



Test certificate N° 922

Bactericidal efficiency test according to the norm NF EN 1656 (April 2000)

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 : eboisumeau@roullier.com

Contact : _____

Surname : BOISUMEAU First name Emmanuelle

Tel: 02-99-16-50-34 Fax : 02-99-16-52-75 E-mail: eboisumeau@roullier.com

Product : _____

Codification : 600 **HYPRED FORCE 7**

Batch number : PP40



Test certificate N° 922

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

First print date : 7/09/06

Print date : 11/03/08

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Sample identification

Name of the product : 600 HYPRED FORCE 7

Batch : PP40

Appearance : colourless liquid

Receipt date : 19/06/06

Date of manufacture : 19/06/06

Active principle:

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 122 NF EN 1656 (Avril 2000)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Pseudomonas aeruginosa DSM 939-Col:939	Neutralizing agent B
Enterococcus hirae CIP 58.55-Col:CIP 58.55	A neutralizer
Proteus hauseri-Col:DSM 30118	Neutralizing agent B
Staphylococcus aureus-Col:CIP 4.83	A neutralizer

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)
A neutralizer : (0,3 %) 02-9207- Lecithin (g); (0,4 %) Sodium lauryl sulphate (g); (0,1 %) L-Histidin (g); (3 %) Polysorbate 80 (ml)

Experimental conditions :

Test manager : A-F. GABILLET

Start of analysis : 29/08/06

End of analysis : 07/09/06

Tested concentrations of the product : 0,01 in % (V/V)
0,1
0,2
0,3
0,4

Interfering substance : 109 Bovine albumin 3 g/l

Contact time : 30 (in mn)

Test temperature : 10 (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



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FM 064H -5

Test certificate N° 922

First print date : 7/09/06

Print date : 11/03/08

Results

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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	0,3	0,4
273 Pseudomonas aeruginosa DSM 939-Col:939	Vc : 167;151 Nv: 1590	Vc : 90;112 A: 101	Vc : 152;123 B: 138	Vc : 82;93 C: 88	10 ⁻⁶ 10 ⁻⁷ Vc : >300;>300 39;29 N: 340 000 000 N10 ⁷ 34 N10 ⁸ 3,4	Vc : Na: 10 ⁴ 10 ⁵		>300;>300 >3000 R<10E4 R<10E5	>300;>300 >3000 R<10E4 R<10E5	33;42 375 9,1 0,9	43;23 330 10,3 1
290 Enterococcus hirae-Col:CIP 58.55	Vc : 92;94 Nv: 930	Vc : 114;112 A: 113	Vc : 115;105 B: 110	Vc : 108;107 C: 108	10 ⁻⁶ 10 ⁻⁷ Vc : 185;176 20;20 N: 182 272 727 N10 ⁷ 18,2 N10 ⁸ 1,8	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
272 Proteus hauseri-Col:DSM 30118	Vc : 68;64 Nv: 660	Vc : 71;72 A: 72	Vc : 81;59 B: 70	Vc : 57;58 C: 58	10 ⁻⁶ 10 ⁻⁷ Vc : 159;161 17;47 N: 174 545 455 N10 ⁷ 17,5 N10 ⁸ 1,7	Vc : Na: 10 ⁴ 10 ⁵	>300;>300 >3000 R<10E4 R<10E5	0;0 < 150 R>10E4 R>10E5	1;1 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5	1;0 < 150 R>10E4 R>10E5
258 Staphylococcus aureus- Col:CIP 4.83	Vc : 119;121 Nv: 1200	Vc : 156;163 A: 160	Vc : 156;159 B: 158	Vc : 120;113 C: 117	10 ⁻⁶ 10 ⁻⁷ Vc : >300;>300 27;25 N: 260 000 000 N10 ⁷ 26 N10 ⁸ 2,6	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

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



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FM 064G-5

Test certificate N° 922

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

First print date : 7/09/06

Print date : 11/03/08

Conclusion :

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According to the norm NF EN 1656 (April 2000), PP40 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted at 0,4% (V/V) in presence of Bovine albumin 3 g/l, presents a bactericidal activity for 30 minutes contact time, at 10 °C, towards the strain(s) : Pseudomonas aeruginosa DSM 939, Enterococcus hirae CIP 58.55, Proteus hauseri, Staphylococcus aureus.

