LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

First print date : 10/04/2003
Print date : 18/07/2008

Test certificate N° 334

Bactericidal efficiency test according

to the norm : NF EN 1276 (October 1997)

Address :

Address : HYPRED SA

Customer identity

Name : **HYPRED SA**
Address : 55 Bd Jules Verger

35 803 DINARD
Tel : 02-99-16-50-00 **Fax :** 02-99-16-50-20 **E-mail :** pmourcel@hypred.fr

Contact :

Surname : MOURCEL **First name** Philippe
Tel: 02-99-16-50-31 **Fax :** 02-99-16-52-75 **E-mail:** pmourcel@hypred.fr

Product :

Codification : 251 **HYPROCLOR ED**
Batch number : 13P30

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

Test certificate N° 334

First print date : 10/04/2003
Print date : 18/07/2008

Sample identification

Name of the product : 251 **HYPROCLOR ED**
Batch : 13P30
Appearance : clear yellow product
Receipt date : 22/11/00
Date of manufacture : 22/11/2000
Active principle: sodium hypochlorite

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 101 NF EN 1276
Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Enterococcus hirae-Col:CIP 58.55	B neutralizer
Escherichia coli-Col:CIP 54.127	B neutralizer
Pseudomonas aeruginosa-Col:CIP 103467	B neutralizer
Staphylococcus aureus-Col:CIP 4.83	D neutralizer

Appearance :
B neutralizer : (3 %) Polysorbate 80 (ml); (3 %) Saponine (g); (0,3 %) Lecithin (g); (0,1 %) L-Histidin (g); (0,5 %) Sodium thiosulphate (g)
D neutralizer : (0,5 %) Sodium thiosulphate (g)

Experimental conditions :

Test manager : A-F. GABILLET
Start of analysis : 23/11/00
End of analysis : 04/12/00

Tested concentrations of the product : 0,1 in % (V/V)
0,15
0,2
0,3
0,4

Interfering substance : 134 Bovine albumin 0,3 g/l
Contact time : 5 (in mn)
Test temperature : 20 (in °C)
Incubation temperature : 37 (in °C)
Diluent described in the norm : Distilled water
Stability of the mixture of interfering substance and diluted product : No precipitate during assay

LABORATOIRE DE MICROBIOLOGIE ET D'HYGIENE
55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : 02 99 16 50 72 - Fax : 02 99 16 52 75

Test certificate N° 334

First print date : 10/04/2003
Print date : 18/07/2008

Results

Tested strain(s)	Validation test				Bactericidal or Fungicidal tested suspension	Operating method at the concentration %				
	Bactericidal or Fungicidal suspension	Experimental conditions	Non toxicity of the neutraliser or reference filtration	Inactivation by dilution/ neutralisation or filtration			0,1	0,15	0,2	0,3	0,4
102 **Enterococcus hirae-Col:CIP 58.55**	Vc : **224;189** Nv: 2065	Vc : **223;220** A: 222	Vc : **209;221** B: 215	Vc : **217;213** C: 215	10^{-6} / 10^{-7} Vc : **>300;>300** / **45;55** N: 500 000 000 $N10^{7}$ **50** $N10^{8}$ **5**	Vc : Na : 10^{4} 10^{5}	**47;51** 490 10.2 1	**0;0** < 150 R>10E4 R>10E5	**2;4** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**4;11** < 150 R>10E4 R>10E5
103 **Escherichia coli-Col:CIP 54.127**	Vc : **153;131** Nv: 1420	Vc : **152;147** A: 150	Vc : **132;138** B: 135	Vc : **133;158** C: 146	10^{-6} / 10^{-7} Vc : **192;194** / **22;17** N: 193 181 818 $N10^{7}$ **19,3** $N10^{8}$ **1,9**	Vc : Na : 10^{4} 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5
105 **Pseudomonas aeruginosa-Col:CIP 103467**	Vc : **132;178** Nv: 1550	Vc : **231;215** A: 223	Vc : **171;145** B: 158	Vc : **165;186** C: 176	10^{-6} / 10^{-7} Vc : **276;272** / **36;31** N: 279 545 455 $N10^{7}$ **28** $N10^{8}$ **2,8**	Vc : Na : 10^{4} 10^{5}	**63;51** 570 4,9 0,5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5
106 **Staphylococcus aureus-Col:CIP 4.83**	Vc : **177;212** Nv: 1945	Vc : **189;179** A: 184	Vc : **174;215** B: 195	Vc : **193;185** C: 189	10^{-6} / 10^{-7} Vc : **>300;>300** / **41;48** N: 445 000 000 $N10^{7}$ **44,5** $N10^{8}$ **4,5**	Vc : Na : 10^{4} 10^{5}	**222;223** 2225 2 0,2	**38;29** 335 13,3 1,3	**8;3** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**2;6** < 150 R>10E4 R>10E5

