



Evans Vanodine International plc

G L O B A L H Y G I E N E S O L U T I O N S

HANDSAN



MICROBIOLOGICAL PROFILE

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INTRODUCTION

HANDSAN is a ready to use, quick acting and highly effective, alcohol based hygienic hand rub. **HANDSAN** is bactericidal and virucidal against enveloped viruses, it evaporates from hands leaving no odour or residue.

HANDSAN is suitable for areas where food is handled, prepared and served and for areas where soap and water are not readily available.

HANDSAN is ideal for use in between patient contact in non-surgical medical care establishments to help prevent the risk of cross infection.

The Infection Control Nurses Association (ICNA) recommends the use of an alcohol-based waterless handrub for the following:

- Before and after patient contact. After removing gloves. Before and after meals/breaks.
- After contact with items or surfaces that are likely to be contaminated, and following personal hygiene measures.

HANDSAN has been tested and proven to be effective against a range of bacteria. European Standard (EN) methods were carried out by the UKAS accredited Microbiology Laboratory of Evans Vanodine International PLC. (Testing number 1108) In addition EN 1500 which involves experimental exposure of hands with *Escherichia coli* followed by application of the product was carried out by an independent laboratory.

HANDSAN has also been tested against *Leptospira* and viruses at independent expert laboratories using appropriate methods.

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Porcine Influenza A H1N1 (Swine influenza)
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A glossary of microbiological and chemical terms is available on request.

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Activity against bacteria under practical conditions using

EN 1500

BACTERIA	DISEASE / INFECTION	BACTERICIDAL DILUTION
		Contact time
		1 minute
<i>Escherichia coli</i>	Food poisoning, urinary tract infections	UNDILUTED

Test carried out at an independent testing laboratory

European Standard: EN 1500

Chemical disinfectants and antiseptics – Hygienic handrub – Test method and requirements

The method simulates practical conditions for establishing whether a product for hygienic handrub reduces the release of transient flora according to the requirements when rubbed onto the artificially contaminated hands of 20 volunteers. The standard applies to products for hygienic handrub in areas where disinfection is medically indicated e.g. Hospitals, dental practices, clinics of schools and nursing homes.

Test parameters: Two applications with two 30 second contact times under clean conditions

Requirement: Must give a significantly greater log reduction than the reference product propan-2-ol on the twenty subjects assessed.

Activity against Leptospira

BACTERIA	DISEASE / INFECTION	BACTERICIDAL DILUTION
		Contact time
		30 seconds
<i>Leptospira interrogans</i>	Leptospirosis (Weil's disease)	UNDILUTED

Test carried out at an independent testing laboratory

Activity against *Leptospira interrogans*

Test parameters: 30 seconds contact time, room temperature

Requirement: No detection of Leptospires

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Activity against bacteria in suspension using

EN 1276 under clean conditions

BACTERIA	DISEASE / INFECTION	BACTERICIDAL DILUTION
		Contact time
		30 seconds
<i>Acinetobacter baumannii</i>	A common and important cause of multiple drug resistant infections in ICUs	UNDILUTED
<i>Enterococcus hirae</i>	Urinary tract infections	UNDILUTED
<i>Escherichia coli</i>	Food poisoning, urinary tract infections	UNDILUTED
<i>Escherichia coli</i> ESBL (Extended Spectrum Beta Lactamase)	Urinary tract infections. Resistant to certain antibiotics i.e. cephalosporins	UNDILUTED
<i>Proteus vulgaris</i>	Urinary tract infections	UNDILUTED
<i>Pseudomonas aeruginosa</i>	Opportunistic pathogen, wound, burn infections	UNDILUTED
<i>Shigella sonnei</i>	Dysentery	UNDILUTED
<i>Staphylococcus aureus</i>	Skin, bone and wound infections	UNDILUTED
<i>Streptococcus pyogenes</i>	Throat infections	UNDILUTED

European Standard: EN 1276

Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity of chemical disinfectants and antiseptics used in food, industrial, domestic, and institutional areas

Designed to test bactericidal products specifically for use in the Food and Catering Industry. Additional organisms were used as well as the four obligatory test organisms.

Test parameters: 30 second time, 20°C, clean conditions.
Requirement: ≥5 log reduction ≡ 99.999% reduction.

