

'TORAY' TEXTILES EUROPE



See It Safe

ANTI-MICROBIAL

TEST RESULTS

October 2006

AATCC 147 (Modified) – Antibacterial Activity Assessment of Textile Materials: Parallel Streak Method

This is a quick and easy qualitative method to determine antibacterial activity. The method involves the inoculation of a nutrient agar growth surface with the specimen bacteria. In our modified version we use a lawn of bacteria instead of the parallel streaks detailed in the standard method. Non-sterile samples of fabric are cut to 25 x 50 mm. This fabric sample is then placed directly on top of the inoculated agar and incubated at $37 \pm 2^{\circ}\text{C}$ for 24 hours. In our investigations, we have occasionally looked at reduced times, sometimes as little as 1 hour. The incubated plates are examined for interruption of growth beneath the specimen, and for a clear zone of inhibition beyond its edge. Where no bacterial colonies occur under the specimen, it is considered to be acceptable antibacterial activity and is reported as 'NZI'. The size of the zone of inhibition around the sample is also reported, by measuring all sides and calculating an average. This test cannot be considered to be quantitative, but can be used for comparison against non-antibacterial samples, and samples of known antibacterial activity. We have used resistant *Staphylococcus aureus* (MRSA), *Klebsiella pneumoniae* and *Escherichia coli* (E.coli), as our standard test organisms.

AATCC 100 – Assessment of Antibacterial Finishes on Textile Materials

This is a quantitative method. Circular cuttings approx. 4.9 cm. in diameter are cut. These are then inoculated with the test organisms, by allowing the cuttings to absorb 1 ml. of bacteria broth culture. Enough cuttings are used to allow complete absorption of the liquid. In the case of hydrophobic fabrics (such as our fabrics which have a water repellent finish), a surfactant is added to enhance wetting. Several of these jars are prepared. Sterilized distilled water is then added to 1 jar. This is vigorously shaken for 1 minute. A sample of the liquid is placed on a nutrient agar plate. This represents 'zero' contact time. The other jars are incubated at $37 \pm 2^{\circ}\text{C}$ for 24 hours (but you can use other time periods to provide information of antibacterial activity). In our investigations we have occasionally looked at reduced times, sometimes as little as 1 hour. After incubation, sterilized distilled water is added and the jar vigorously shaken for 1 minute. A sample of this liquid is again placed on a nutrient agar plate. All plates are incubated at $37 \pm 2^{\circ}\text{C}$ for 48 hours. Bacteria counts can then be made. The percentage reduction of bacteria from the 'zero' time sample is then calculated.

Modified AATCC 100

Reduction after 24 hr (%)		Untreated			After 100 washes			Type
		K	S	E	K	S	E	
Agabus	4072	99.9	98.1	99.8	99.9	99.9	99.8	§
Agabus Warp	4122	97.5	96.7	99.3	97.8	99.9	99.9	§
Agarthea	4188	99.2	98.6	99.8	99.9	99.0	99.9	§
Agaso	4221	99.9	99.8	99.9	99.9	99.8	99.9	§
Agathon	4190	95.5	99.8	99.9	99.9	99.9	99.8	§
Agema	4194	99.8	99.9	99.8	98.2	99.9	99.9	§
Aggers	7676	99.8	99.9	99.9	99.9	99.9	99.9	§
Agnos	4215	99.9	98.9	99.9	99.9	99.9	99.9	§
Agora	4058	99.9	99.9	99.9	99.7	99.9	99.9	
Agustideri	4192	99.9	98.1	99.8	99.0	99.0	99.9	§
Agustideri Pure	7672	99.9	99.9	99.9	99.9	99.9	99.9	§
Lindt	4538	99.9	99.9	99.9	99.4	99.9	99.9	
Lobelia	4535	99.9	99.9	99.9	99.4	99.9	99.9	
Luna	4151	99.9	99.9	99.9	99.7	99.9	99.9	
Luna FR	4516	99.9	99.9	99.9	99.3	99.9	99.9	
Lupin	4163	99.9	99.9	99.9	99.7	99.9	99.9	
Tranquil	7709	99.9	99.9	99.9	99.2	99.8	99.9	

K = *Klebsiella pneumoniae* S = *Staphylococcus aureus* E = *Escherichia coli*
 § Surgical wash at 73°C, otherwise domestic wash BS EN 26330 4A at 50°C.

