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Spectro B.V. PO Box 699 NL - 5340 AR Oss

Bremen, 09/04/2020

Summary: Virus-inactivating properties (virucidal activity against enveloped viruses) of Ethades of Spectro B.V. according to EN 14476:2013+A2:2019 under clean conditions

This summary is based on the following test report of Dr. Brill + Partner GmbH for the hand disinfectant Ethades produced by Spectro B.V.:

modified vaccinia virus Ankara test report (L20/0248MV.1) dating 09/04/2020

The following concentration and exposure time are necessary for the inactivation of the test virus:

undiluted 30 seconds

in order to achieve a 4 \log_{10} reduction (inactivation \ge 99.99 %) under clean conditions in a quantitative suspension test according to EN 14476:2013+A2:2019.

After evaluation with modified vaccinia virus Ankara the hand disinfectant Ethades can be declared as having **"virucidal activity against all enveloped viruses"** according to EN 14476:2013+A2:2019.

The declaration **"virucidal activity against all enveloped viruses"** covers all enveloped viruses (Annex A) like HBV, HCV, HIV as well as members of other virus families such as orthomyxoviridae (incl. all human influenza viruses), coronaviridae (like MERS-CoV, SARS-CoV-1 and SARS-CoV-2) and filoviridae including Ebola virus.

Dr. Jochen Steinmann

Extract from Annex A in EN 14476 Examples of viruses which may contaminate human medical instruments, hands, surfaces (*Enveloped viruses*)

NOTE This list is not exhaustive.

Blood

Filoviridae Flavivirus Herpesviridae Hepatitis B virus (HBV)

Respiratory tract

Coronavirus Herpesviridae

Neural tissue, ear & nose, eye

Herpesviridae Measles Virus

Gastro-intestinal

Coronavirus

Skin, breast and/or milk

Herpesviridae Human Immunodeficiency Virus (HIV)

Spleen and lymph nodes (see also "Blood")

Human T Cell Leukemia Virus (HTLV) Human Immunodeficiency Virus (HIV)

Dental procedure

Herpesviridae Hepatitis B virus (HBV)

Urogenital tract

Hepatitis B Virus (HBV) Herpesviridae Human Immunodeficiency Virus (HIV)

Reference:

Van Regenmortel MHV et al., Eds.: Virus Taxonomy, Classification and Nomenclature of Viruses, seventh report of the international committee on taxonomy of viruses. Academic Press, San Diego, 2000

Hepatitis C virus (HCV) Hepatitis Delta virus (HDV) Human Immunodeficiency Virus (HIV) Human T Cell Leukemia Virus (HTLV)

Influenza Virus Paramyxoviridae Rubella Virus

Human Immunodeficiency Virus (HIV) Rabies Virus Rubella Virus

Human T Cell Leukemia Virus (HTLV) Poxviridae

Hepatitis C Virus (HCV) Hepatitis Delta Virus (HDV) Human Immunodeficiency Virus (HIV)

Human T Cell Leukemia Virus (HTLV)

Summary Ethades - virucidal activity against all enveloped viruses - EN 14476 Version 01