schülke

Surface hygiene:
Brilliant protection on all levels.

Measures, products, methods

the plus of pure performance

Surfaces are the hands of the hospital.

More than 100 years of competence in hygiene and preservation ...

1892 | Successful fight against the cholera epidemic in Hamburg with lysol®

1913 | Market introduction of sagrotan®, the first brand name disinfectant for domestic use

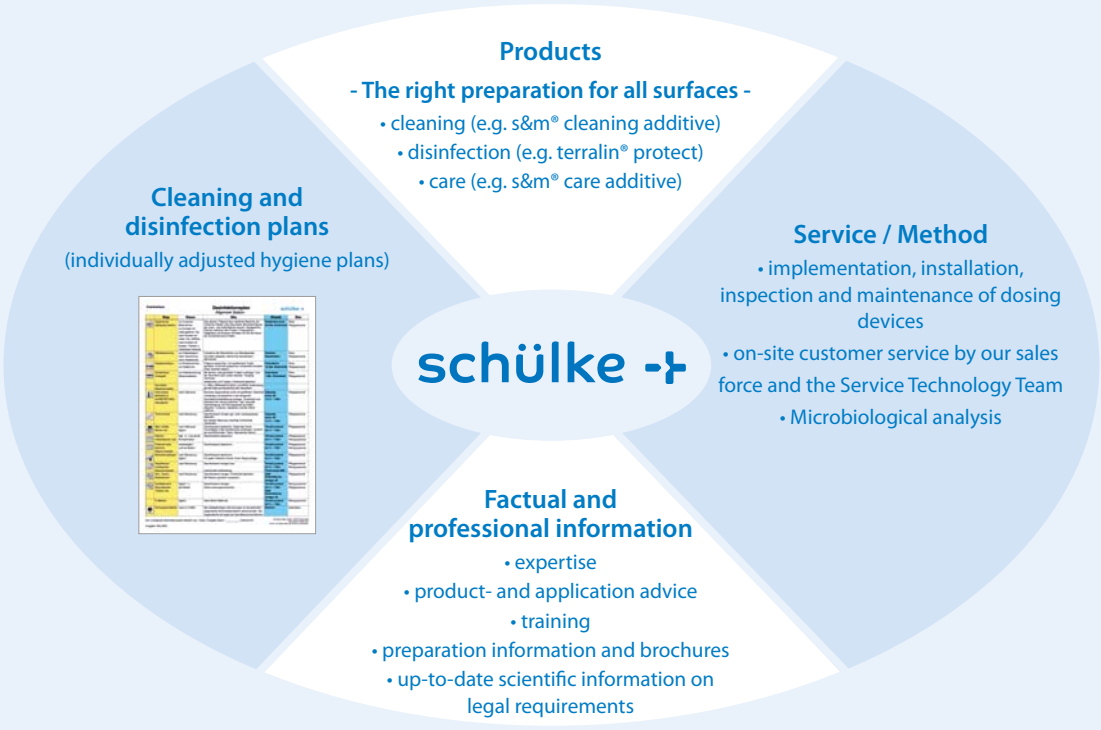
1975 | gigasept® the first disinfectant against HBV

The schülke surface concept.

Offers professional support in all areas and makes survival difficult for hospital germs.

Surface hygiene is one of the most important measures against nosocomial infections in medical facilities. Our surface concept has been developed according to strict economical, ecological and social aspects.

schülke focuses on sustainability:
Social responsibility for our employees, resource efficiency and environmental protection as well as product development and trade. Our "Report On Sustainability 2009", which can be requested from our office, offers a detailed description.



Contents

1980 | kodan® – skin-friendly antiseptic for use, for example, prior to injections

1981 | Launch of mikrozid®, the leading quick disinfectant for the medical field

1982 | Launch of perform®, the first Europe-wide active oxygen based concentrate for surfaces disinfection.

Prophylaxis covering all surfaces.

Disinfection and cleaning of hospital surfaces.

Today, a maximum infection prevention is a must in all medical facilities and should meet the highest requirements, in order to protect staff and patients.
Microorganisms can survive several months on surfaces, which is likely to lead to a contamination of other surfaces, e.g. due to contact with hands and skin. In order to prevent the transfer of micro-organisms, cleaning and disinfection of surfaces is necessary.

Survivability of relevant pathogens on surfaces

Bacteria	Pseudomonas aeruginosa	up to 16 months
	Escherichia coli	up to 16 months
	Staphylococcus aureus incl. MRSA	up to 7 months
	Clostridium difficile (Spores)	up to 5 months
	Mycobacterium tuberculosis	up to 4 months
	Enterococcus spp. incl. VRE und VSE	up to 4 months
Fungi	Candida albicans	up to 4 months
Viruses	Norovirus	up to 7 months
	Vacciniavirus	up to 5 months
	Adenovirus	up to 3 months
	HIV / HBV	up to 7 days

Source: BMC Infectious Diseases 2006; 6:130: How long do nosocomial pathogens persist on inanimate surfaces? A systematic review. (A. Kramer, I. Schwebke, G. Kampf)

The schülke hygiene circle

The disinfection and cleaning of surfaces is a crucial part of the hygiene circle.

Apart from the disinfection of surfaces, the disinfection of hands, skin and instruments is also part of the hygiene circle.

Cleaning the surfaces includes the removal of dirt, dust and all other visible contaminations – however, it is not a sufficient measure to minimise infection risks.

