

Company Name: Ingenia Life Solutions

Contact Name: Dan Gay

Contact Email: dan.gay@ingenia.co.uk

Purchase Order No: 6555

Report Date: 30/06/2020

Melbec Ref Number: 17504

No. of Samples: 1

Name of Test Product: Ingen Hand Gel

Batch Number: N/A

**Sample Details:**

Manufacture / Supplier:..... Ingenia Life Solutions Ltd  
Product storage conditions:..... Ambient Clear  
Appearance of the product (as supplied):..... gel  
Appearance of the product (after dilution):..... N/A  
Appearance of product with interfering substance and test organism: Cloudy liquid  
Active substance and concentration:..... Ethanol Denatured  
Product dilutions/concentrations:..... Ready to Use (RTU)  
Diluent used to dilute product:..... N/A

Incubation temperature: ..... 36 degrees

The test product was in satisfactory condition for testing when received.

Date product received: 20/05/20 Test Date: 05/06/20

**Experimental Conditions:**

Interfering substance: Bovine Albumin (clean 0.3g/l)  
Test temperature: 18 to 25 °C  
Contact time: 60 Seconds  
Test organisms: Pseudomonas aeruginosa ATCC 15442  
Staphylococcus aureus ATCC 6538  
Escherichia coli K12 NCTC 10538  
Enterococcus hirae ATCC 10541

**Requirements of the Standard:**

The test product shall demonstrate at least a 5 decimal logarithm (lg) reduction when tested in accordance with this standard under simulated clean or dirty conditions.

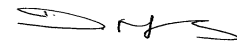
**Conclusion:**

For the product Solo Hand Gel, [N/A] the log reduction requirements as specified in EN 1276:2019 (5 lg within the relevant contact time) were met.

Testing carried out by:

Name: Danika Weatherburn  
Position: Laboratory Manager

Report authorised by:



Name: Dawn Mellors  
Position: Technical Director  
Date: 30/06/2020



***Pseudomonas aeruginosa* ATCC  
15442**

| Validation and controls                                    |    |             |  |    |             |  |    |             | Melbec Ref No  | 17504 |             |
|--|----|-------------|--|----|-------------|--|----|-------------|--|-------|-------------|
| Validation suspension ( $Nv_0$ )                           |    |             | Experimental conditions control (A)  |    |             | Neutralizer control (B)  |    |             | Method validation (C)<br>Product conc: RTU   |       |             |
| Vc 1   | 48 | $\bar{X} =$ | Vc 1   | 39 | $\bar{X} =$ | Vc 1   | 54 | $\bar{X} =$ | Vc 1   | 55    | $\bar{X} =$ |
| Vc 2   | 31 | 39.5        | Vc 2   | 37 | 38          | Vc 2   | 44 | 49          | Vc 2   | 44    | 49.5        |
| $30 \leq \bar{X} \text{ of } Nv_0 \leq 160?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of A is } \geq 0.5 \times \bar{X} \text{ of } Nv_0?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of B is } \geq 0.5 \times \bar{X} \text{ of } Nv_0?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of C is } \geq 0.5 \times \bar{X} \text{ of } Nv_0?$<br><b>Yes</b> |       |             |

**Test suspension and test**

|   |           |      |      |   |
|---|-----------|------|------|---|
| <b>Test suspension (<math>N</math> and <math>N_0</math>):</b> | $N$       | Vc 1 | Vc 2 | $X_m$ 3.65E+08 ; $\lg N =$ 8.56   |
|   | $10^{-6}$ | >330 | >330 | $N_0 = N/10$ ; $\lg N_0 =$ 7.56   |
|   | $10^{-7}$ | 37   | 36   | $7.17 \leq \lg N_0 \leq 7.70?$ Yes<br>$\bar{X} \text{ quotient} = >5 \text{ and } <15?$ N/A |

| Conc. of the active (%) | Vc 1 | Vc 2 | $Na = \bar{X} \times 10$ | $\lg Na$ | $\lg R$<br>$N_0 =$ 7.56 | Contact time | Result      |
|-------------------------|------|------|--------------------------|----------|-------------------------|--------------|-------------|
| RTU                     | <14  | <14  | 1.40E+02                 | <2.15    | >5.42                   | 60 Seconds   | <b>Pass</b> |

**Staphylococcus aureus ATCC  
6538**

| Validation and controls                                       |    |             |   |    |             |   |    |             | Melbec Ref No   | 17504 |             |
|---|----|-------------|---|----|-------------|---|----|-------------|---|-------|-------------|
| Validation suspension ( $N_{v_0}$ )                           |    |             | Experimental conditions control (A)   |    |             | Neutralizer control (B)   |    |             | Method validation (C)<br>Product conc: RTU  |       |             |
| Vc 1  | 65 | $\bar{X} =$ | Vc 1  | 73 | $\bar{X} =$ | Vc 1  | 60 | $\bar{X} =$ | Vc 1  | 75    | $\bar{X} =$ |
| Vc 2  | 56 | 60.5        | Vc 2  | 63 | 68          | Vc 2  | 73 | 66.5        | Vc 2  | 71    | 73          |
| $30 \leq \bar{X} \text{ of } N_{v_0} \leq 160?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of A is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of B is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of C is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |       |             |