Strains are preserved and checked according to EN 12353.

Written by:	Approved by:
A-F. GABILLET	M. THERAUD
on : 11/03/08	on : 11/03/08
Signature : 	Signature : 



Test certificate N° 1659

Bactericidal efficiency test according

to the norm : NF EN 14349 (April 2008)

Address : _____

Address : HYPRED SA

Customer identity _____

Name : HYPRED SA
Address : 55 bd Jules Verger

35803 Dinard Cedex

Tel : Fax : E-mail : idemoment@ullier.com

Contact : _____

Surname : DEMOMENT First name Isabelle
Tel: 0299165035 Fax : 0299165275 E-mail: idemoment@ullier.com

Product : _____

Codification : 839 HYPRED FORCE 7
Batch number : 05/06/90/08



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° 1659

First print date : 09/07/2009

Print date : 02/10/2009

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Sample identification

Name of the product : 839 HYPRED FORCE 7

Batch : 05/06/90/08

Appearance : clear product

Receipt date : 18/04/08

Date of manufacture : 06/05/2008

Active principle: Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 156 NF EN 14349 (Avril 2008)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Enterococcus hirae CIP 58.55-Col:CIP 58.55	B neutralizer
Proteus hauseri DSM 30118-Col:DSM 30118	B neutralizer
Pseudomonas aeruginosa DSM 939-Col:939	B neutralizer
Staphylococcus aureus CIP 4.83-Col:CIP 4.83	B neutralizer

Appearance :

B neutralizer : (3 %) Polysorbate 80 (ml); (3 %) Saponine (q); (0.3 %) Lecithin (q); (0.1 %) L-Histidin (q); (0.5 %) Sodium thiosulphate (q)

Experimental conditions :

Test manager : M. THERAUD

Start of analysis : 22/05/08

End of analysis : 25/06/08

Tested concentrations of the product : 0,01 % (m/V)
0,25
0,5
0,75
1

Interfering substance : 109 Bovine albumin 3 g/l

Contact time : 30 (min)

Test temperature : 10 (°C)

Incubation temperature : 37 (°C)

Diluent described in the norm : Hard water

Stability of the mixture of interfering substance and diluted product : not concerned



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FM 064G

Test certificat N° 1659

First print date : 09/07/2009

Print date : 02/10/2009

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Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,01	0,25	0,5	0,75	1
328 Enterococcus hirae CIP 58.55-Col: CIP 58.55	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0		dil : Vc : n:		10 ⁻⁰ >300;>300 0	10 ⁻⁰ 22;27 2	10 ⁻⁰ 11;7 2	10 ⁻⁰ 3;3 2
328 Enterococcus hirae CIP 58.55-Col: CIP 58.55	dil : 10 ⁻⁴ Vc : >300;>300 n: 0	dil : 10 ⁻⁴ Vc : >300;>300 n: 0	dil : 10 ⁻⁴ Vc : >300;>300 n: 0		dil : Vc : n:		10 ⁻¹ 118;151 2	10 ⁻¹ 9;4 0	10 ⁻¹ 5;2 0	10 ⁻¹ 0;0 0
328 Enterococcus hirae CIP 58.55-Col: CIP 58.55	dil : 10 ⁻⁵ Vc : 36;45 n: 2	dil : 10 ⁻⁵ Vc : 37;32 n: 2	dil : 10 ⁻⁵ Vc : 37;35 n: 2		dil : Vc : n:		10 ⁻² 12;15 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0
328 Enterococcus hirae CIP 58.55-Col: CIP 58.55 Synthesis	Nc: 7,60 Nts: >100	B: 7,50	A: 7,60	10 ⁻⁷ Vc : 178;152 n: 2 N: 7,60	Nd: R: Nts:		4,1 3,5 1	2,4 5,2 7	< 2,2 R>4 2	< 2,2 R>4 4

N: log number of cfu per 0.05ml of test suspension ;
Nc: log number of cfu/ml per control surface ;
Nd: log number of cfu/ml per test surface ;
A: log number of cfu/ml per test surface of the neutralizer toxicity control ;
B: log number of cfu/ml of the dilution-neutralization control
Nts: growth observed on treated surface
R: reduction in viability

Methodology checked for :
* N is between 7.6 and 8.1 ;
* N-Nc is not greater than 3 log10 ;
* N-A is not greater than 3 log10 ;
* A-B is not greater than $\pm 0.3 \log_{10}$.