Modified AATCC 147

Zone of inhibition (mm.)		Untreated			After 100 washes			Type
		K	S	E	K	S	E	
Agabus	4072	NZI	6	NZI	NZI	NZI	NZI	§
Agabus Warp	4122	2	4	NZI	NZI	NZI	NZI	§
Agarthea	4188	1	2	1	NZI	NZI	NZI	§
Agaso	4221	2	3	2	1	5	1	§
Agathon	4190	2	3	3	NZI	NZI	NZI	§
Agema	4194	3	6	1	NZI	1	NZI	§
Aggers	7676	NZI	3	1	NZI	NZI	1	§
Agnos	4215	NZI	6	1	NZI	1	NZI	§
Agora	4058	1	3	3	1	2	2	
Agustideri	4192	2	5	1	NZI	NZI	NZI	§
Agustideri Pure	7672	3	4	4	NZI	NZI	1	§
Lindt	4538	8	6	6	2	2	2	
Lobelia	4535	4	7	2	2	3	2	
Luna	4151	1	2	3	2	3	1	
Luna FR	4516	2	14	2	NZI	NZI	NZI	
Lupin	4163	2	8	4	2	4	1	
Tranquil	7709	6	3	4	NZI	NZI	NZI	

NZI = No zonal inhibition, but inhibition noted in contact with the test material.
 Test certificates for all the above are available.

Client: Toray Textiles Europe Limited
Crown Farm Way
Forest Town
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NG19 0FT

Job Ref: 06H2621
Sample Ref No.: LSN 28/97730
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agabus 4072 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	98.1	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculm control.

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Client: Toray Textiles Europe Limited
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Job Ref: 06I0089
Sample Ref No.: LSN 29/3099
Date Received: 01/09/2006
Date Reported: 21/09/2006


CERTIFICATE OF ANALYSIS

4072 Agabus 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**

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06I0089/1/10/10

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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97759**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agabus 4072 Unwashed

Meth. Desc Modified AATCC 147

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	6	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3114
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4072 Agabus 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material


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Job Ref: 06H2621
Sample Ref No.: LSN 28/97731
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agabus Warpway 4122 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	97.5	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	96.7	%	Reduction After 24 Hours
Escherichia coli	99.3	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculm control.**

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Job Ref: **06I0089**
Sample Ref No.: **LSN 29/3090**
Date Received: **01/09/2006**
Date Reported: **21/09/2006**

CERTIFICATE OF ANALYSIS

4122 Agabos Warp 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	97.8	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**


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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97760**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agabus warpway 4122 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	4	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3105
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4122 Agabos Warp 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**


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Job Ref: 06H2621
Sample Ref No.: LSN 28/97732
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agarthea 4188 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.2	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	98.6	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculm control.

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Job Ref: 06I0089
Sample Ref No.: LSN 29/3094
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4188 Agarthea 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.0	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.

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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97761**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agarthea 4188 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	1	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	2	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3109
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4188 Agarthea 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**

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Job Ref: 06H2630
Sample Ref No.: LSN 28/97769
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agaso 4221 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.8	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.

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Job Ref: 06I0089
Sample Ref No.: LSN 29/3093
Date Received: 01/09/2006
Date Reported: 21/09/2006


CERTIFICATE OF ANALYSIS

4221 Agaso 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.8	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.

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06I0089/1/4/10

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Job Ref: 06H2634
Sample Ref No.: LSN 28/97782
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agaso 4221 Unwashed

Meth. Desc Modified AATCC 147

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: Microbiological results satisfactory

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Job Ref: 06I0091
Sample Ref No.: LSN 29/3108
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4221 Agaso 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	1	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	5	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**

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Job Ref: 06H2621
Sample Ref No.: LSN 28/97733
Date Received: 25/08/2006
Date Reported: 07/09/2006


CERTIFICATE OF ANALYSIS

Agathon 4190 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	95.5	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.8	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculm control.

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06H2621/1/5/9

Client: Toray Textiles Europe Limited
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Job Ref: 06I0089
Sample Ref No.: LSN 29/3097
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4190 Agathon 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97762**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agathon 4190 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	3	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: **06I0091**
Sample Ref No.: **LSN 29/3112**
Date Received: **01/09/2006**
Date Reported: **21/09/2006**

CERTIFICATE OF ANALYSIS

4190 Agathon 100 Surgical Washes

Meth. Desc Modified AATCC 147

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**


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Job Ref: 06H2621
Sample Ref No.: LSN 28/97735
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agema 4194 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.8	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.

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Job Ref: 06I0089
Sample Ref No.: LSN 29/3096
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4194 Agema 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	98.2	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**

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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97764**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agema 4194 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	3	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	6	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3111
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4194 Agema 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	1	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**


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Job Ref: 06H2621
Sample Ref No.: LSN 28/97737
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Aggers 7676 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.8	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.

