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ADSAN LN1856 07-05-2020

Virucidal Disinfectant and Sanitiser

Kills 99.9% of bacteria and germs.

ADSAN LN1856 is a ready to use sanitiser for sanitising both non porous surfaces such as benches, tables, chairs, equipment, floors and walls. It can also be used on porous surfaces such as fabric. It is based on patented technology using a blend of specialised quaternary ammonium disinfectants.

ADSAN LN1856 will kill a broad spectrum of micro-organisms including bacteria, viruses, yeasts, moulds, fungi and algae. It can be used in the food industry to clean light soil and sanitise non food prep surfaces such as benches and equipment. It can be used in rooms and in motor vehicles. It is unperfumed so as not to taint foodstuffs. It helps control moulds and odours.

ADSAN LN1856 can be applied by spray, wiping or immersion. It will tolerate a light soil load without losing its effectiveness. It is corrosion safe on all metal and painted surfaces and will not harm plastics or fabric. It is odourless and pleasant to use. It has very low irritatecy on skin.

CHEMICAL AND PHYSICAL PROPERTIES

| | |
|-----------------------|-------------------------|
| Appearance: | Clear colourless liquid |
| Flash Point: | Non-flammable |
| Odour: | Almost none |
| Specific Gravity: | 1.0 |
| pH: | 8 – 9.8 |
| Foam Characteristics: | Low |

DIRECTIONS FOR USE

Light Soil: Spray on and wipe off or leave to dry.

Gross soil: Clean away gross soil before sanitising. Any surfaces holding liquid must be drained and any collection of liquid removed before contact with food. Spray on, leave 1 to 2 minutes and wipe off.

ADSAN LN1856 can also be used neat by immersion. Immerse neat for 1 – 5 minutes then remove and allow to dry.

Efficacy

ADSAN LN1856 contains a dual quaternary ammonium synergistic disinfectant system to kill a wide range of microbes including viruses as detailed below.

Bacteria: Published data of a comparable formulation using the Use-Dilution Confirmation Tests, modified, in accordance with the A.O.A.C. Manual, 12th Edition, 1975 pages 56-60 showed no survivors when tested against the following bacteria.

Gram negative bacteria: *Pseudomonas aeruginosa*, *Salmonella choleraesuis*, *Enterobacter cloacae*, *Klebsiella pneumoniae*, *Proteus mirabilis*, *Shigella flexneri*, *Enterobacter aerogenes*, *Serratia marcescens*, *Proteus vulgaris*, *Shigella sonnei*.

Gram-Positive Organisms *Staphylococcus aureus*, *Staphylococcus aureus* phage 80, *Staphylococcus aureus* phage 81, *Streptococcus pyogenes*, *Staphylococcus epidermidis*.

The germicidal and detergent sanitizer activity of the above formulation was illustrated by conducting A.O.A.C. Germicidal and Detergent Sanitizer tests, modified in accordance with the A.O.A.C. Manual, 13th Edition, 1980. Results are listed below.

| Organism | Activity % | % Kill | | | |
|----------------------|------------|------------|--------|------------|--------|
| | | 30 seconds | | 60 seconds | |
| Staphyococcus Aureus | 50 | 99.999 | | 99.999 | |
| Escherichia coli | 50 | 99.999 | 99.999 | 99.999 | 99.999 |

Fungicidal Activity: The formulation concentrate was tested in the presence of 5% weight blood serum and 400 p.p.m. hard water calculated as calcium carbonate. The fungicidal activity of the formulation was demonstrated according to the A.O.A.C. Fungicidal Test, modified, against *Trychophyton interdigitale*. See A.O.A.C. Fungicidal Test, 12th Edition, 1975, page 63. The following results were noted

| | 5 Minutes | | 10 Minutes | | 15 Minutes | |
|---------|-----------|---------|------------|---------|------------|---------|
| | Prim. | Second. | Prim. | Second. | Prim. | Second. |
| Test I | — | — | — | — | — | — |
| Test II | — | — | — | — | — | — |

Viricidal Activity: The formulation was tested in the presence of 5% weight blood serum and 400 p.p.m. hard water calculated as calcium carbonate. The formulation's activity as a viricide was also demonstrated according to viricidal carriers method, modified, accepted by the Environmental Protection Agency against Adenovirus Type III, Vaccinia, Influenza A/Texas, Herpes Virus Type I. The following results were noted:

| VIRUS: | TCID ₅₀ | TCLD ₅₀ | TCTD ₅₀ | TCID ₅₀ – TCLD ₅₀ = |
|-----------------------------|-------------------------|------------------------|------------------------|--|
| Test I Adenovirus Type III | $1 \times 10^{-4.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.5} \log 10$ |
| Test II Adenovirus Type III | $1 \times 10^{-4.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.5} \log 10$ |
| Test I Vaccinia | $1 \times 10^{-5.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{5.5} \log 10$ |
| Test II Vaccinia | $1 \times 10^{-5.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{5.5} \log 10$ |
| Test I Influenza A/Texas | $1 \times 10^{-4.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.5} \log 10$ |
| Test II Influenza A/Texas | $1 \times 10^{-4.5/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.5} \log 10$ |
| Test I Herpesvirus Type I | $1 \times 10^{-4.3/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.3} \log 10$ |
| Test II Herpesvirus Type I | $1 \times 10^{-4.3/ml}$ | $<1 \times 10^{-1/ml}$ | $<1 \times 10^{-1/ml}$ | $\cong 10^{4.3} \log 10$ |

The above results show that combination of quat disinfectants together with suitable adjuncts used in ADSAN LN1856 are effective at killing a range of bacteria, fungi and viruses. The formulation is also shown to be effective in the presence of biological soil and hard water salts.

Adsan LN1856 is modelled on a RTU (ready to use) surface disinfecting spray listed by the US EPA in a list of about 300 registered products of manufacturers claiming viricidal kill. This similar product is claimed to kill a wide range of microbes, including 22 viruses, one of which is Coronavirus (SARS-CoV). This virus is in the same family as COVID-19 and is described as a surrogate virus to COVID-19. No manufacturer has yet claimed kill against COVID-19.