

Sainghin-en-Mélantois , on the October 31<sup>th</sup> 2019

**Responsibles :**

Dr LOEFFERT FREMIOT Sophie  
PLUCHART Chrystèle

**Study followed by :**

LAURENT Meghan

**PURPOSE OF THE STUDY :**

Study of the survival of the bacteria *Burkholderia cepacia* contained in the disinfectant detergent SURFA'SAFE PREMIUM after application on two types of surface

**In charge of the study :**

**Chrystèle PLUCHART**

Microbiology Laboratory Manager

  
**Sophie LOEFFERT-FREMIOT**

Microbiology Manager

 This document has 5 numbered pages including 0 appendix

## PROTOCOL

The tests described below were carried out based on the standard NF EN 16615 (May 2015) "Chemical disinfectants and antiseptics - Quantitative test for the evaluation of bactericidal and yeasticidal activity on non-porous surfaces, with mechanical action using wipes in the medical field (Phase 2 / Step 2) ".

### Principle :

The disinfectant detergent SURFA'SAFE PREMIUM (lot B 274.24S) contaminated with the bacteria *Burkholderia cepacia* is applied on two types of surfaces according to the protocols described below.

Tested surfaces: Stainless steel and PVC.

Test areas are plotted 10/10 cm square on each surface

Six zones 10/10 cm are identified : 1, 2, 3, 4, 5, 6

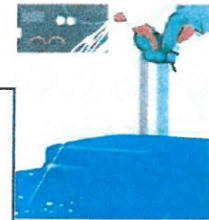
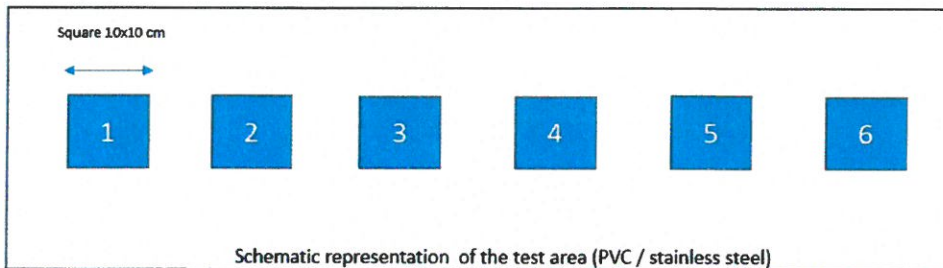
↳ Protocol 1 : Two sprays of SURFA'SAFE PREMIUM (Batch B 274.24S) are applied to each test area of each surfaces (stainless steel / PVC) and wiping of each zone is carried out using a wipe (1 go- return).

↳ Protocol 2 : Two sprays of SURFA'SAFE PREMIUM (Batch B 274.24S) are applied to one wipe and then wiping of each test area of each surface (stainless steel / PVC) is carried out using this wipe (1 go- return).

Each operation is performed in duplicate.

Below the diagram of the tests.

Protocol 1: On PVC and stainless-steel surface.



2 sprays on each square of 10x10 cm then wiping of each square with wipe



After the implementation of the protocol, a contact time is respected before proceeding to the sampling of residual germs on the surfaces.

The experimental plan (zone/contact time) is as follows :