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Job Ref: **06I0089**
Sample Ref No.: **LSN 29/3092**
Date Received: **01/09/2006**
Date Reported: **21/09/2006**

CERTIFICATE OF ANALYSIS

7676 Aggers 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**

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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97766**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Aggers 7676 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Client: Toray Textiles Europe Limited
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Job Ref: 06I0091
Sample Ref No.: LSN 29/3107
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

7676 Aggers 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material

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Job Ref: 06H2621
Sample Ref No.: LSN 28/97736
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agnos 4215 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	98.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculm control.**

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Job Ref: 06I0089
Sample Ref No.: LSN 29/3098
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4215 Agnos 100 Surgical

Meth. Desc Modified AATCC 100

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.

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Job Ref: 06H2628
Sample Ref No.: LSN 28/97765
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agnos 4215 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	6	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Job Ref: 06I0091
Sample Ref No.: LSN 29/3113
Date Received: 01/09/2006
Date Reported: 21/09/2006


CERTIFICATE OF ANALYSIS

4215 Agnos 100 Surgical Washes

Meth. Desc Modified AATCC 147

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	1	mm Zone	Of Inhibition

Comment: Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material

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06I0091/1/9/10

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Job Ref: 06H2621
Sample Ref No.: LSN 28/97729
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agora 4058 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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Client: Toray Textiles Europe Limited
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Job Ref: 06I1709
Sample Ref No.: LSN 29/11719
Date Received: 18/09/2006
Date Reported: 25/09/2006

CERTIFICATE OF ANALYSIS

AGORA 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.7	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97758**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agora 4058 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	3	mm Zone	Of Inhibition
Klebsiella pneumoniae	1	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Client: **Toray Textiles Europe Limited**
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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11726**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

AGORA 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	1	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	2	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**



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06I1710/1/3/7

Client: Toray Textiles Europe Limited
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Job Ref: 06H2621
Sample Ref No.: LSN 28/97734
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agustideri 4192 Unwashed

Meth. Desc Modified AATCC 100

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	98.1	%	Reduction After 24 Hours
Escherichia coli	99.8	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test inhibits the growth of the above listed microbial strains. Tested against a inoculum control.

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Client: Toray Textiles Europe Limited
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Job Ref: 06I0089
Sample Ref No.: LSN 29/3095
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4192 Agustideri 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.0	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.0	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2628**
Sample Ref No.: **LSN 28/97763**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agustideri 4192 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	5	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3110
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

4192 Agustideri 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material

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Job Ref: 06H2630
Sample Ref No.: LSN 28/97768
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Agutideripore 7672 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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Job Ref: **06I0089**
Sample Ref No.: **LSN 29/3091**
Date Received: **01/09/2006**
Date Reported: **21/09/2006**

CERTIFICATE OF ANALYSIS

7672 Agostideri Pure 100 Surgical Washes

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Test against initial inoculum.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97781**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Agustideripore 7672 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	4	mm Zone	Of Inhibition
Klebsiella pneumoniae	3	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	4	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: 06I0091
Sample Ref No.: LSN 29/3106
Date Received: 01/09/2006
Date Reported: 21/09/2006

CERTIFICATE OF ANALYSIS

7672 Agostideri Pure 100 Surgical Washes

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**


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Job Ref: 06H2630
Sample Ref No.: LSN 28/97774
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Lindt 4538 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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Client: Toray Textiles Europe Limited
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Job Ref: 06I1709
Sample Ref No.: LSN 29/11718
Date Received: 18/09/2006
Date Reported: 25/09/2006

CERTIFICATE OF ANALYSIS

LINDT 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.4	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97787**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Lindt 4538 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	6	mm Zone	Of Inhibition
Klebsiella pneumoniae	8	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	6	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11725**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

LINDT 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	2	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**



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06I1710/1/2/7

Client: **Toray Textiles Europe Limited**
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Job Ref: **06I1709**
Sample Ref No.: **LSN 29/11717**
Date Received: **18/09/2006**
Date Reported: **25/09/2006**

CERTIFICATE OF ANALYSIS

LOBELIA 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.4	%	
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**


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Job Ref: 06H2630
Sample Ref No.: LSN 28/97773
Date Received: 25/08/2006
Date Reported: 07/09/2006


CERTIFICATE OF ANALYSIS

Lobeila 4535 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.

