

To:

OXY'PHARM

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According to offer n°SMI.2019.036.1

Date: 09/07/2019

Description: Test of the bactericidal effectiveness in altered conditions of the commercially available biocide formula provided by Oxy'pharm (**Hydrogen peroxide solution - Nocolyse food**) used for the airborne decontamination of surfaces. The trials were performed following the NF T 72-281 (2014) standard guidelines with some modifications: bacterial strains, coupons position, room temperature, concentration and contact time. The biocide formula was diffused with the disinfection machine Nocospray 2 by Oxy'Pharm (Serial n° 172x522). As recommended in the NF T 72-281 standard, bacterial suspensions were prepared in 20 x diluted skimmed milk (clean condition according to the standard).

Results:

Test n°	Microorganism	Concentration	Contact time	Room temperature	Coupons position	Conclusion	
1	<i>Listeria monocytogenes</i> CIP 7838	5 ml/m ³	1 hour 15min	20°C	Normative position	Bactericidal²	
	<i>Salmonella</i> Typhimurium WDCM 00031						
	<i>Cronobacter sakazakii</i> CIP 57.33						
2	<i>Listeria monocytogenes</i> CIP 7838	3 ml/m ³	2 hours		Alternative positions - Putative lower accessibility to biocide ¹		
	<i>Salmonella</i> Typhimurium WDCM 00031						
	<i>Cronobacter sakazakii</i> CIP 57.33						
4	<i>Listeria monocytogenes</i> CIP 7838	3 ml/m ³	1 hour				
	<i>Salmonella</i> Typhimurium WDCM 00031						
	<i>Cronobacter sakazakii</i> CIP 57.33						
3	<i>Listeria monocytogenes</i> CIP 7838			10°C			
	<i>Salmonella</i> Typhimurium WDCM 00031						
	<i>Cronobacter sakazakii</i> CIP 57.33						

¹Three alternative coupons positions were used (pictures available in annex):

- In height behind a part of a skid (distance from device to coupons 3.5m / Ground to sample distance 1.7m)
- In an open tank (distance from device to coupons 1.9m / Ground to sample distance 0.8m)
- Close to normative conditions but placed in a partly opened box (distance from device to coupons 4.9m / Ground to sample distance 0m)

²Log reduction due to biocide treatment exceeded 5 log

Conclusion: According to the NF T 72-281 (2014) standard, in tested conditions, the commercially available biocide formula provided by OXY'PHARM (Hydrogen peroxide solution – Nocolyse food) is bactericidal at 3ml/m³ against *Listeria monocytogenes* CIP 7838, *Salmonella* Typhimurium WDCM00031 and *Cronobacter sakazakii* CIP 57.33 (log reduction due to biocide treatment exceeded 5 log) even though the contact time is reduced to 1 hour, the initial room temperature decreased to 10°C and biological targets placed in locations where the biocide delivery is considered as less effective.

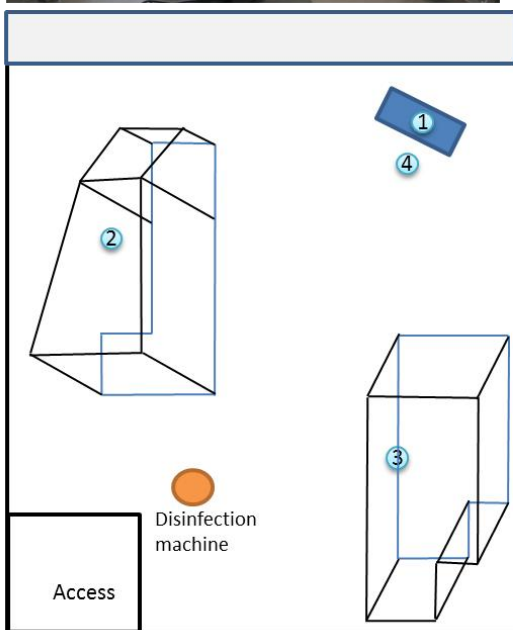
A. Hanin, PhD
Project manager in Microbiology



ANNEX 1 – Coupons location



① Normative position



ANNEX 2 – Biocide certificate of analysis

Bulletin de contrôle <i>Control report</i>	Date d'application : 08/12/2017	
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Nom du produit/ Product name : NOCOLYSE FOOD 7.9% ☒ NEUTRE ☐ NOCODOR

N° de Lot/ Batch No. : 050319FD/1 Nbre de contenant/num.containing: 1

Quantité/Quantity: 500 flgs

Date de fabrication/ manufacturing date: 08/03/19

Origine/Origin: France

Date de péremption/ Expiration date: 03/2021.

Caractéristique contrôlée/ Controlled characteristic/ Méthode/Method	Unité / Unit	Spécification / Tolerance	Résultats / Results
Apparence / Appearance	-	Liquide limpide clear liquid	<input checked="" type="checkbox"/> Conforme/compliant <input type="checkbox"/> Non conforme/non-compliant
Odeur/Odor	-	<input checked="" type="checkbox"/> Inodore/odorless <input type="checkbox"/> désodorisant/deodorant	<input checked="" type="checkbox"/> Conforme/compliant <input type="checkbox"/> Non conforme/non-compliant
Volume par flacon/ per bottle	L	<input checked="" type="checkbox"/> 1L <input checked="" type="checkbox"/> 5L <input checked="" type="checkbox"/> 10L	<input checked="" type="checkbox"/> Conforme/compliant <input type="checkbox"/> Non conforme/non-compliant
Densité/density Densimètre/ densimeter	-	1,025 à/to 1,035	Valeur/value: 1,035
pH pH mètre/ pH meter	pH	2,2 à/to 2.8	Valeur/value: 2,3
Identification : H2O2 Test colorimétrique / colorimetric Test	-	Coloration bandelette Color trip	<input checked="" type="checkbox"/> Conforme/compliant <input type="checkbox"/> Non conforme/non-compliant
Dosage : H2O2 Instruction IN 11.02	%	7,6% à/to 7,9%	Valeur/value: 7,76%

Opérateur/operator: Orlando Date du contrôle/control date:

N° de contrôle/ No Control: 4227

RESULTATS/Results: ☒ CONFORME/compliant ☐ NON CONFORME/non-compliant

Signature : Pharmacien / pharmacist :


☒ ACCEPTE/Accepted – ☐ REFUSE/refused