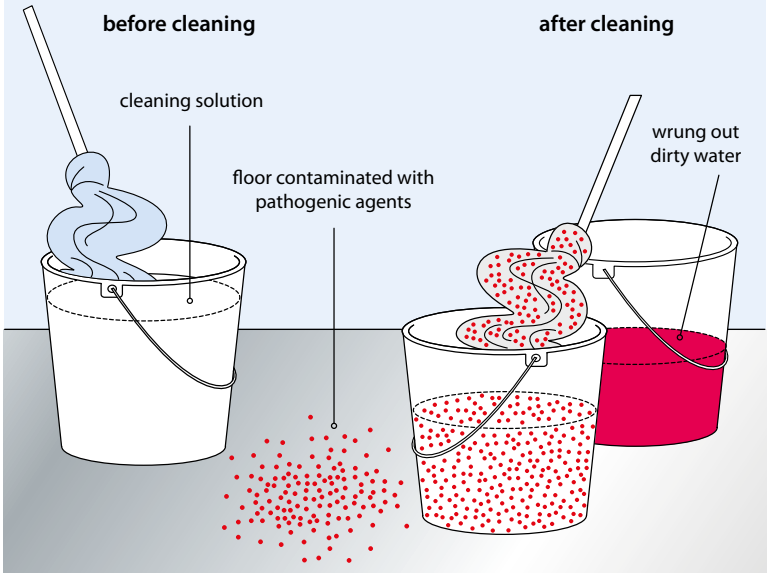
In contrast to that, disinfection works extremely well preventing the spread of germs on floors and other surfaces, counteracting cross-contamination and reducing the number of pathogenic germs by as much as 99.999 %.

Optimal solution: cleaning disinfection!

Germ-free prospects for all surfaces in hospitals!

Today, the infection risk determines the method. Medical facilities and nursing homes are especially affected by nosocomial infections that represent health risks not only to patients, but potentially also to the staff. Cleaning alone is not enough; cleaning disinfection is the method of choice!

Contamination of cleaning materials and cleaning solutions



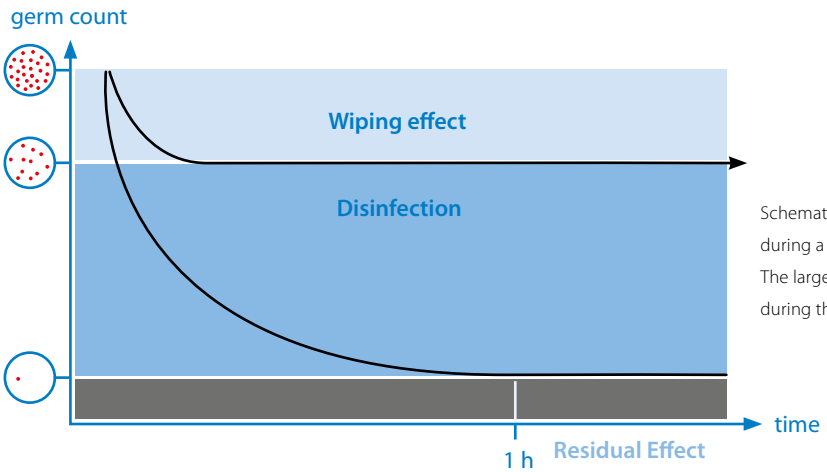
If material and solution are not replaced frequently, previously uncontaminated areas become contaminated when being cleaned.
In accordance with RKI-recommendation cleaning and disinfection procedures must be organized, in a way that cross-contamination is avoided.

Cleaning may take away visible contamination from hospital surfaces, but does not kill pathogenic germs. In fact, some ingredients of cleaning agents can foster certain bacteria leading to the formation of spores e.g. *Clostridium difficile*. Furthermore, in case of only using cleaning agents, there is a risk of contaminating the cleaning solutions and utensils with pathogens (see fig. on the left).

Disinfection, on the other hand, causes a discontinuation of potential infection chains: appropriate products and methods can kill existing pathogen agents. The risks of transfer and contamination of other surfaces can thus be reduced by almost 100 %.

Cleaning and disinfection in one application can be achieved with products that were specifically developed for this combined purpose – e.g. terralin® protect. When using these products the possibility of cross contamination is excluded.

Course of reduction of germ count



Schematic depiction of germ reduction during a disinfection process.
The largest germ reduction takes place during the first minutes.

Surface disinfection for all areas.

Requirements may change with the increased risk of infection.

Different hospital areas harbour different risks!
This is an important consideration for surface disinfection as, depending on area and risk, different procedures have to be used!

Cleaning and disinfection according to risk areas

Areas*	non treatment areas/low risk of infection	moderate risk of infection	high risk of infection	colonised or infectious patients	risk of infection to staff
Example pictures					
Examples	• stair cases, halls, administration, offices • cafeterias • class rooms • technical areas	general wards, outpatient areas: • radiology • physical therapy • bathrooms • dialysis • maternity • intensive care/ observation	surgical departments, operating theatres, units for: • special intensive care, such as long-term ventilation (> 24 h), severe burn victims • transplantations (such as KMT, stem cells) • haematoma oncology (for patients under aggressive chemotherapy) • neonatal wards	isolation area / care • functional areas in which the above mentioned patients are being treated	microbiolog. laboratories, pathology, disposal, unclean areas in - laundries - functional units, such as CSSD
schülke recommendation cleaning/ disinfection	cleaning as a minimum	cleaning and disinfection			

*Source: RKI-recommendation – Hygiene requirements for cleaning and disinfecting surfaces, Federal Health Gazette – Health research- Health protection 2004, 47:51-61

Surface disinfection for all requirements.

Routine, rapid and final disinfection: different situations call for different measures and products.