Zone 1 : T0 : immediate

Zone 2 : Contact time of 1 min

Zone 3 : Contact time of 1 min 30

Zone 4 : Contact time of 2 min

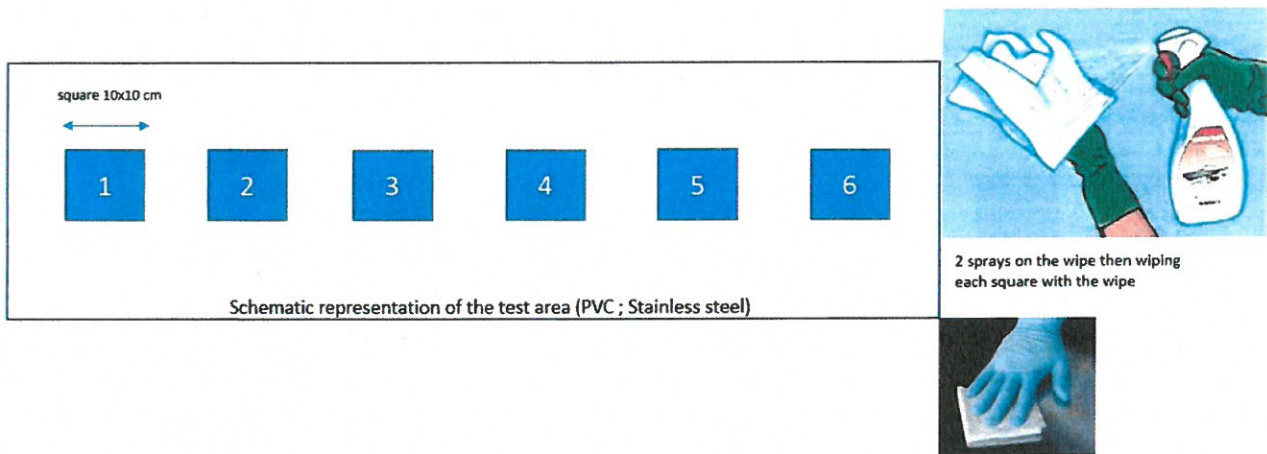
Zone 5 : Contact time of 2 min 30

Zone 6 : Contact time of 3 min

The *Burkholderia cepacia* strain is recovered by applying a Count tact box for 10 seconds on each defined area.

The Petri dishes are then incubated for 48H at 30°C ± 1°C

## Protocol 2: On PVC and stainless-steel surface.



After the implementation of the protocol, a contact time is respected before proceeding to the sampling of residual germs on the surfaces.

The experimental plan (zone/contact time) is as follows :

- Zone 1 : T0 : immediate
- Zone 2 : Contact time of 1 min
- Zone 3 : Contact time of 1 min 30
- Zone 4 : Contact time of 2 min
- Zone 5 : Contact time of 2 min 30
- Zone 6 : Contact time of 3 min

The *Burkholderia cepacia* strain is recovered by applying a Count tact box for 10 seconds on each defined area.

The Petri dishes are then incubated for 48H at 30°C ± 1°C

Résultats : Protocol 1

Surface PVC

Contact time	Zone 1 : T0 CFU/25 cm <sup>2</sup>	Zone 2: T1min CFU/25 cm <sup>2</sup>	Zone 3: T1min30 CFU/25 cm <sup>2</sup>	Zone 4: T2min CFU/25 cm <sup>2</sup>	Zone 5: T2min30 CFU/25 cm <sup>2</sup>	Zone 6: T3min CFU/25 cm <sup>2</sup>
Test Result	+	+	231	32	0	0
PVC	+	+	243	41	0	0
	+	+	217	25	0	0

Surface Stainless steel

Contact time	Zone 1 : T0 CFU/25 cm <sup>2</sup>	Zone 2: T1min CFU/25 cm <sup>2</sup>	Zone 3: T1min30 CFU/25 cm <sup>2</sup>	Zone 4: T2min CFU/25 cm <sup>2</sup>	Zone 5: T2min30 CFU/25 cm <sup>2</sup>	Zone 6: T3min CFU/25 cm <sup>2</sup>
Test Result	+	+	144	15	0	0
Inox	+	+	130	17	0	0
	+	+	127	19	0	0

Résultats : Protocol 2

Surface PVC

Contact time	Zone 1 : T0 CFU/25 cm <sup>2</sup>	Zone 2: T1min CFU/25 cm <sup>2</sup>	Zone 3: T1min30 CFU/25 cm <sup>2</sup>	Zone 4: T2min CFU/25 cm <sup>2</sup>	Zone 5: T2min30 CFU/25 cm <sup>2</sup>	Zone 6: T3min CFU/25 cm <sup>2</sup>
Test Result	+	+	202	32	0	0
PVC	+	+	213	27	0	0
	+	+	227	39	0	0

Surface Stainless steel

Contact time	Zone 1 : T0 CFU/25 cm <sup>2</sup>	Zone 2: T1min CFU/25 cm <sup>2</sup>	Zone 3: T1min30 CFU/25 cm <sup>2</sup>	Zone 4: T2min CFU/25 cm <sup>2</sup>	Zone 5: T2min30 CFU/25 cm <sup>2</sup>	Zone 6: T3min CFU/25 cm <sup>2</sup>
Test Result	+	+	151	22	0	0
Inox	+	+	163	20	0	0
	+	+	140	17	0	0

Conclusion :

Regardless of the protocol and the surface, the results of the tests demonstrate that the *Burkholderia cepacia* strain contained in SURFA'SAFE PREMIUM (Batch B 274.24S) is no longer present after 2 minutes 30.