Test certificat N° 1659

First print date : 09/07/2009

Print date : 02/10/2009

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Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,01	0,25	0,5	0,75	1
334 Proteus hauseri DSM 30118-Col:DSM 30118	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0		dil : 10 ⁻⁰ Vc : >300;>300 n: 0	10 ⁻⁰ 21;29 2	10 ⁻⁰ 0;0 2			
334 Proteus hauseri DSM 30118-Col:DSM 30118	dil : 10 ⁻³ Vc : 61;44 n: 2	dil : 10 ⁻³ Vc : 33;31 n: 2	dil : 10 ⁻³ Vc : 24;25 n: 2		dil : 10 ⁻¹ Vc : >300;>300 n: 0	10 ⁻¹ 3;4 0	10 ⁻¹ 0;0 0			
334 Proteus hauseri DSM 30118-Col:DSM 30118	dil : 10 ⁻⁴ Vc : 18;7 n: 1	dil : 10 ⁻⁴ Vc : 4;5 n: 0	dil : 10 ⁻⁴ Vc : 3;3 n: 0		dil : 10 ⁻² Vc : 232;256 n: 2	10 ⁻² 0;0 0	10 ⁻² 0;0 0			
334 Proteus hauseri DSM 30118-Col:DSM 30118 Synthesis	Nc: 5,70 Nts: 26	B: 5,50	A: 5,40	10 ⁻⁷ Vc : 151;177 n: 2 N: 7,60	10 ⁻⁸ 10;17 1	Nd: 5,4 R: 0,3 Nts: 8	2,4 3,3 18	< 2,2 R>4 0		

N: log number of cfu per 0.05ml of test suspension ;
Nc: log number of cfu/ml per control surface ;
Nd: log number of cfu/ml per test surface ;
A: log number of cfu/ml per test surface of the neutralizer toxicity control ;
B: log number of cfu/ml of the dilution-neutralization control
Nts: growth observed on treated surface
R: reduction in viability

Methodology checked for :
* N is between 7.6 and 8.1 ;
* N-Nc is not greater than 3 log10 ;
* N-A is not greater than 3 log10 ;
* A-B is not greater than $\pm 0.3 \log_{10}$.



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Test certificat N° 1659

First print date : 09/07/2009

Print date : 02/10/2009

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Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,01	0,25	0,5	0,75	1
330 <i>Pseudomonas aeruginosa</i> DSM 939-Col:939	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0		dil : Vc : n:		10 ⁻⁰ 60;62 2	10 ⁻⁰ 40;40 2	10 ⁻⁰ 0;0 2	
330 <i>Pseudomonas aeruginosa</i> DSM 939-Col:939	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0		dil : Vc : n:		10 ⁻¹ 4;5 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	
330 <i>Pseudomonas aeruginosa</i> DSM 939-Col:939	dil : 10 ⁻⁴ Vc : 41;36 n: 2	dil : 10 ⁻⁴ Vc : 29;32 n: 2	dil : 10 ⁻⁴ Vc : 31;35 n: 2		dil : Vc : n:		10 ⁻² 0;0 0	10 ⁻² 1;0 0	10 ⁻² 0;0 0	
330 <i>Pseudomonas aeruginosa</i> DSM 939-Col:939 Synthesis	Nc: 6,60 Nts: >100	B: 6,50	A: 6,50	10 ⁻⁷ Vc : >300;>300 n: 0 N: 7,80	10 ⁻⁸ 30;23 2	Nd: R: Nts:	2,8 3,8 0	2,6 4 1	< 2,2 R>4 0	

N: log number of cfu per 0.05ml of test suspension ;
Nc: log number of cfu/ml per control surface ;
Nd: log number of cfu/ml per test surface ;
A: log number of cfu/ml per test surface of the neutralizer toxicity control ;
B: log number of cfu/ml of the dilution-neutralization control
Nts: growth observed on treated surface
R: reduction in viability

Methodology checked for :
* N is between 7.6 and 8.1 ;
* N-Nc is not greater than 3 log10 ;
* N-A is not greater than 3 log10 ;
* A-B is not greater than $\pm 0.3 \log_{10}$.