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Activity against bacteria in suspension using

EN 13727 under clean conditions

BACTERIA	DISEASE / INFECTION	BACTERICIDAL DILUTION
		Contact time
		30 seconds
<i>Enterococcus hirae</i>	Urinary tract infections	UNDILUTED
<i>Escherichia coli</i> "0157"	Food poisoning which can result in enteritis and haemolytic uraemic syndrome (characterised by renal failure)	UNDILUTED
<i>Escherichia coli</i> K12	Food poisoning	UNDILUTED
Methicillin Resistant <i>Staphylococcus aureus</i> (MRSA)	Skin, bone and wound infections, pneumonia. Resistant to treatment with the antibiotic Methicillin	UNDILUTED
<i>Pseudomonas aeruginosa</i>	Opportunistic pathogen, wound, burn infections	UNDILUTED
<i>Salmonella typhimurium</i>	Food poisoning (linked with cattle) resulting in gastro-enteritis	UNDILUTED
<i>Shigella sonnei</i>	Dysentery	UNDILUTED
<i>Staphylococcus aureus</i>	Skin, bone and wound infections	UNDILUTED
<i>Streptococcus pyogenes</i>	Wound infections	UNDILUTED

HANDSAN is deemed to have passed EN 13727 as it demonstrated a 3 log reduction when tested in accordance with the requirements for hygienic handrub products.

European Standard: EN 13727

Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of bactericidal activity in the medical area.

Designed to test bactericidal products used in hospitals, health centres, dental practices, school/nursery clinics and nursing homes where disinfection or antiseptics is medically indicated. Additional organisms were used as well as the four obligatory test organisms.

Hygienic hand rub parameters: 30 second contact time, 20°C, clean conditions.
Requirement: ≥3 log reduction ≡ 99.9% reduction.

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Activity against yeast in suspension using EN 13624 under clean conditions

BACTERIA	DISEASE / INFECTION	BACTERICIDAL DILUTION
		Contact time
		30 seconds
<i>Candida albicans</i>	Thrush	UNDILUTED

European Standard: EN 13624

Chemical disinfectants and antiseptics - Quantitative suspension test for the evaluation of fungicidal or yeasticidal activity in the medical area.

Designed to test fungicidal or yeasticidal products used in hospitals, health centres, dental practices, school/nursery clinics and nursing homes where disinfection or antisepsis is medically indicated.

Hygienic hand rub parameters: 30 second contact time, 20°C, clean conditions.
Requirement: ≥ 3 log reduction \equiv 99.9% reduction

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Activity against viruses

VIRUS	DISEASE / INFECTION	VIRUCIDAL DILUTION
		Contact time
		30 seconds
Hepatitis B (HBV)	Hepatitis B	UNDILUTED
Human Immunodeficiency type 1 (HIV)	AIDS	UNDILUTED
Porcine Influenza A (H1N1)	Influenza	UNDILUTED
VIRUS		Contact time
		1 minute
Vacciniavirus	Used as a surrogate for enveloped viruses	UNDILUTED

All virus tests were carried out by expert virology laboratories.

Hepatitis B (HBV)

An indirect method of measuring the activity against Hepatitis B was used as this virus cannot be propagated in tissue culture. The test method relies on the destruction of the surface antigen of HBV. The method is recommended by the German Association for the Control of Viral Diseases and usually makes greater demands on the concentration or contact time of the disinfectant than methods such as the demonstration of destruction of HBV DNA polymerase. The test was carried out at room temperature with a 30 seconds contact time. No surface antigen remained detectable at the end of the contact time.

Human Immunodeficiency Virus Type 1 (HIV)

The test method uses an assay for measuring the concentration of a virus specific molecule in an infected blood sample following exposure of the sample to the disinfectant. The loss of detectable virus specific molecules is used as a marker of virus 'killing'. The assay is likely to underestimate the effectiveness of the disinfectant against HCV because the molecule detected is relatively resistant to chemical degradation, it is however, essential for infectivity and so its disappearance following treatment is a good indication of virus inactivation.

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European Standard: EN 14476

Chemical disinfectants and antiseptics – Quantitative suspension test for the evaluation of virucidal activity in the medical area

Designed to test the virucidal activity of products specifically for use in the medical area (instruments, surfaces and hands). It was carried out under “clean” (representative of surfaces which have received a satisfactory cleaning programme and/or are known to contain minimal levels of organic and/or inorganic materials) conditions.

Vacciniavirus

For activity against enveloped viruses

Test parameters: 1 minute contact time, 20°C, clean conditions.
Virucidal requirement: ≥ 4 log reduction \equiv 99.99% reduction.

Additional virus tested:

Porcine Influenza A H1N1

Test parameters: 30 second contact time, 20°C, clean conditions.
Virucidal requirement: ≥ 4 log reduction \equiv 99.99% reduction.