

Customer:	Nylstar S.A.	
Report Date:	15. March 2018	Sukano AG
Report Number:	LS18-00140	Ref: LR-18-017

1. Sample Details

#	Description
1	Standard PES control (100% PES, Woven)
2	AMB 2%, 2% TA03-15 MB09
3	AMB 2.5%, 2.5% TA03-15 MB09
4	AMB 3%, 3% TA03-15 MB09
5	STANDARD, Reference PA am S6522% TA03-15 MB09

Sample handling: Scale: Not specified, Place of Finishing: Client
Application method: Spinning
Dry/cure method:
Laundry conditions: ISO 6330 (40 °C)
Comments: -
Total value: USD 1290.-

Composition of the Substrate (Chemical composition of the Substrate)

Component	Component abbreviation	Amount (%)
Polyamid	PA	100

2. Methods

Methods	Ref	Organisms
ISO 20743	[1]	Klebsiella pneumoniae (ATCC 4352), Staphylococcus aureus (ATCC 6538P)

Note: See references at end for details of test methods.

3. Results

ISO 20743: Staphylococcus aureus (ATCC 6538P)

#	Sample	Log cfu		Percent reduction (%)	Log reduction	Activity
		Mean	St.Dev			
0	Standard PES control (initial)	4.1	0.1			
0	Standard PES control (18h)	6.8	0.0			
1.1	AMB 2%, 2% TA03-15 MB09 (5 x 40°C)	2.6	1.0	99.9934	4.2	Very good
1.2	AMB 2%, 2% TA03-15 MB09 (50 x 40°C)	2.0	0.0	99.9984	4.8	Very good
2.1	AMB 2.5%, 2.5% TA03-15 MB09 (5 x 40°C)	3.7	1.7	99.9148	3.1	Very good
2.3	AMB 2.5%, 2.5% TA03-15 MB09 (100 x 40°C)	3.2	0.1	99.9731	3.6	Very good
3.1	AMB 3%, 3% TA03-15 MB09 (5 x 40°C)	3.3	1.2	99.9692	3.5	Very good
4.1	STANDARD, Reference PA am S6522% TA03-15 MB09 (5 x 40°C)	2.9	1.4	99.9857	3.8	Very good
4.2	STANDARD, Reference PA am S6522% TA03-15 MB09 (50 x 40°C)	2.7	0.9	99.9919	4.1	Very good
4.3	STANDARD, Reference PA am S6522% TA03-15 MB09 (100 x 40°C)	3.4	0.3	99.9612	3.4	Very good

ISO 20743: Klebsiella pneumoniae (ATCC 4352)

#	Sample	Log cfu		Percent reduction (%)	Log reduction	Activity
		Mean	St.Dev			
0	Standard PES control (initial)	4.1	0.1			
0	Standard PES control (18h)	7.6	0.0			
1.1	AMB 2%, 2% TA03-15 MB09 (5 x 40°C)	4.6	2.0	99.8972	3.0	Very good
1.2	AMB 2%, 2% TA03-15 MB09 (50 x 40°C)	2.1	0.2	99.9997	5.5	Very good
2.1	AMB 2.5%, 2.5% TA03-15 MB09 (5 x 40°C)	4.2	1.7	99.9574	3.4	Very good
2.3	AMB 2.5%, 2.5% TA03-15 MB09 (100 x 40°C)	2.0	0.0	99.9998	5.6	Very good
3.1	AMB 3%, 3% TA03-15 MB09 (5 x 40°C)	2.4	0.7	99.9994	5.2	Very good
4.1	STANDARD, Reference PA am S6522% TA03-15 MB09 (5 x 40°C)	2.3	0.5	99.9995	5.3	Very good
4.3	STANDARD, Reference PA am S6522% TA03-15 MB09 (100 x 40°C)	3.5	1.7	99.9916	4.1	Very good

4. Remarks

3rd report including 100 x 40 °C washes on samples 2 and 4

- All fabrics show very good antimicrobial activity (also after 100 x 40 °C washes).
- Deviation on some samples is quite high.

5. References

- [1] ISO 20743: "DIN EN ISO 20743:2007, Textiles – Determination of antibacterial activity of antibacterial finished products", International Organization for Standardization (2007) [Note: equivalent to JIS L 1902:2008].

6. Pro Forma Invoice

Total costs of this report in USD

Item	Price per Item	no. Items	Costs
washing	8	5	40
LIMS license + reporting	50	1	50
ISO 20743: Klebsiella pneumoniae (ATCC 4352)	150	4	600
ISO 20743: Staphylococcus aureus (ATCC 6538P)	150	4	600
TOTAL			1290

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