All areas, without exception, that are contaminated with bodily fluids, such as blood, pus and excrement have to be disinfected in a targeted way. In general, the difference between routine disinfection and targeted infection is:

Routine disinfection – also known as prophylactic or maintenance disinfection – is an ongoing disinfection measure undertaken during the course of a hospital's everyday routine. **Part of it is rapid disinfection.**

Targeted disinfection is used when specific situations call for targeted measures – and thus also for specific disinfectants.

This includes:
Room disinfection: extensive disinfection of all surfaces and objects in an enclosed room.

Final disinfection: preparing complete rooms and/or areas for the next patient/occupant if the area was previously occupied by infected/colonised patients.

Outbreak disinfection: in the case of epidemics or increased occurrence of pathogenic agents, the same measures as with final disinfection apply, but should be extended to include other areas such as bathrooms, kitchens and canteens.

Disinfecting measures: type, extent, method and product

Routine wipe disinfection or maintenance cleaning	Rapid disinfection	Final disinfection	Outbreak situation/officially ordered decontamination (§18 IfSG*)
floor surfaces **all work surfaces** **all contact surfaces** bed frames | bed table | shelves | medical equipment | commode | stretchers | changing table | door knobs | keyboards	**surfaces close to patients** **e.g. between two operations** good moistening properties no residues/streaks	**all surgical departments** accessible floor surfaces, potentially soiled or contaminated surfaces all accessible surfaces and objects (furniture, walls, floors) in accordance with certain infection events (e.g. MRSA, Tb)	**all contaminated surfaces** (contact surfaces close to patients) including bathtubs and hospital kitchens
wipe disinfection	wipe disinfection e.g. with disposable wipe	wipe disinfection	**In case of a massive contamination with organic material (e.g. blood):** Remove visible material with disposable disinfectant wipe. Afterwards, disinfect the surface as usual. **In case of slight contamination:** wipe disinfection
e.g. aldehyde-free product – terralin® protect – (0.5 % – 1h)	e.g. alcohol based product – terralin® liquid, antifect® N liquid, mikrozid® wipes – (ready-to-use – 1 min)	– e.g. terralin® protect – (0.5 % – 1h)	(acc. §18 IfSG*): only RKI-listed products (a. procedures) e.g. active oxygen based product – perform® – (3 % – 4 h) *German Infection Protection Act
Routine disinfection	**Routine disinfection**	**Targeted disinfection**	**Targeted disinfection**

Contact time and method.

Contact time – generally not a matter of time!

Again and again, the question arises whether the contact time stated on the product has to be observed: these contact times refer to the microbiological efficacy of a product that has been evaluated within the framework of a test method. Tests show that, at the instant of drying, the process of killing germs is nowhere near being over: moisture may be necessary for the active agents of the disinfectants to begin to fight germs, but the disinfecting effect still remains after drying.

On principle, the contact time has to be observed; however, in the case of routine disinfections, surfaces can be used again immediately after having visibly dried off.

Exceptions:
In case of an epidemic, however, observing the contact time is required. This is also true for the surfaces that need to be final-rinsed with water, e.g. bathtubs or surfaces in kitchen areas.

Wherever it is possible to wipe, do not spray!

As has been proven, wipe disinfection is more thorough and comprehensive than spray disinfection. This is due to the fact that spraying does not yield a comprehensive effect. Spray disinfection is advantageous, however, in case of uneven, angled and/or hard to reach surfaces. But: If possible, wiping afterwards should take place so that the product is distributed over the entire surface.

Criteria: spraying and wiping

Spraying	Wiping
angled, uneven, hard to reach surfaces	low health risk (wiping does not result in harmful aerosols that can be breathed in by the staff)
ready-to-use	comprehensive disinfection
durability (container)	additional mechanical removal of pathogens

If spraying is necessary, do it methodically!

If spraying is necessary, we recommend the 16-sides-cloth folding method:
Thus you obtain the maximum wiping surface for the disinfection. Furthermore, you are using a hygienic and ecological method that is also economical.

Source: Guide for the Practice Commercial Cleaning 2008 (M. Lutz)

Surface disinfection follows a method!

Hospital surfaces like it sufficiently wet!

In practice, the wet-wipe-method has proven useful.

In one-step mopping, the floor is being cleaned with a well wrung mop. This means that the area being disinfected may not have been moistened sufficiently and, after drying, residual disinfectant solution may remain on the floor.

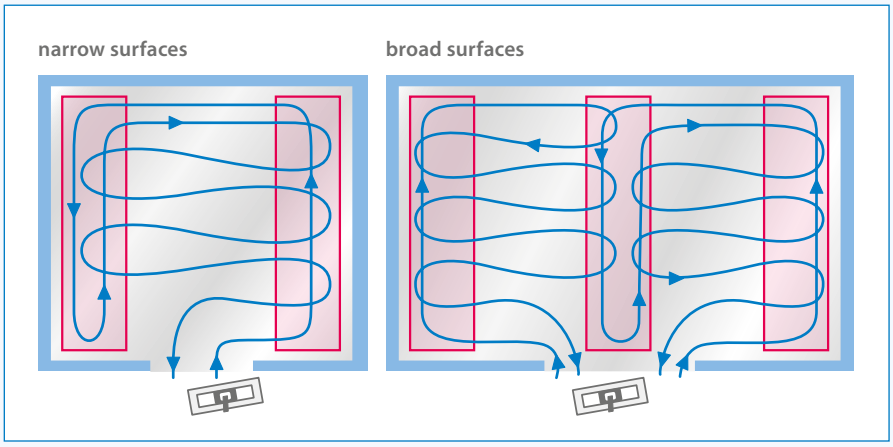
Optimum efficacy can only be achieved if the floor is sufficiently moistened.