**Test suspension and test**

|                                 | N   | Vc 1 | Vc 2 | X m                            | 3.00E+08 | ; lg N =     | 8.48 |
|---------------------------------|---|------|------|--------------------------------|----------|--------------|------|
| Test suspension (N and $N_0$ ): | $10^{-6}$   | >330 | >330 | $N_0 = N/10$                   |          | ; lg $N_0 =$ | 7.48 |
|                                 | $10^{-7}$   | 32   | 28   | $7.17 \leq \lg N_0 \leq 7.70?$ |          | Yes          |      |
|                                 | $\bar{X} \text{ quotient} = >5 \text{ and } <15?$ |      |      |                                |          |              | N/A  |

| Conc. of the active (%) | Vc 1 | Vc 2 | $N_a = \bar{X} \times 10$ | lg $N_a$ | lgR<br>$N_0 =$ | 7.48 | Contact time | Result |
|-------------------------|------|------|---------------------------|----------|----------------|------|--------------|--------|
| RTU                     | <14  | <14  | 1.40E+02                  | <2.15    | >5.33          |      | 60 Seconds   | Pass   |

**Escherichia coli K12 NCTC  
10538**

| Validation and controls                                       |    |             |   |    |             |   |    |             | Melbec Ref No   | 17504 |             |
|---|----|-------------|---|----|-------------|---|----|-------------|---|-------|-------------|
| Validation suspension ( $N_{v_0}$ )                           |    |             | Experimental conditions control (A)   |    |             | Neutralizer control (B)   |    |             | Method validation (C)<br>Product conc: RTU  |       |             |
| Vc 1  | 51 | $\bar{X} =$ | Vc 1  | 5  | $\bar{X} =$ | Vc 1  | 50 | $\bar{X} =$ | Vc 1  | 43    | $\bar{X} =$ |
| Vc 2  | 48 | 49.5        | Vc 2  | 60 | 32.5        | Vc 2  | 47 | 48.5        | Vc 2  | 58    | 50.5        |
| $30 \leq \bar{X} \text{ of } N_{v_0} \leq 160?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of A is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of B is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |    |             | $\bar{X} \text{ of C is } \geq 0.5 \times \bar{X} \text{ of } N_{v_0}?$<br><b>Yes</b> |       |             |

**Test suspension and test**

|   |           |      |      |   |
|---|-----------|------|------|---|
| <b>Test suspension (<math>N</math> and <math>N_0</math>):</b> | $N$       | Vc 1 | Vc 2 | $X_m$ 3.50E+08 ; $\lg N =$ 8.54   |
|   | $10^{-6}$ | >330 | >330 | $N_0 = N/10$ ; $\lg N_0 =$ 7.54   |
|   | $10^{-7}$ | 37   | 33   | $7.17 \leq \lg N_0 \leq 7.70?$ Yes<br>$\bar{X} \text{ quotient} = >5 \text{ and } <15?$ N/A |

| Conc. of the active (%) | Vc 1 | Vc 2 | $N_a = \bar{X} \times 10$ | $\lg N_a$ | $\lg R$<br>$N_0 =$ 7.54 | Contact time | Result      |
|-------------------------|------|------|---------------------------|-----------|-------------------------|--------------|-------------|
| RTU                     | <14  | <14  | 1.40E+02                  | <2.15     | >5.40                   | 60 Seconds   | <b>Pass</b> |

**Enterococcus hirae ATCC 10541**

| Validation and controls                       |    |             |   |    |             |   |     |             | Melbec Ref No   | 17504 |             |
|---|----|-------------|---|----|-------------|---|-----|-------------|---|-------|-------------|
| Validation suspension ( $Nv_0$ )              |    |             | Experimental conditions control (A)                           |    |             | Neutralizer control (B)                                       |     |             | Method validation (C)<br>Product conc: RTU                    |       |             |
| Vc 1  | 89 | $\bar{X} =$ | Vc 1  | 98 | $\bar{X} =$ | Vc 1  | 88  | $\bar{X} =$ | Vc 1  | 77    | $\bar{X} =$ |
| Vc 2  | 70 | 79.5        | Vc 2  | 95 | 96.5        | Vc 2  | 103 | 95.5        | Vc 2  | 71    | 74          |
| 30 ≤ $\bar{X}$ of $Nv_0$ ≤ 160?<br><b>Yes</b> |    |             | $\bar{X}$ of A is ≥ 0.5 x $\bar{X}$ of $Nv_0$ ?<br><b>Yes</b> |    |             | $\bar{X}$ of B is ≥ 0.5 x $\bar{X}$ of $Nv_0$ ?<br><b>Yes</b> |     |             | $\bar{X}$ of C is ≥ 0.5 x $\bar{X}$ of $Nv_0$ ?<br><b>Yes</b> |       |             |

**Test suspension and test**

|                                 | N         | Vc 1 | Vc 2 | X m                              | 3.10E+08 | ; lg N =     | 8.49 |
|---------------------------------|-----------|------|------|----------------------------------|----------|--------------|------|
| Test suspension (N and $N_0$ ): | $10^{-6}$ | >330 | >330 | $N_0 = N/10$                     |          | ; lg $N_0 =$ | 7.49 |
|                                 | $10^{-7}$ | 33   | 29   | 7.17 ≤ lg $N_0$ ≤ 7.70?          |          | Yes          |      |
|                                 |           |      |      | $\bar{X}$ quotient = >5 and <15? |          |              | N/A  |

| Conc. of the active (%) | Vc 1 | Vc 2 | $Na = \bar{X} \times 10$ | lgNa  | IgR<br>$N_0 =$ | 7.49  | Contact time | Result |
|-------------------------|------|------|--------------------------|-------|----------------|-------|--------------|--------|
| RTU                     | <14  | <14  | 1.40E+02                 | <2.15 |                | >5.35 | 60 Seconds   | Pass   |