

## DAIRY, PLANT-BASED, MILK, FOOD

### CUP STERILIZATION

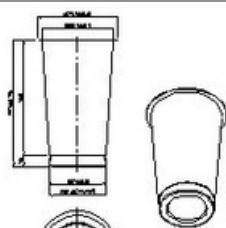
#### PS cup 200 ml



- Spray inoculation - *A. brasiliensis* DSM 1988 surface in contact with the product
- Initial contamination:  $2.4 \times 10^4$
- 2 lamps reflector

Flash N°	2	3
Mean log-reduction	4.3	4.4

#### PS cup 300 ml



- Spray inoculation - *B. atrophaeus* surface in contact with the product
- Initial contamination:  $4.3 \times 10^5$
- 1 lamp reflector

Flash N°	2	3
Mean log-reduction	4.2	5.4

#### Cardboard cup Seda Packaging 500 ml



- Spray inoculation - *A. brasiliensis* DSM 1988 surface in contact with the product
- Initial contamination:  $5.2 \times 10^3$
- 2 lamps reflector

Flash N°	2	3
Mean log-reduction	3.4	>3.6

#### Double chamber PS cup



- Spray inoculation - *A. brasiliensis* DSM 1988 surface in contact with the product
- Initial contamination:  $9.9 \times 10^4$
- 2 lamps reflector

Flash N°	2	3
Mean log-reduction	4.8	> 5.0

#### PS rectangular cup 1 kg






- Spray inoculation - *A. brasiliensis* DSM 1988 surface in contact with the product
- Initial contamination:  $6.6 \times 10^4$
- 2 lamps reflector

Flash N°	1	2
Mean log-reduction	3.3	4.2

#### PP bucket 10.7 l (height 265 mm x up diameter 245 mm)



- Multi-dots deposition - *Abrasiliensis* DSM 1988 surface in contact with the product
- Initial contamination:  $3 \times 10^3$
- 3 lamps reflector

Investigated	Flash N°	5
area Bottom 	Mean log-reduction	3.47
Angle 		
Wall 		

## INFANT FORMULA, SENSITIVE POWDERED FOOD

### CAP STERILIZATION



#### Scoop cap

- Petri dish with Aclar film - Inoculation by drop spread over homogeneously on the entire surface
- Initial contamination:  
*Staphylococcus aureus* ATCC 6538 : 5.9 x 10<sup>5</sup> and  
*Escherichia coli* ATCC11229 : 2.6 x 10<sup>4</sup>
- UV-C target dose : 20 mJ/cm<sup>2</sup>

UV-C target dose: 20 mJ/cm <sup>2</sup>	<i>S. aureus</i> ATCC 6538	<i>E. coli</i> ATCC 11229
Mean log-reduction	3.8	>4.1

### TIN CAN STERILIZATION



#### Can 1 kg Ø 127 mm x 165 mm

- *Cronobacter sakazakii* DSM 4485
- Initial contamination: 9.9 x 10<sup>4</sup>
- Pulsed Light decontamination - 2 lamps reflector

Flash N°: 1	<i>C. sakazakii</i> DSM 4485
Mean log-reduction	4.6

### BAG STERILIZATION



#### Big bag

- Petri dish with Aclar film - Inoculation by drop spread over homogeneously on the entire surface
- Initial contamination:  
*Staphylococcus aureus* ATCC 6538 : 2.2 x 10<sup>6</sup> -  
*Escherichia coli* ATCC 11229 : 2.6 x 10<sup>4</sup>
- UV-C treatment

UV-C target dose: 20 mJ/cm <sup>2</sup>	<i>S. aureus</i> ATCC 6538	<i>E. coli</i> ATCC 11229
Mean log-reduction	>5.1	>4.4