The best method:
the 2-step wet-wipe-method
1. step: apply the disinfectant solution with a well soaked mop, which softens and loosens adhesive contaminations. Within 2 – 5 minutes, the active agent of the disinfectant solution attaches to the bacteria and the remaining partially removed dirt.

2. step: the excess disinfectant solution is removed with a second mop – and with it the bacteria. Any remaining moisture needs a maximum of 5 minutes to dry.

The 2-step wet-wipe-method ensures, that surfaces are sufficiently moistened and disinfectants are used to their maximum efficacy.

The 2-step wet-mopping method



Narrow surfaces: Apply disinfecting solution at the edges first, and then clean the middle of the room in a figure of 8 way continuously absorbing disinfectant solution from the edges.

Absorb waste water with a wrung, at most damp cleaning cloth, starting at the edges and progressing to the middle. Lastly, remove coarse dirt with a cloth.

Broad surfaces: Move mop along the edges and then through the middle.

Absorb disinfectant solution repeatedly from the edges! Clean the middle of the right part of the room in a figure of 8 way. Then clean the left edge and afterwards the left part of the room in a figure of 8 way. Remove coarse dirt. Generally, start mopping from the corner of the room diagonally opposite the door.

Inventory has to be disinfected, too.
Gently rub the surface with a disinfectant soaked cloth, thus loosening and absorbing adhesive contamination and germs. Do not dry the cleaned surfaces, allow them to dry naturally!

Important for all cases and methods:
1. Working solution of disinfecting agents can be used for a max. of one working day only.
2. In case of a significant contamination with organic material (secretions, blood, faeces, etc.), the material must first be removed with a cleaning cloth soaked with disinfectant. Then, disinfect as usual. Wear disposable gloves. Dispose of cloth immediately after use.

Problem found, problem solved!

Smears, streaks, discolouration etc. indicate problematic areas.

Inaccurate cleaning leaves smears/streaks. These smears show where contamination with pathogenic germs remains and, as such, this can be counteracted immediately.

When cleaning in a circular motion, corners and edges of the area to be disinfected are insufficiently moistened. Unwanted interaction between detergent and disinfectant can arise if the cleaning cloth/ mop is not sufficiently rinsed.

Causes of smears

- Fine dirt/dust was not removed by initial dust binding cleaning
- one-step wet mopping was used too frequently, thus causing the development of layers of residues
- Cleaning water was not replaced often enough
- Mop/cleaning cloth has been in use for too long, has been washed/rinsed incorrectly
- Using too much or not enough of the agent
- Using warm water

Counteractive measures

- Check cleaning method and adjust, e.g.
  - multi-step method
  - shorten intervals between cleaning
  - appropriate dosage
  - choose different kind of cloth/mop
  - train staff
- If applicable, intense cleaning with 4 % s&m® cleaning additive, afterwards, continue adding 0.5 % – 1% cleaning additive

Discolouration, spots and damage
Spilled disinfectants, drugs or body fluids can cause discoloration or other damages to the surfaces. If possible, remove spilled liquid/urine immediately. In case of dispensers of hand sanitisers, we recommend using a drip catcher (e.g. dish holder by schülke).

Foam formation

- Ensure correct procedure is adopted: first fill bucket with water, then add disinfectant in desired concentration.
- If foam forms, decrease the distance between tap and bucket.
- If tap contains an aerator, remove it.
- In case of manual dosing, add the disinfecting agent at the end.

It’s the content that matters!

Active agents by schülke and their effectiveness.

Active agents of cleaning supplies

Active agent	Roles/functions
Surfactant	• surface active substances | decrease surface tension | improve wetting ability and capillarity • emulsify care products during basic cleaning | disperse dirt and keep them in suspension • cationic and amphoteric surfactant: germicidal cleaning possible
Acids and acid splitters	• remove mineral dirt (rust, lime, urine scale, cement residue, etc.) • partly remove natural colouring (e.g. fruit stains/beverage stains)
Alkali and alkaline salts	• remove protein-containing contaminations • saponify oils, greases, waxes and many care components | have a cleaning effect
Complexing agent	• disable minerals causing hardness of water
Dissolving agent	• stabilisation of substances in aqueous solutions (e.g. alcohols) • dissolving agents are also part of basic cleaners and dissolve residues sticking to surfaces
Oxidants	• have a bleaching effect due to destruction of natural colouring (fruit and beverage stains) • many oxidants can be used for disinfection
Reducing agent	• for stain removal; destroy natural colouring
Corrosion inhibitors	• inhibit the corrosion of metals
Abrasives	• fine abrasive particles (mechanical support of the cleaning process)

Active agents of disinfectants

Active agent	Roles/functions
Alcohols	• aliphatics (ethanol & isopropanol) • aromatics (phenoxyethanol) • alcohols have a broad effect spectrum, only bacterial spores are not being inactivated.
Guanidine	• guanidine and biguanidine – usually in combination with other active agents • expansion of effect spectrum
Aldehydes	• formaldehyde, glutardialdehyde and succindialdehyde • broad effect spectrum (fungi, bacteria, viruses, mycobacteria and bacterial spores) • versatile use, usually bio-degradable and very gentle to material
Formaldehyde depots	• gradually release chemically bound formaldehyde only when being used
Active oxygen	• basis are peroxide compounds, peracetic acid, hydrogen peroxide | effect spectrum usually very broad
Amphoteric surfactant	• depending on pH(-)value, compounds with cationic and anionic character • cationic form is frequently used | active against fungi

Source: according to M. Lutz – Cleaning and Hygiene Technology

It all depends on the protection!