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FM 064G

Test certificat N° 1659

First print date : 09/07/2009

Print date : 02/10/2009

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Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,01	0,25	0,5	0,75	1
326 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0		dil : 10 ⁻⁰ Vc : >300;>300 n: 0	10 ⁻⁰ 4;3 2	10 ⁻⁰ 4;3 2	10 ⁻⁰ 0;0 2		
326 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻⁴ Vc : 242;268 n: 2	dil : 10 ⁻⁴ Vc : 261;245 n: 2	dil : 10 ⁻⁴ Vc : 247;254 n: 2		dil : 10 ⁻¹ Vc : >300;>300 n: 0	10 ⁻¹ 1;1 0	10 ⁻¹ 1;1 0	10 ⁻¹ 0;0 0		
326 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻⁵ Vc : 21;26 n: 2	dil : 10 ⁻⁵ Vc : 21;27 n: 2	dil : 10 ⁻⁵ Vc : 23;22 n: 2		dil : 10 ⁻² Vc : >300;>300 n: 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0		
326 Staphylococcus aureus CIP 4.83-Col:CIP 4.83 Synthesis	Nc: 7,40 Nts: >100	B: 7,40	A: 7,40	10 ⁻⁷ Vc : 150;161 n: 2 N: 7,60	10 ⁻⁸ 7;10 0	Nd: >5,5 R: R<4	< 2,2 R>4	< 2,2 R>4		

N: log number of cfu per 0.05ml of test suspension ;
Nc: log number of cfu/ml per control surface ;
Nd: log number of cfu/ml per test surface ;
A: log number of cfu/ml per test surface of the neutralizer toxicity control ;
B: log number of cfu/ml of the dilution-neutralization control
Nts: growth observed on treated surface
R: reduction in viability

Methodology checked for :
* N is between 7.6 and 8.1 ;
* N-Nc is not greater than 3 log10 ;
* N-A is not greater than 3 log10 ;
* A-B is not greater than $\pm 0.3 \log_{10}$.



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First print date : 09/07/2009

Print date : 02/10/2009

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Conclusion :

In conformity with the norm NF EN 14349 (April 2008), 05/06/90/08 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted to 0.75% (m/V) in presence of bovine albumin 3 g/l, presents a bactericidal activity on surfaces, for a 30 minute contact time, at 10°C, towards the strain(s) : Enterococcus hirae CIP 58.55, Proteus hauseri DSM 30118, Pseudomonas aeruginosa DSM 939 and Staphylococcus aureus CIP 4.83.
Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
M. THERAUD	A-F. GABILLET
on : 2/10/09	on : 2/10/09
Signature : 	Signature : 



Test certificate N° 933

Bactericidal efficiency test according
to the norm NF EN 1656 (April 2000)

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 : eboisumeau@roullier.com

Contact : _____

Surname : BOISUMEAU First name Emmanuelle

Tel: 02-99-16-50-34 Fax : 02-99-16-52-75 E-mail: eboisumeau@roullier.com

Product : _____

Codification : 600 **HYPRED FORCE 7**

Batch number : PP40



Test certificate N° 933

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

First print date : 22/11/06

Print date : 20/03/08

2/4

Sample identification

Name of the product : 600 HYPRED FORCE 7

Batch : PP40

Appearance : colourless liquid

Receipt date : 19/06/06

Date of manufacture : 19/06/06

Active principle:

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 122 NF EN 1656 (Avril 2000)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Ornithobacterium rhinotracheale-Col: DSM 15997	Neutralizing agent B
Campylobacter jejuni subsp. jejuni-Col:DSM 4688	Neutralizing agent B
Ornithobacterium rhinotracheale SE06-2669-Col:06-	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 : 27/09/06