Vc : Number of colonies on Petri dishes
N : CFU in the microbial tested suspension
Nv : CFU in the validation suspension
Na : CFU in assay mix

R : Viable cell reduction
A : CFU in experimental conditions
B : CFU in neutralizer non toxicity or filtration validation
C : CFU in dilution/neutralization or filtration validation

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

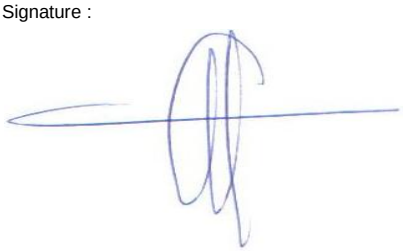
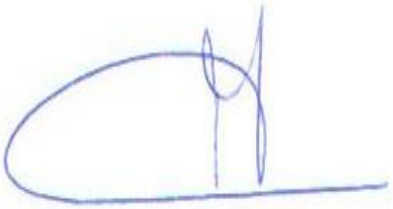
55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

Test certificate N° 334

First print date : 10/04/2003
Print date : 18/07/2008

Conclusion :

In conformity with the norm NF EN 1276 (October 1997), 13P30 batch of HYPROCLOR ED product of HYPRED SA firm, when diluted to 0.15% (V/V) in presence of bovine albumin 0.3 g/l, presents a bactericidal activity for 5 minutes contact time, at 20°C, towards the strain(s) : Enterococcus hirae CIP 58.55, Escherichia coli CIP 54.127, Pseudomonas aeruginosa CIP 103467 and Staphylococcus aureus CIP 4.83.
Strains are preserved and checked according to EN 12353.

Written by:	Approved by:
A-F. GABILLET	**M. THERAUD**
on : 18/07/08	on : 18/07/08
Signature : 	Signature : 

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

First print date : 28/07/2005
Print date : 29/02/2008

Test certificate N° 649

Bactericidal efficiency test according

to the norm : NF EN 1276 (October 1997)

Address :

Address : HYPRED SA

Customer identity

Name : **HYPRED SA**
Address : 55 Bd Jules Verger

35 803 DINARD Cedex
Tel : **Fax :** **E-mail :** jppetagna@roullier.com

Contact :

Surname : PETAGNA **First name** Jean Pierre
Tel: 02-99-16-50-01 **Fax :** 02-99-16-50-20 **E-mail:** jppetagna@roullier.com

Product :

Codification : 462 **Hyproclor ED**
Batch number : 06.02.15.5

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

Test certificate N° 649

First print date : 28/07/2005
Print date : 29/02/2008

Sample identification

Name of the product : 462 **Hyproclor ED**
Batch : 06.02.15.5
Appearance : clear yellow product
Receipt date : 02/06/05
Date of manufacture : 02/06/2005
Active principle: **sodium hypochlorite**

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 101 NF EN 1276 (Octobre 1997)
Test method :

Strain(s)	Neutralizing agent
Enterococcus hirae-Col:CIP 58.55	Neutralizing agent B
Escherichia coli-Col:CIP 54.127	Neutralizing agent B
Pseudomonas aeruginosa-Col:CIP 103467	Neutralizing agent B
Staphylococcus aureus-Col:CIP 4.83	Neutralizing agent B

Appearance :
Neutralizing agent B : (3 %) Polysorbate 80 (ml); (3 %) Saponine (g); (0,3 %) Lecithin (g); (0,1 %) L-Histidin (g); (0,5 %) Sodium thiosulphate (g)

Experimental conditions :

Test manager : M. THERAUD
Start of analysis : 26/07/05
End of analysis : 28/07/05