Even high quality products are not free from irritants and hazardous substances.

Protect your patients: if possible, perform surface disinfection only in aired rooms; observe accident prevention regulations (“Basics of prevention” BGV A1) during and after applying the agent.

Protect yourself: avoid contact with the skin; wear protective gloves (BRG 250/TRBA 250/ DIN EN 374), disposable gloves suitable for constant use with disinfectants, working shoes and, if handling concentrates when diluting or bottling, also wear safety goggles. In case of rubbing and wipe disinfection, wear waterproof aprons and shoes and, if necessary, also face and head protection.

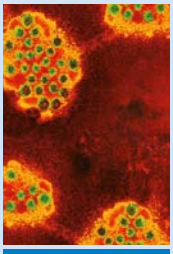
When handling chemicals: never mix, store separately and in original containers and dispose of safely! Always read label first, observe concentration specifications, use cold water only, first water – then the chemicals! Use dosage device if possible, wash hands after each application, do not smell the concentrates, do not eat, drink or smoke in the vicinity of disinfectants.

Consistent surface disinfection with suitable products ...

So far, disinfection is the only effective measure against hospital germs!

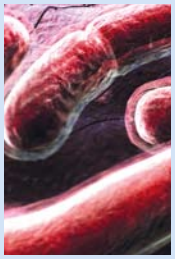
In recent years, nosocomial infections in medical facilities, foster and nursing homes have increased alarmingly. Not only does this cause life threatening effects on the health of patients, it also increases treatment and maintenance costs.

Important hospital germs and measures

Pathogens	Description	Transfer	Cleaning and disinfection of surfaces
 Noro	Noro viruses are the main cause for non-bacterial gastro-intestinal infections. These viruses are particularly resistant and can remain contagious on surfaces for more than a week. Over the last six years, the number of outbreaks increased 20 fold and, in Germany, has now reached 200,000 infections per year.	The virus is transmitted faecal-orally, after the viruses have been excreted via stool or vomit.	Routine disinfection of surfaces close to patients; if necessary, disinfect further surfaces. Preferably use preparations with proven efficacy (FCV and MNV). **Our effective problem solvers:** • terralin® liquid • antifect® N liquid • terralin® protect • perform®
 Clostridium difficile	Clostridium difficile is a spore forming bacterium that causes different forms of diarrhoea and intestinal inflammations with serious effects. It is the fifth most commonly transmitted hospital infection. Recently, there have been severe outbreaks where the mortality rate of the reported 88 cases in Germany in 2007 was 54 %.	It has been proven that transfer can occur via direct or indirect contact of the hands with contaminated objects (faeces, or rather faecal contamination of toilets bed linens, bed frames, blankets, phones, etc).	Disinfection of all surfaces in patients' rooms in order to get rid of spores through careful cleaning. For disinfection, preferably use preparations based on oxidising active ingredients. RKI-listed products with a confirmed sporicide are also suitable. **Final disinfection** Following a period of isolation: thorough cleaning disinfection with sporicidal surface disinfectants. **Our effective problem solvers:** • perform® • terralin® PAA
 MRSA	MRSA (methicillin-resistant Staphylococcus aureus) is a form of bacteria that is resistant to otherwise highly effective antibiotics, thus making it hard to treat. In Germany, about 50,000 people become infected with MRSA every year, about 1,500 of whom die.	From skin to skin, especially in case of frequent and intense contact. Transfer is also possible via contaminated surfaces (door knobs, etc).	Disinfect (wipe disinfection) surfaces in the vicinity of patients (bed frame, bed table, wet area, door knobs etc.) at least once a day; if necessary, disinfect other contaminated surfaces, as well. Wipe-disinfect all contact surfaces of equipment used on patients (e.g. buttons of ultrasonic devices, ECG-electrodes and ECG cables) after use, as well as before removing them from the room. **Our effective problem solvers:** • mikrozid® AF Tücher • antifect® AF (N) • terralin® protect • terralin liquid • perform® • terralin® PAA

... reduces hospital germs by as much as 99.999 %

Important hospital germs and measures

Pathogens	Description	Transfer	Cleaning and disinfection of surfaces
 TB	Tuberculosis is a bacterial infection that mainly attacks the lung. More than 2 million people worldwide die of tuberculosis every year.	Infection with tuberculosis usually happens via droplet infection. Mycobacteria do not only remain infectious in the air for hours, but also on hands, skin, surfaces and surgical instruments.	Routine disinfection of surfaces close to patients; if necessary, disinfect further surfaces. Daily cleaning disinfection of floors and surfaces whilst the patient is considered contagious.[1] After discharge, disinfect room with aldehyde containing disinfectants with tuberculosis effective agents using the rubbing-wiping method. **Our effective problem solvers:** • terralin® protect • perform® [1]
 VRE (vancomycin resistant enterococci)	VRE usually populate the lower gastro-intestinal tract. Apart from patient-related risk factors (e.g. immunosuppression), the resistance against antibiotics plays a major role.	VRE can be found in high concentrations in faeces. Hands are a major factor in the transfer and spread of contamination.	**Continuous disinfection:** Clean and disinfect contact surfaces, furniture, care, treatment and examination devices (e.g. stethoscope, thermometer, washbowls) at least once a day. **Final disinfection:** Disinfect the room, using the scrubbing-wiping method, after the patient has been released from isolation or has been discharged. Do not reassign room before end of contact time (1 hour)! Discard all laundry (e.g. operation shirt, molleton) and patient related medication from within the immediate vicinity of the patient's bed (1 m). **Our effective problem solvers:** • terralin® protect • perform®
 ESBL (extended spectrum ß-lactamases)	ESBL is an enzyme that can be formed by numerous gram negatives bacteria and which is resistant to a broad spectrum of antibiotics. Currently, more than 340 mutations are known.	Transfer via direct and indirect contact with faeces, infected wounds and pathogen-containing secretion.	