End of analysis : 22/11/06

Tested concentrations of the product : 0,01 in % (V/V)
0,1
0,2
0,3
0,4

Interfering substance : 109 Bovine albumin 3 g/l

Contact time : 30 (in mn)

Test temperature : 10 (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



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FM 064H -5

Test certificate N° 933

First print date : 22/11/06

Print date : 20/03/08

Results

3/4

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	0,3	0,4
313 Ornithobacterium rhinotracheale-Col: DSM 15997	Vc: 146;146 Nv: 1460	Vc : 149;165 A: 157	Vc : 98;87 B: 93	Vc : 79;50 C: 65	10⁻⁶ 10⁻⁷ Vc : >300;>30040;41 N: 405 000 000 N10⁷40,5 N10⁸4,1	Vc : >300;>300 Na: >3000 10 ⁴ R<10E4 10 ⁵ R<10E5	260;>300 2600 1,6 0,2	8;9 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5		
314 Campylobacter jejuni subsp. jejuni-Col:DSM 4688	Vc: 79;75 Nv: 770	Vc : 75;86 A: 81	Vc : 71;74 B: 73	Vc : 48;28 C: 38	10⁻⁶ 10⁻⁷ Vc : 151;15422;29 N: 161 818 182 N10⁷16,2 N10⁸1,6	Vc : >300;>300 Na: >3000 10 ⁴ R<10E4 10 ⁵ R<10E5	1;3 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5			
315 Ornithobacterium rhinotracheale SE06-2669-Col:06-2669	Vc: 440;500 Nv: 4700	Vc : 528;496 A: 512	Vc : 508;452 B: 480	Vc : 376;340 C: 358	10⁻⁶ 10⁻⁷ Vc : >3000;>3000118;76 N: 970 000 000 N10⁷97 N10⁸9,7	Vc : 301;301 Na: 3010 10 ⁴ 3,2 10 ⁵ 0,3	10;3 < 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



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Tél : +33 (0)2 99 16 50 72 - Fax : +33 (0)2 99 16 52

First print date : 22/11/06

Print date : 20/03/08

Conclusion :

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According to the norm NF EN 1656 (April 2000), PP40 batch of HYPRED FORCE 7 product of HYPRED SA firm, in presence of Bovine albumin 3 g/l, presents a bactericidal activity for 30 minutes contact time, at 10 °C, when diluted at :

- 0,2% (V/V) towards *Ornithobacterium rhinotracheale* DSM 15997,
- 0,1% towards *Campylobacter jejuni* subsp. *jejuni* DSM 4688,
- 0,1% towards *Ornithobacterium rhinotracheale* (field strain).

Strains are preserved and checked according to EN 12353.

Written by:	Approved by:
A-F. GABILLET	M. THERAUD
on : 20/03/08	on : 20/03/08
Signature : 	Signature : 



Test certificate N° 891

Bactericidal efficiency test according
to the norm NF EN 1276 (October 1997)

Address : _____

Address : HYPRED SA

Customer identity _____

Name : HYPRED DISTRI
Address : 55 Bd Jules Verger

35 803 DINARD Cedex

Tel : 02-99-16-50-00 Fax : 02-99-16-50-20 E-mail :

Contact : _____

Surname : LAILLIER First name Pierre

Tel: 02-99-16-50-05 Fax : 02-99-16-50-20 E-mail:

Product : _____

Codification : 600 HYPRED FORCE 7

Batch number : PP40



Test certificate N° 891

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

First print date : 13/07/06

Print date : 12/03/08

2/4

Sample identification

Name of the product : 600 HYPRED FORCE 7

Batch : PP40

Appearance : colourless liquid

Receipt date : 19/06/06

Date of manufacture : 19/06/06

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
Pseudomonas aeruginosa DSM 939-Col:939	Neutralizing agent B
Enterococcus hirae-Col:CIP 58.55	Neutralizing agent B
Escherichia coli-Col:CIP 54.127	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 : A-F. GABILLET

Start of analysis : 21/06/06

End of analysis : 13/07/06

Tested concentrations of the product : 0,01 in % (V/V)
0,1
0,2
0,3
0,4

Interfering substance : 109 Bovine albumin 3 g/l

Contact time : 5 (in mn)

