| | |
|---|---|
| TEST LABORATORY | KL Laboratories |
| Contact name: | Kathryn Lees |
| Contact address: | 35A Brookway<br>Lees<br>Oldham<br>OL4 5BE |
| Telephone: | +44 161 626 8563 |
| E-mail: | k.leesconsultancy@yahoo.co.uk |

| | |
|---|---|
| **CLIENT:** | **Biosphere Innovation AS**<br>**Snarøyveien 57**<br>**1367 Snarøy**<br>**Norway** |
| **CONTACT:** | **Mr F Siggestrøm** |
| **REPORT NO:** | **KL2008/BI/1107** |
| **DATED:** | **12th July 2008** |

## *1. .VIRAL TEST METHOD AND ITS VALIDATION*

This product was evaluated at a dilution @ 1:250 in the presence of 5% serum with a contact time of 10 minutes on hard nonporous environmental surfaces.

Testing is performed per EPA Guidance (DIS/TSS-7). Two separate lots are tested. Inactivation of the virus must be demonstrated at all dilutions when no cytotoxicity is observed or at all dilutions above the cytotoxic level when it is observed. The data must demonstrated a 3-log reduction in viral titer for both lots.

| | |
|---|---|
| Methods: | DIS/TSS-7 |
| Samples | One sample was received for testing on 10.06.07 labelled as follows:-<br><br>**Barriertech™ RFU** |
| Test procedure: | Dilution-Neutralisation |
| Neutraliser: | Polysorbate 80 30g/l,<br>Sodium Chloride 8.5g/l,<br>Lecithin 6.0g/l,<br>Sodium Thiosulphate 5.0g/l,<br>L-Histidine 1.0g/l,<br>Tryptone 1.0g/l. |

## 2. EXPERIMENTAL CONDITIONS

| | |
|---|---|
| Period of Analysis: | 23/06/08 - 27/06/08 |
| Product Diluent used during test: | Hard water |
| Product test concentrations: | 1:250 |
| Contact Times Used: | T = 10 minutes. |
| Test Temperature: | 20°C ± 1°C |
| Interfering Substance: | Bovine Albumin Serum 5% |
| Temperature of Incubation: | 37°C ± 1°C |
| Time in incubator: | 2 days. (48 hours) |

Identification of viral strains used:

**Avian Influenza A H5N1 virus**

**Influenza A H3N8 virus**

**Influenza A 2 /Hong Kong**
**ATCC VR-544**
**Influenza A 2 /J305**
**ATCC VR-100**

**Hepatitis B virus**
**Hepatitis C virus**

**Herpes Simplex Type 1 ATCC VR-260**
**Herpes Simplex Type 2 ATCC VR-734**

**Human Immunodeficiency virus type 1 (HIV 1) HTLV-IIIB**

## *3. RESULTS*

Results are detailed in the Tables below and are described in the Conclusion.

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid<br>Avian Influenza A H5N1 virus | |
|---|---|---|
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥4.75 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid<br>Influenza A H3N8 virus | |
|---|---|---|
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥5.0 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid<br>Influenza A 2 /Hong Kong ATCC VR-544 | |
|---|---|---|
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥5.25 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Influenza A 2 /J305 ATCC VR-100 | |
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥5.5 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Hepatitis B virus | |
| KL2008/BI/1107 | | |
| T = 10 minutes | 5.06 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Hepatitis C virus | |
| KL2008/BI/1107 | | |
| T = 10 minutes | 5.56 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Herpes Simplex Type 1 ATCC VR-260 | |
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥4.0 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Herpes Simplex Type 2 ATCC VR-734 | |
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥3.5 $Log_{10}$ | Pass |
| | | |

| Sample & Contact Times | Efficacy (log reduction) ME Value For Barriertech™ RFU Liquid | |
|---|---|---|
| | Human Immunodeficiency virus type 1 (HIV 1) HTLV-IIIB | |
| KL2008/BI/1107 | | |
| T = 10 minutes | ≥5.5 $Log_{10}$ | Pass |
| | | |

## *6. CONCLUSION*

Viral activity for general/specific purpose is characterised by the concentration of the tested product for which a >3.0 $Log_{10}$ or more reduction in viability is demonstrated under the required test conditions.

Barriertech Sanitiser liquid achieved a reduction in viability of >3.0 $Log_{10}$ or more against all viruses species tested.

Signed K. Lees Date: 12-07-2008

Kathryn Lees BSc
Microbiologist

Reviewed J Lees Date: 13.07.2008

J Lees
QA Manager