TB: Source: according to Hyg Med volume 31. 2006, p. 84 – 92 (N. Wischnewski and M. Mielke)

Brilliant results with schülke products.

All-round protection for surface disinfection.

schülke has what germs fear and medical facilities value: high-quality products for the daily and thorough disinfection of surfaces, even for critical and sensitive areas, so that nosocomial infections and pathogenic agents cannot find a contact surface!
The accredited schülke products are specifically formulated for their field of application and have been thoroughly tested for their efficacy. During the development of these products, we focus not only on efficacy, but also on industrial safety and user friendliness, which we achieve by carefully choosing raw materials and active agents.
These properties make schülke surface products your proven partner in the various fields of applications within daily medical practice.

Effective solutions for the wipe disinfection

Wipe disinfection: routine and targeted disinfection in all areas

Effective ranges	antifect® AF (N)	terralin® protect	perform®	terralin® PAA	Disinfection-Cleaner AF
tested by DGHM/VAH and/or EN	○	○	○	○	○
Virucidal against enveloped viruses (incl. HBV, HCV, HIV)	○	○	○	○	○
Bacteria	○	○	○	○	○
Fungi	○	○	○	○	○
MRSA	○	○	○	○	○
Polyoma SV 40	–	○	○	○	–
Rotavirus	○	○	○	○	–
Adenovirus	–	○	○	○	–
Norovirus (murine)	–	○	○	○	–
Tb	–	○	○	○	–
Spores (Bacteria)	–	–	○	○	–

Wipe disinfection

antifect® AF (N)

Concentrate for aldehyde-free disinfection and cleaning of medical products and other wipeable surfaces

Our Plus

- free of aldehydes and thus especially user-friendly
- good efficacy against bacteria, fungi and viruses ("limited virucidal"* incl. HBV, HIV, HCV) and rotaviruses
- good cleaning and dirt-loosening properties

Pack size

2 l bottle
5 l canister

* acc. to RKI-recommendation Federal Health Gazette 01/2004

terralin® protect

Concentrate for aldehyde-free disinfection and cleaning of medical products and other wipeable surfaces

Our Plus

- free of aldehydes and thus especially user-friendly
- subtle, pleasant, fresh smell
- wide microbiological effective spectrum against bacteria (incl. Tb, MRSA), fungi and viruses (“limited virucidal”* incl. HBV, HIV, HCV rota-, adeno- and noroviruses)
- provides an excellent optical appearance
- especially suitable for odour-sensitive areas and sensitive materials

Pack size

20 ml pouch (500 x)
2 l bottle
5 l canister
30 l canister
200 l barrel
500 l container

* acc. to RKI-recommendation Federal Health Gazette 01/2004

perform®

Concentrate based on active oxygen for disinfection and cleaning of medical products and other wipeable surfaces

Our Plus

- broad microbiological effective spectrum against bacteria (incl. Tb), fungi and viruses (“virucidal”*) and also spores
- especially gentle to the environment, due to the active oxygen based active agent system
- simple dosing through single use bag rather than measuring spoon
- RKI listed for the application in case of an epidemic acc. § 18 IfSG

Pack size

250 x 40 g packages/box
60 x 40 g packages/box
4 x 900 g can

* acc. to RKI-recommendation Federal Health Gazette 01/2004

terralin® PAA

High level surface disinfection for fighting outbreaks

Our Plus

- aldehyde free, active oxygen based formulation | very short contact time
- complies with European Norms
- broad antimicrobial spectrum: effective against bacteria, fungi, viruses and spores

Pack size

2 x 80 ml

Sanitary cleaning agent

Disinfection-Cleaner AF

Concentrate for disinfection and cleaning in sanitary areas

Our Plus

- loosens dirt, lime and urine scale (acidic pH-value)
- tested material compatibility on ceramic coverings (Acid Tiler Association)
- disinfecting effect after only one minute when used in concentrated form

Pack size

1 l bottle
5 l bottle

Accessories

Turret cap

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

Effective solutions for rapid disinfection.

Brilliant results with schülke-products.

Rapid disinfection: e.g. surfaces in the operating theatre in-between two procedures

Effective ranges	mikrozid® sensitive liquid / wipes / wipes *premium*	terralin® liquid	antifect® N liquid	mikrozid® AF wipes / wipes *premium*
tested by DGHM/VAH and/or EN	○	○	○	○
Virucidal against enveloped viruses (incl. HBV, HCV, HIV)	○	○	○	○
Bacteria	○	○	○	○
Fungi	○	○	○	○
MRSA	○	○	○	○
Polyoma SV 40	○	○	○	○
Rotavirus	○	○	○	○
Adenovirus	–	○	○	○
Norovirus (murine)	–	○	○	○
Tb	–	○	○	○

Rapid disinfection

mikrozid® sensitive liquid / wipes

Rapid action disinfectant for medical products and other surfaces

Our Plus

- alcohol-free, thus making it particularly suitable for alcohol sensitive surfaces
- rapid and good efficacy (bacteria, fungi (C. albicans), "limited virucidal"* incl. HBV, HIV, HCV and rotaviruses)
- tested according to AAH/GSHM methods