Test temperature : 20 (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

FM 064H -2

Test certificate N° 891

First print date : 13/07/06

Print date : 12/03/08

Results

3/4

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	0,3	0,4
273 Pseudomonas aeruginosa DSM 939-Col:939	Vc : 139;137 Nv: 1380	Vc : 106;129 A: 118	Vc : 128;140 B: 134	Vc : 132;151 C: 142	10 ⁻⁶ 10 ⁻⁷ Vc : >300;>300 29;30 N: 295 000 000 N10 ⁷ 29,5 N10 ⁸ 3	Vc : Na: 10 ⁴ 10 ⁵			>300;>300 >3000 R<10E4 R<10E5	175;201 1880 1,6 0,2	12;17 < 150 R>10E4 R>10E5
256 Enterococcus hirae-Col:CIP 58.55	Vc : 110;105 Nv: 1075	Vc : 95;108 A: 102	Vc : 96;89 B: 93	Vc : 98;96 C: 97	10 ⁻⁶ 10 ⁻⁷ Vc : 195;150 18;20 N: 174 090 909 N10 ⁷ 17,4 N10 ⁸ 1,7	Vc : Na: 10 ⁴ 10 ⁵	>300;>300 >3000 R<10E4 R<10E5	57;42 495 3,5 0,4	0;0 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5
255 Escherichia coli-Col:CIP 54.127	Vc : 119;105 Nv: 1120	Vc : 130;127 A: 129	Vc : 108;105 B: 107	Vc : 109;118 C: 114	10 ⁻⁶ 10 ⁻⁷ Vc : 252;264 37;16 N: 258 636 364 N10 ⁷ 25,9 N10 ⁸ 2,6	Vc : Na: 10 ⁴ 10 ⁵	>300;>300 >3000 R<10E4 R<10E5	>300;>300 >3000 R<10E4 R<10E5	>300;>300 >3000 R<10E4 R<10E5	>300;>300 >3000 R<10E4 R<10E5	6;5 < 150 R>10E4 R>10E5
258 Staphylococcus aureus- Col:CIP 4.83	Vc : 139;122 Nv: 1305	Vc : 131;142 A: 137	Vc : 116;97 B: 107	Vc : 84;96 C: 90	10 ⁻⁶ 10 ⁻⁷ Vc : 230;228 21;24 N: 228 636 364 N10 ⁷ 22,9 N10 ⁸ 2,3	Vc : Na: 10 ⁴ 10 ⁵	>300;>300 >3000 R<10E4 R<10E5	14;8 < 150 R>10E4 R>10E5	0;0 < 150 R>10E4 R>10E5	2;1 < 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

Test certificate N°1951 -1

Bactericidal efficiency test

according to the methodology of the norme NF EN 13697
(November 2001)

Address : _____

Address : HYPRED SA

Customer identity _____

Name : HYPRED SA

Address : 55 bd Jules Verger

35803

Dinard Cedex

Tel :

Fax :

E-mail : idemoment@roullier.com

Contact : _____

Surname : DEMOMENT

First name Isabelle

Tel: 0299165035

Fax : 0299165275

E-mail: idemoment@roullier.com

Product : _____

Codification : 1154 **HYPRED FORCE 7**

Batch number : 08/24/14/10

Manufactured by : HYPRED SA

This test certificate concerns only the tested product .

Duplication of this test certificate is only authorised in it's entirely

This test certificate is composed of 7 pages (this page included)

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° 1951-1

First print date : 03/01/2011

Print date : 04/11/2011

2/7

Sample identification

Name of the product : 1154 HYPRED FORCE 7

Batch : 08/24/14/10

Appearance : Transparent limpid product

Receipt date : 13/09/2010

Date of manufacture : 24/08/2010

Expiration date : 24/08/2011

Active principle:

Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 142 NF EN 13697 (Novembre 2001)

