
- **Free from perfume, aldehydes, phenols and QAC**
- **Gentle to the skin**

100 g solution contain: 63.1 g (70 % V/V) 2-propanol, 2 % Chlorhexidine Digluconate (w/v).

Container size	DU	REF
150 ml pocket-sized bottle	30	00-520C-001EXP
250 ml spray bottle	20	00-520C-0025EXP
1 l bottle	12	00-520C-010EXP

Use disinfectants safely. Always read label and product information before use.



Spectrum of efficary and contact times			15 s	30 s	1 min	3 min
Skin antisepsis / surgical hand rub with 3-hour sustained effect	EN 12791					•
Bacteria and yeasts						
bactericidal	EN 13727	clean conditions			•	
	EN 1276	clean conditions	•			
yeasticidal (Candida albicans)	EN 13624	clean conditions			•	
	EN 1650	clean conditions	•			
tuberculocidal (M. terrae)	EN 14348	clean conditions		•		
Mycobactericidal (M. avium and M. terrae)	EN 14348	clean conditions			•	
Virus						
active against enveloped viruses	EN 14476	incl. HBV, HIV, HCV	•			

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