Tested concentrations of the product : 0,01 in % (V/V)
0,1
0,2
0,5
1

Interfering substance : 164 Skimmed milk 10 g/l
Contact time : 10 (in mn)
Test temperature : 40 (in °C)
Incubation temperature : 37 (in °C)
Diluent described in the norm : Hard water
Stability of the mixture of interfering substance and diluted product : No precipitate during assay

LABORATOIRE DE MICROBIOLOGIE ET D'HYGIENE
55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

Test certificate N° 649

First print date : 28/07/2005
Print date : 29/02/2008

Results

Tested strain(s)	Validation test				Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Bactericidal or Fungicidal suspension	Experimental conditions	Non toxicity of the neutraliser or reference filtration	Inactivation by dilution/ neutralisation or filtration			0,01	0,1	0,2	0,5	1
206 **Enterococcus hirae-Col:CIP 58.55**	Vc : **71;58** Nv: 645	Vc : **76;67** A: 72	Vc : **64;74** B: 69	Vc : **49;59** C: 54	10^{-6} 10^{-7} Vc : **150;150** **15;13** N: 150 000 000 $N10^{7}$ **15** $N10^{8}$ **1,5**	Vc : Na: 10^{4} 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**13;9** < 150 R>10E4 R>10E5	**0;1** < 150 R>10E4 R>10E5	**4;3** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5
207 **Escherichia coli-Col:CIP 54.127**	Vc : **148;125** Nv: 1365	Vc : **170;200** A: 185	Vc : **90;103** B: 97	Vc : **88;123** C: 106	10^{-6} 10^{-7} Vc : **149;148** **16;13** N: 149 047 619 $N10^{7}$ **14,9** $N10^{8}$ **1,5**	Vc : Na: 10^{4} 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5	**0:0** < 150 R>10E4 R>10E5
208 **Pseudomonas aeruginosa-Col:CIP 103467**	Vc : **58;67** Nv: 625	Vc : **172;152** A: 162	Vc : **147;166** B: 157	Vc : **131;107** C: 119	10^{-6} 10^{-7} Vc : **138;138** **24;20** N: 145 454 545 $N10^{7}$ **14,5** $N10^{8}$ **1,5**	Vc : Na: 10^{4} 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**2;0** < 150 R>10E4 R>10E5	**8;9** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5
223 **Staphylococcus aureus-Col:CIP 4.83**	Vc : **96;125** Nv: 1105	Vc : **129;93** A: 111	Vc : **93;84** B: 89	Vc : **113;139** C: 126	10^{-6} 10^{-7} Vc : **232;251** **32;32** N: 248 636 364 $N10^{7}$ **24,9** $N10^{8}$ **2,5**	Vc : Na: 10^{4} 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**4;10** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**2;1** < 150 R>10E4 R>10E5

Vc : Number of colonies on Petri dishes
N : CFU in the microbial tested suspension
Nv : CFU in the validation suspension
Na : CFU in assay mix

R : Viable cell reduction
A : CFU in experimental conditions
B : CFU in neutralizer non toxicity or filtration validation
C : CFU in dilution/neutralization or filtration validation

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

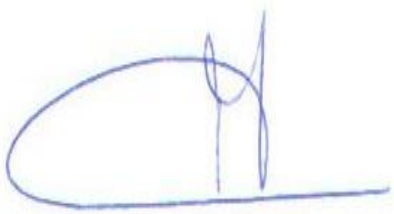
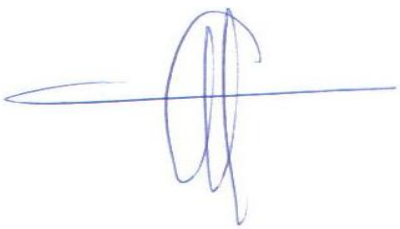
Test certificate N° 649

First print date : 28/07/2005

Print date : 29/02/2008

Conclusion :

In conformity with the norm NF EN 1276 (October 1997), 06.02.15.5 batch of Hyproclor ED product of HYPRED SA firm, when diluted to 0.1% (V/V) in presence of skimmed milk 10 g/l, presents a bactericidal activity for 10 minutes contact time, at 40 °C, towards the strain(s) Enterococcus hirae CIP 58.55, Escherichia coli CIP 54.127, Pseudomonas aeruginosa CIP 103.467 and Staphylococcus aureus CIP 4.83.
Strains are preserved and checked according to EN 12353.