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06H2630/1/6/8

Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97786**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Lobelia 4535 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	4	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	7	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11724**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

LOBELIA 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**



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06I1710/1/1/7

Client: Toray Textiles Europe Limited
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Job Ref: 06H2630
Sample Ref No.: LSN 28/97770
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Luna 4151 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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Job Ref: 06I1709
Sample Ref No.: LSN 29/11720
Date Received: 18/09/2006
Date Reported: 25/09/2006

CERTIFICATE OF ANALYSIS

LUNA 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.7	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97783**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Luna 4151 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	3	mm Zone	Of Inhibition
Klebsiella pneumoniae	1	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	2	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11727**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

LUNA 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**



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06I1710/1/4/7

Client: Toray Textiles Europe Limited
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Job Ref: 06H2630
Sample Ref No.: LSN 28/97772
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Luna FR 4516 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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J. Francis
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N.Stanton
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Client: Toray Textiles Europe Limited
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NG19 0FT

Job Ref: 06I1709
Sample Ref No.: LSN 29/11723
Date Received: 18/09/2006
Date Reported: 25/09/2006

CERTIFICATE OF ANALYSIS

LUNAR FR 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.3	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97785**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Luna FR 4516 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	2	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	14	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**


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Client: **Toray Textiles Europe Limited**
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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11730**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

LUNA FR 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**



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06I1710/1/7/7

Client: Toray Textiles Europe Limited
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Job Ref: 06H2630
Sample Ref No.: LSN 28/97771
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Lupin 4163 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.

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Client: Toray Textiles Europe Limited
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Job Ref: 06I1709
Sample Ref No.: LSN 29/11721
Date Received: 18/09/2006
Date Reported: 25/09/2006

CERTIFICATE OF ANALYSIS

LUPIN 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.7	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Job Ref: 06H2634
Sample Ref No.: LSN 28/97784
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Lupin 4163 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	4	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	8	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11728**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

LUPIN 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	1	mm Zone	Of Inhibition
Klebsiella pneumoniae	2	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	4	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**



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06I1710/1/5/7

Client: Toray Textiles Europe Limited
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Job Ref: 06H2630
Sample Ref No.: LSN 28/97775
Date Received: 25/08/2006
Date Reported: 07/09/2006

CERTIFICATE OF ANALYSIS

Tranquil 7709 Unwashed

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.9	%	Reduction After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.9	%	Reduction After 24 Hours
Escherichia coli	99.9	%	Reduction After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against a inoculum control.**

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Job Ref: **06I1709**
Sample Ref No.: **LSN 29/11722**
Date Received: **18/09/2006**
Date Reported: **25/09/2006**

CERTIFICATE OF ANALYSIS

TRANQUIL 100 WASH

Meth. Desc **Modified AATCC 100**

Test	Result	Unit	Est
Klebsiella pneumoniae	99.2	%	Redcution After 24 Hours
Staphylococcus aureus (Resistant Strain)	99.8	%	Redcution After 24 Hours
Escherichia coli	99.9	%	Redcution After 24 Hours

Comment: **The microbiological results demonstrate that the material under test exhibits biocidal activity against the above listed microbial strains. Tested against an inoculum control.**

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Client: **Toray Textiles Europe Limited**
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Job Ref: **06H2634**
Sample Ref No.: **LSN 28/97788**
Date Received: **25/08/2006**
Date Reported: **07/09/2006**

CERTIFICATE OF ANALYSIS

Tanquil 7709 Unwashed

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	4	mm Zone	Of Inhibition
Klebsiella pneumoniae	6	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	3	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory**

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Job Ref: **06I1710**
Sample Ref No.: **LSN 29/11729**
Date Received: **18/09/2006**
Date Reported: **04/10/2006**

CERTIFICATE OF ANALYSIS

TRANQUIL 100 WASH

Meth. Desc **Modified AATCC 147**

Test	Result	Unit	Est
Escherichia coli O157	NZ/I	mm Zone	Of Inhibition
Klebsiella pneumoniae	NZ/I	mm Zone	Of Inhibition
Staphylococcus aureus (Resistant Strain)	NZ/I	mm Zone	Of Inhibition

Comment: **Microbiological results satisfactory NZ/I = no zonal inhibition but inhibition noted in contact with the test material**



R.P.Elliott CChem., MRSC., MIFST <i>Deputy Managing Director</i>	D.J.Petford MChemA., CChem., FRSC., FIFST <i>Analytical Services Director</i>	C.Fuller BSc. (Hons.), CBiol., MBiol., MIFST <i>Company Microbiologist</i>	J.M. Bayles <i>Principal Microbiologist</i>	J.Elliott BSc. (Hons.), CBiol., MBiol. <i>Senior Microbiologist</i>	J. Francis BSc. (Hons.) <i>Senior Microbiologist</i>	N.Stanton BSc. (Hons.) <i>Senior Microbiologist</i>
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06I1710/1/6/7