

Practical tip

Virucides: Spectrum of efficacy / Pathogens / Diseases

Classification "limitedly virucidal", "limitedly virucidal PLUS", "virucidal"

With the introduction of the "limitedly virucidal PLUS" range of efficacy, the classification of virucidal disinfection agents is arranged in a three-level concept:

- **Limitedly virucidal:** effective against enveloped viruses
- **Limitedly virucidal PLUS:** Effective against enveloped viruses and against noro-, rota- and adenoviruses
- **Virucidal:** effective against enveloped and non-enveloped viruses

Enveloped viruses

Enveloped viruses have a membrane consisting of lipids. This sheath is delicate and can be attacked using most effective virucidal agents. Once the sheath is destroyed, these viruses can no longer infect the host cell and so are inactivated. Typical enveloped viruses are hepatitis B & C, HIV, herpes, influenza and corona viruses. In addition, many of the viral diseases caught through traveling are caused by enveloped viruses: For example, Ebola, yellow fever, Zika, FSME, SARS viruses.

Non-enveloped lipophilic viruses

Noro-, rota- and adenoviruses belong to the group of non-enveloped lipophilic viruses and are often the cause of virus-related infections. These viruses are more stable than enveloped viruses (and thus more difficult to inactivate), but not as stable as other non-enveloped viruses, e.g. parvoviruses. Products with the efficacy spectrum "limitedly virucidal PLUS" can be used all year round as a prophylaxis and when the aforementioned pathogens appear. This means that switching disinfection agents is less often necessary. Virucidal products must be used for the inactivation of all other non-enveloped viruses.

Non-enveloped hydrophilic viruses

In addition to the aforementioned noro-, rota- and adenoviruses, there are also other non-enveloped viruses that are hydrophilic. They can be responsible for diseases whose transmission could be hindered through hygienic measures. Hydrophilic non-enveloped viruses are generally more difficult to inactivate than enveloped viruses; they demonstrate a high level of resistance to environmental influences and chemical and physical processes. The efficacy spectrum required is "virucidal" and/or the proof of efficacy against the respective pathogen. Not all disinfectants are suitable for inactivating non-enveloped viruses; in some cases, higher concentrations and longer exposure times are required in use of the disinfectant.

Overview of the efficacy spectrum for B. Braun disinfectants

Area	Product	Limitedly virucidal	Limitedly virucidal PLUS	Virucidal
Hands	Softa-Man® ViscoRub / Softa-Man® pure	✓		
	Softa-Man® / Promanum® pure	✓	✓	
	Softa-Man® acute	✓	✓	✓
Surfaces	Meliseptol® Foam pure / Wipes sensitive	✓		
	Meliseptol® New Formula / rapid / HBV Wipes	✓	✓	
	Meliseptol® acute / acute Wipes	✓	✓	✓
	Meliseptol® Wipes ultra	✓	✓	✓
	Hexaquart® pure	✓		
	Hexaquart® XL	✓	✓	
	Melsept® SF	✓	✓	✓
Instruments	Helipur® / Stabimed® fresh	✓		
	Helipur® H plus N	✓	✓	✓
	Stabimed® ultra	✓	✓	✓

Due to the path of transfer, the efficacy of skin disinfectants against viruses plays a rather subordinate role and is there not taken into account in the table.