Pack size

1 l bottle
5 l canister
200 jumbo wipes dispenser
200 jumbo wipes refill package

mikrozid® AF wipes / Jumbo wipes

Alcohol based wipes for fast effective cleaning and disinfection of surfaces

Our Plus

- dries rapidly, leaving no streaks | aldehyde free
- effective against bacteria (incl. Tb), fungi and viruses (incl. HBV, HCV, adeno-, rota-, papova-, polioviruses)

Pack size

Tub 150 wipes
Refill 150 wipes
Plus Tub 200 large wipes
Jumbo Refill 200 large wipes

terralin® liquid

Rapid alcohol disinfection for medical products

Our Plus

- ready-to-use I short contact time | dries residue-free
- broad microbiological effective spectrum against bacteria (incl. Tb), fungi and viruses ("virucidal"*)

Pack size

1 l bottle
5 l canister

* acc. to RKI-recommendation Federal Health Gazette 01/2004

antifect® N liquid

Rapid alcohol disinfectant for surfaces, especially in kitchen areas

Our Plus

- ready-to-use | free of colourings and perfume
- applicable in areas where food is being handled
- short contact time and broad effect against bacteria, viruses and fungi
- fast and residue-free drying

Pack size

1 l bottle

5 l canister

mikrozid® AF wipes *premium*

Ready-to-use disinfectant wipes impregnated with an alcoholic solution for medical devices and for all types of surfaces

Our Plus

- dries rapidly | aldehyde free
- effective against bacteria, fungi and virucidal*
- handy softpack format | premium quality wipe | extra soft
- high coverage

Pack size

softpack 24 wipes

softpack 48 wipes

mikrozid® sensitive wipes *premium*

Ready-to-use disinfectant wipes impregnated with alcohol-free cleansing solution for medical devices and for all types of surfaces

Our Plus

- alcohol-free, therefore particularly suitable for alcohol sensitive surfaces
- rapid and good efficacy (bacteria, fungi (C.albicans), "limited virucidal"* incl. HBV, HIV, HCV and rotaviruses)
- handy softpack format | premium quality wipe
- extra soft | high coverage

Pack size

softpack 24 wipes

softpack 48 wipes

* acc. to RKI-recommendation Federal Health Gazette 01/2004

Moist wipes dispenser system

schülke wipes / schülke wipes mini

Moist wipe dispenser system for the application of schülke surface disinfecting agents

Our Plus

- broadly usable
- easy to handle
- lifetime when solution is prepared: up to 28 days, e.g. terralin® protect
- lint-free on surfaces
- 100 respectively 40 large cloths (30 x 30 cm) per roll

Pack size

schülke wipes

1 x moist wipe dispenser system

1 x 6 cloth rolls (100 wipes)

schülke wipes mini

1 x moist wipe dispenser system

1 x 10 cloth rolls (40 wipes)

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

Dosage devices

For the preparation of ready-made disinfectant solutions

dosit® des

- dosage device for the preparation and application of aqueous disinfectant solutions
- microprocessor controlled system
- complete sensor controlled dosage process
- range of dosage 0.25 – 5 %, dosage tolerance + 5 %, adjustable in 0.05 % steps
- especially user-friendly due to clear control panel and easy canister change
- build according to RKI guidelines

Dimensions I technical data

width x depth x height:	51 x 18 x 57.8 cm
amount of dispensing:	7 litre/minute
systems voltage:	AC 230 V – 50 Hz
power:	75 watt
water connection:	3/8" external thread
Art. No.:	644 000

dosage device Duo

- double device for the preparation of aqueous disinfectant solutions and removal of two preparation solutions of the same or different concentration
- depressurised dispensing of solution via directly traversable outlet
- 2 x 7 dosage steps: 0.25 – 0.5 – 1- 2 –3 –4 –5 %; dosage tolerance max. + 5 %
- dosage is being controlled and monitored by microprocessor
- automatic cut-off in case of shortage of concentration or water, as well as disruption of concentration flow
- displays operating status and malfunctions on screen
- separation of systems acc. to DIN 1988, part 4 (TRWI), as well as DIN EN 1717

Dimensions I technical data

width x depth x height:	72 x 21 x 38 cm
amount of dispensing:	7 litre/minute
systems voltage:	AC 230 V – 50 Hz
control voltage:	21 V / 8 V
power:	96 Watt
water connection:	1/2" external thread
headwater pressure:	1.5 min – 6 bar max.
Art. No.:	647 000

dosage device D

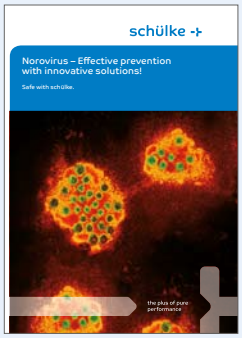
- for the preparation and application of aqueous disinfectant solutions
- release of solution by using the house internal water pressure – without pressure increase
- supplies bedpan sink, splash lance or attached pipe tapping
- 5 dosage steps: 0.25 – 0.5 – 1- 2 –3 %; dosage tolerance max. + 5 %
- dosage is being controlled and monitored by microprocessor
- automatic cut-off in case of shortage of concentration or water, as well as disruption of concentration flow
- displays operating status and malfunctions on screen
- suction lance and canister holder can be mounted on the left or the right side of the device
- separation of systems acc. to DIN 1988, part 4 (TRWI), as well as DIN EN 1717

Dimensions I technical data

width x depth x height:	51 x 21 x 38 cm
amount of dispensing:	8 litre/minute
systems voltage:	AC 230 V – 50 Hz
control voltage:	21 V / 8 V
power:	96 Watt
water connection:	1/2"external thread
solution discharge:	1/2" external thread
sewage connection:	1/2" external thread
headwater pressure:	1.5 min – 6 bar max.
Art. No.:	648 000

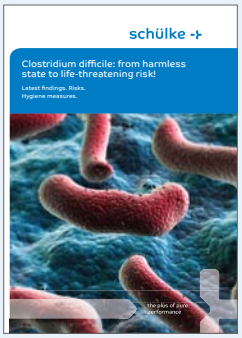
Information material

For further information, please order our brochures!