Written by:	Approved by:
M. THERAUD	**A-F. GABILLET**
on : 29/02/08	on : 29/02/08
Signature : 	Signature : 

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52

Test certificate N° 361 m

Bactericidal efficiency test according

to the norm NF EN 1276 (October 1997)

Address :

Address : HYPRED SA

Customer identity

Name : **HYPRED SA**
Address : 55 Bd Jules Verger

35 803 DINARD Cedex
Tel : 02-99-16-50-00 **Fax :** 02-99-16-50-20 **E-mail :** pmourcel@hypred.fr

Contact :

Surname : MOURCEL **First name** Philippe
Tel: 02-99-16-50-31 **Fax :** 02-99-16-52-75 **E-mail:** pmourcel@hypred.fr

Product :

Codification : 269 **HYPROCLOR ED**
Batch number : 48P83

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52

Test certificate N° 361m

First print date : 29/08/03
Print date : 27/11/07

Sample identification

Name of the product : 269 **HYPROCLOR ED**
Batch : 48P83
Appearance : clear yellow product
Receipt date : 19/08/03
Date of manufacture : 18/08/03
Active principle:

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 101 NF EN 1276 (Octobre 1997)
Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Listeria monocytogenes -Col:CIP 52.118	Neutralizing agent B

Appearance :
Neutralizing agent B : (3 %) Polysorbate 80 (ml); (3 %) Saponine (g); (0,3 %) Lecithin (g); (0,1 %) L-Histidin (g); (0,5 %) Sodium thiosulphate (g)

Experimental conditions :

Test manager : A-F. GABILLET
Start of analysis : 20/08/03
End of analysis : 29/08/03

Tested concentrations of the product : 0,05 in % (V/V)
0,1
0,25
0,5
0,75

Interfering substance : 129 1% whole milk
Contact time : 5 (in mn)
Test temperature : 30 (in °C)
Incubation temperature : 37 (in °C)
Diluent described in the norm : Distilled water
Stability of the mixture of interfering substance and diluted product No precipitate during assay

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52 75

Test certificate N° 361m

First print date : 29/08/03
Print date : 27/11/07

Results

Tested strain(s)	Validation test				Bactericidal or Fungicidal tested suspension	Operating method at the concentration %				
	Bactericidal or Fungicidal suspension	Experimental conditions	Non toxicity of the neutraliser or reference filtration	Inactivation by dilution/ neutralisation or filtration			0,05	0,1	0,25	0,5	0,75
198 **Listeria monocytogenes - Col:CIP 52.118**	Vc : **195;177** Nv: 1860	Vc : **235;241** A: 238	Vc : **207;213** B: 210	Vc : **212;220** C: 216	10^{-6} / 10^{-7} Vc : **>300;>300** / **42;36** N: 390 000 000 $N10^{7}$ **39** $N10^{8}$ **3,9**	Vc : $Na\cdot 10^{4}$ 10^{5}	**>300;>300** >3000 R<10E4 R<10E5	**>300;>300** >3000 R<10E4 R<10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5	**0;0** < 150 R>10E4 R>10E5

Vc : Number of colonies on Petri dishes
N : CFU in the microbial tested suspension
Nv : CFU in the validation suspension
Na : CFU in assay mix

R : Viable cell reduction
A : CFU in experimental conditions
B : CFU in neutralizer non toxicity or filtration validation
C : CFU in dilution/neutralization or filtration validation

LABORATOIRE DE
MICROBIOLOGIE
ET D'HYGIENE

55 Bd Jules Verger - 35 803 DINARD Cedex
Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52

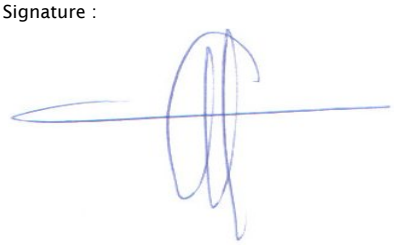
Test certificate N° 361m

First print date : 29/08/03
Print date : 27/11/07

Conclusion :

According to the norm NF EN 1276 (October 1997), 48P83 batch of HYPROCLOR ED product of HYPRED SA firm, when diluted at 0,25 % (V/V) in presence of 1% whole milk, presents a bactericidal activity for 5 minutes contact time, at 30 °C , towards the strain(s) : Listeria monocytogenes .
Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET	M. THERAUD
on :	on :
Signature : 	Signature :