Virucides: Spectrum of efficacy / Pathogens / Diseases

Overview of the major viruses

Pathogens	Enveloped / non-enveloped	Potential diseases	Path of transfer	Required spectrum of efficacy
Viruses belonging to the kennel cough complex	non-enveloped	Gastroenteritis, keratoconjunctivitis, infections of the airways, kennel cough	Contact infection	Limitedly virucidal PLUS
Calicivirus	non-enveloped	Mucosal ulcerations, infections of the airways, conjunctivitis	Droplet infection	Limitedly virucidal PLUS
Canine adenovirus type 1	non-enveloped	Liver inflammation, hepatitis impetigo	Fecal-oral, contact, respiratory droplets	Limitedly virucidal PLUS
Herpes viruses	enveloped	Kennel cough, cat flu, Aujeszky's disease	Saliva, contact infection	Limitedly virucidal
FIV	enveloped	Immunodeficiency (cat AIDS)	Contact infection, fighting / biting, bodily fluids	Limitedly virucidal
Corona viruses	enveloped	Infections of the airways, Feline infectious peritonitis	Droplet infections, aerosols, contact infection, smear infections	Limitedly virucidal
Influenza viruses	enveloped	Infections of the airways	Droplet/contact infection	Limitedly virucidal
Noroviruses	non-enveloped	Gastroenteritis	Droplet/contact infection	Limitedly virucidal PLUS
Papillomaviruses	non-enveloped	Warts, skin tumors	Contact infection, contaminated instruments	Virucidal and/or proof of efficacy against polyomaviruses
Paramyxoviruses	enveloped	Distemper, parainfluenza	Droplet infection, contact with secretions	Limitedly virucidal
Parvoviruses	non-enveloped	Parvovirus, feline panleucopenia virus	Droplet/contact infection	Virucidal
Feline leukemia virus	enveloped	Leukemia	Contact infection, smear infection	Limitedly virucidal
Rabies virus	enveloped	Rabies	Bite infection, smear infection, contact infection	Limitedly virucidal
Rabbit hemorrhagic disease virus	non-enveloped	RHD (VHD)	Contact infection, mosquitoes	Virucidal
Rotaviruses	non-enveloped	Gastroenteritis	Fecal-oral, contact infection	Limitedly virucidal PLUS

Softa-Man®/Softa-Man® acute/Softa-Man® pure/Softa-Man® ViscoRub

Composition: 100ml solution contains: Effective ingredients: Ethanol (100%) 45 g, 1-Propanol (Ph. Eur.) 18 g; Other ingredients: Softa-Man®: Purified water, diisopropyl adipate, macrogol-6-glycerol caprylocaprate (Ph.Eur.), dexpanthenol, (+/-)alpha-bisabolol, odorants (3-methyl-4-(2,6,6-trimethylcyclohex-2-en-1-yl) but-3-en-2-one, benzyl alcohol, benzyl benzoate, benzyl(2-hydroxybenzoate), citral, citronellol, coumarin, D-limonene, eugenol, farnesol, geraniol, 2-benzylideneoctanal, isoeugenol, linalool, oakmoss), allantoin. Softa-Man® acute: purified water,

macrogol 4000, butane-2-on, octyldodecanol (Ph. Eur.), glycerol, phosphoric acid 85%. Softa-Man® pure: purified water, isopropyl myristate (Ph. Eur.), octyldodecanol (Ph. Eur.), dexpanthenol, glycerol, (+/-)alpha-bisabolol, allantoin, denatonium benzoate. Softa-Man® ViscoRub: purified water, butane-2-one, glycerol, isopropyl myristate (Ph. Eur.), (hexadecyl, octadecyl)[(RS)-2-ethylhexanoate], octyldodecanol (Ph. Eur.), Edetol, acrylates (C10-30 alkyl acrylate crosspolymer), (+/-)alpha-bisabolol.

Applications: Hygienic and surgical hand disinfection.

Contraindications: Hypersensitivity (allergy) to ethanol or 1-propanol or one of the other ingredients.

Side effects: Contact allergy. Skin irritations such as redness and burning, especially with frequent use.

Warnings: Inflammable. Keep container tightly closed. Keep away from sources of ignition. No smoking! Keep away from eyes. Do not use on broken skin or mucous membranes. For external use only.

52.3% ethanol by weight | 20.9% 1-Propanol by weight
21°C flash point according to DIN 51 755

Information last updated: 04/2021

Pharmaceutical company:

B. Braun Melsungen AG
34209 Melsungen

Promanum® pure

Composition: 100ml solution contains: Effective ingredients: Ethanol (100%) 73.4 g, 2-Propanol (Ph. Eur.) 10.0g; other ingredients: purified water, isopropyl myristate (Ph. Eur.), butane-2-one, sorbitol (Ph. Eur.), (hexadecyl, octadecyl)[(RS)-2-ethylhexanoate], povidone K 30.

Applications: Hygienic and surgical hand disinfection.

Contraindications: Hypersensitivity (allergy) to ethanol or 2-propanol or one of the other ingredients.

Side effects: Contact allergy. Skin irritations such as redness and burning, especially with frequent use.

Warnings: Highly inflammable. Keep container tightly closed. Keep away from sources of ignition. No smoking! Keep away

from eyes. Do not use on broken skin or mucous membranes. For external use only.

14°C flash point according to DIN 51755.

Information last updated: 11/2018

Pharmaceutical company:

B. Braun Melsungen AG
34209 Melsungen