Folder Norovirus
Mat.-No. 2056

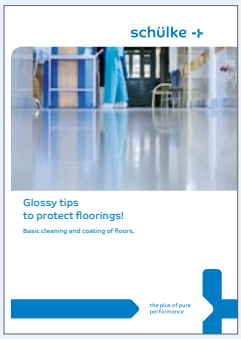
Folder Tuberculosis
Mat.-No. 2106



Folder Clostridium difficile
Mat.-No. 2102

Folder Hygiene technology
Mat.-No. 2122

Folder Applikationshilfen
Mat.-No. 2563



Documentation Glossy tips
Mat.-No. 2349

The schülke dosage table

Dosier-Tabelle / Dosage-Table

Gesamtmenge Gebrauchslösung[1] Total quantity of working solution[1]		%											
		0,25	0,5	0,75	1,0	1,5	2,0	3,0	4,0	5,0	6,0	7,0	8,0	10,0
Liter litre	1	2,5 ml	5 ml	7,5 ml	10 ml	15 ml	20 ml	30 ml	40 ml	50 ml	60 ml	70 ml	80 ml	100 ml
	2	5 ml	10 ml	15 ml	20 ml	30 ml	40 ml	60 ml	80 ml	100 ml	120 ml	140 ml	160 ml	200 ml
	3	7,5 ml	15 ml	22,5 ml	30 ml	45 ml	60 ml	90 ml	120 ml	150 ml	180 ml	210 ml	240 ml	300 ml
	4	10 ml	20 ml	30 ml	40 ml	60 ml	80 ml	120 ml	160 ml	200 ml	240 ml	280 ml	320 ml	400 ml
	5	12,5 ml	25 ml	37,5 ml	50 ml	75 ml	100 ml	150 ml	200 ml	250 ml	300 ml	350 ml	400 ml	500 ml
	10	25 ml	50 ml	75 ml	100 ml	150 ml	200 ml	300 ml	400 ml	500 ml	600 ml	700 ml	800 ml	1,0 l
	30	75 ml	150 ml	225 ml	300 ml	450 ml	600 ml	900 ml	1,2 l	1,5 l	1,8 l	2,1 l	2,4 l	3,0 l

[1]Gesamtmenge Gebrauchslösung = Menge Desinfektionsmittelkonzentrat + Differenzmenge Wasser
[1]Total Working Solution = Quantity of Disinfectant + Water

Beispiel: 10 l 1 %ige Gebrauchslösung = 100 ml Desinfektionsmittelkonzentrat + 9,9 l Wasser
Example: 10 l of solution at 1 % working solution = 100 ml of disinfectant + 9900 ml (9.9 l) of water

www.schuelke.com

561 IV/07.09/D

schülke worldwide:

Austria
Schülke & Mayr Ges.m.b.H.
1070 Vienna
Phone +43-1-523 25 01 0
Fax +43-1-523 25 01 60

China
Schülke & Mayr GmbH
Shanghai Representative Office
Shanghai 200041
Phone +86-21-62 17 29 95
Fax +86-21-62 17 29 97

France
Schülke France SARL
94250 Gentilly
Phone +33-1-49 69 83 78
Fax +33-1-49 69 83 85

Germany
Schülke & Mayr GmbH
22840 Norderstedt
Phone +49-40-521 00 0
Fax +49-40-521 00 318

India
Schulke India Pvt. Ltd.
New Delhi 100044
Phone +91-11-40 55 02 00
Fax +91-11-40 55 02 01

Italy
Schülke & Mayr Italia S.r.l.
20148 Milano
Phone +39-02-40 21 820
Fax +39-02-40 21 829

Malaysia
Schülke & Mayr (Asia) Sdn Bhd.
47301 Petaling Jaya, Selangor
Phone +60-3-78 85 80 20
Fax +60-3-78 85 80 21

Netherlands
Schülke & Mayr Benelux B.V.
2032 HA-Haarlem
Phone +31-23-535 26 34
Fax +31-23-536 79 70

Poland
Schulke Polska Sp. z o.o.
01-793 Warszawa
Phone +48-22-568 22 02-03
Fax +48-22-568 22 04

Singapore
Schülke & Mayr (Asia) Pte. Ltd.
Singapore 768767
Phone +65-62-57 23 88
Fax +65-62-57 93 88

Switzerland
Schülke & Mayr AG
8003 Zurich
Phone +41-44-466 55 44
Fax +41-44-466 55 33

United Kingdom
Schülke & Mayr UK Ltd.
Sheffield S9 1AT
Phone +44-114-254 35 00
Fax +44-114-254 35 01

... plus our international distributors

Schülke & Mayr GmbH
22840 Norderstedt | Germany
Phone | Fax +49-40 521 00 -0 | -318
www.schuelke.com
A company of the
Air Liquide Group

2104 | III | 10.11 | B | westwerk
This product information is not automatically updated.
HI_GB v_07