

Results-Table

Fraunhofer Institute for Process Engineering and Packaging, Freising, Germany

Customer:	Heraeus Noblelight GmbH	
Quotation-No.	QL/10030/19	
Trial No./Name	UVC sterilization efficiency on cups	
Test Date	21.08.2019-26.08.2019	
Treatment	UVC irradiation	
Sample Description	Cup 2 (h=80 mm; Ø-top=116 mm; Ø-bottom=92 mm)	
Inoculated surface	bottom of the cup (surface in contact with the product)	
Number of Controls	10	
Number of Samples	10	
Microorganism	<i>Aspergillus niger</i>	DSM 1957
Inoculation	Spray inoculation	
Initial Cell Count	5,00E+04	CFU/Object

Initial Cell Count on the Untreated Control Samples

Control-No.	CFU/Object
A 0.1	1,3E+04
A 0.2	-
A 0.3	1,2E+04
A 0.4	1,3E+04
A 0.5	9,8E+03
Mean Cell Count	1,2E+04
SD	1,4E+03

Trial Design / Sterilization Parameters

Reflector-ID	BSH4087
Power	100 % as defined by Heraeus
Time of treatment	2 s, 4 s, (stop times), travel speed: 0,13 m/s
Distance	15 mm

Surviving Cell Count on the Treated Samples

2 s, 0,13 m/s	CFU/Object	log-red/sample		
A 1.1	< 1,2E+00	> 4,0	mean CFU/Object 1,2E+00	
A 1.2	< 1,2E+00	> 4,0		
A 1.3	< 1,2E+00	> 4,0	mean log-red. SD 4,0 0,1	
A 1.4	< 1,2E+00	> 4,0		
A 1.5	< 1,2E+00	> 4,0		
4 s, 0,13 m/s	CFU/Object	log-red/sample		
A 2.1	< 1,2E+00	> 4,0	mean CFU/Object 1,4E+00	
A 2.2	< 1,2E+00	> 4,0		
A 2.3	2,4E+00	3,7	mean log-red. SD 3,9 0,2	
A 2.4	< 1,2E+00	> 4,0		
A 2.5	< 1,2E+00	> 4,0		