Strain(s)	Neutralizing agent
Staphylococcus aureus CIP 4.83-Col:CIP 4.83	B neutralizer
Enterococcus hirae CIP 58.55-Col:CIP 58.55	B neutralizer
Escherichia coli CIP 54.127-Col:CIP 54.127	B neutralizer
Pseudomonas aeruginosa DSM 939-Col:939	B 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)

Experimental conditions :

Test manager : A-F. GABILLET

Start of analysis : 16/09/2010

End of analysis : 03/01/2011

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

Interfering substance : 134 Bovine albumin 0,3 g/l

Contact time : 15 (min)

Test temperature : 20 (°C)

Incubation temperature : 37 (°C)

Diluent described in the norm Hard water

Stability of the mixture of interfering substance and diluted product not concerned

Test certificat N° 1951-1

First print date : 03/01/2011

Print date : 04/11/2011

3/7

Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,1	0,5	1	1,5	
406 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	-	dil : 10 ⁻⁰ Vc : 2;1 n: 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	
406 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻⁴ Vc : 67;53 n: 2	dil : 10 ⁻⁴ Vc : 49;49 n: 2	dil : 10 ⁻⁴ Vc : 45;38 n: 2	-	dil : 10 ⁻¹ Vc : 0;0 n: 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	
406 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	dil : 10 ⁻⁵ Vc : 11;5 n: 0	dil : 10 ⁻⁵ Vc : 4;2 n: 0	dil : 10 ⁻⁵ Vc : 5;5 n: 0	-	dil : 10 ⁻² Vc : 0;0 n: 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	
406 Staphylococcus aureus CIP 4.83-Col:CIP 4.83	Nc: 6,78 Nts: >100	NT: 6,69	NC: 6,62	10 ⁻⁶ Vc : >300;>300 n: 0 N: 7,23	10 ⁻⁷ 30;38 2	Nd: 1,18 ME: ME >=4	< 0,1 ME>4	< 0,1 ME>4	< 0,1 ME>4	

N: test suspension ;
NC: log number of cfu/ml per test surface of the neutralizer toxicity control ;
NT: log number of cfu/ml of the dilution-neutralization control ;
Nc: log number of cfu/ml per water control surface ;
Nd: log number of cfu/ml per test surface ;
Nts: growth observed on treated surface
ME: microbicidal effect

Methodology checked for :
* N-Nc is not greater than 2 lg ;
* N-NC is not greater than 2 lg ;
* NC-NT is not greater than $\bar{a} \pm 0.3$ lg.

Test certificat N° 1951-1

First print date : 03/01/2011

Print date : 04/11/2011

4/7

Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,1	0,5	1	1,5	
408 Enterococcus hirae CIP 58.55-Col:CIP 58.55	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	dil : 10 ⁻³ Vc : >300;>300 n: 0	-	dil : 10 ⁻⁰ Vc : >300;>300 n: 0	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	
408 Enterococcus hirae CIP 58.55-Col:CIP 58.55	dil : 10 ⁻⁴ Vc : 136;137 n: 2	dil : 10 ⁻⁴ Vc : 105;96 n: 2	dil : 10 ⁻⁴ Vc : 91;96 n: 2	-	dil : 10 ⁻¹ Vc : 114;133 n: 2	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	
408 Enterococcus hirae CIP 58.55-Col:CIP 58.55	dil : 10 ⁻⁵ Vc : 10;7 n: 0	dil : 10 ⁻⁵ Vc : 10;9 n: 0	dil : 10 ⁻⁵ Vc : 4;8 n: 0	-	dil : 10 ⁻² Vc : 9;11 n: 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	
408 Enterococcus hirae CIP 58.55-Col:CIP 58.55	Nc: 7,14 Nts: >100	NT: 7,00	NC: 6,97	10 ⁻⁶ Vc : 251;244 n: 2 N: 7,09	10 ⁻⁷ 14;23 1	Nd: 4,09 ME: 3,05 Nts: >100	< 0,1 ME>4 0	< 0,1 ME>4 0	< 0,1 ME>4 0	

N: test suspension ;
NC: log number of cfu/ml per test surface of the neutralizer toxicity control ;
NT: log number of cfu/ml of the dilution-neutralization control ;
Nc: log number of cfu/ml per water control surface ;
Nd: log number of cfu/ml per test surface ;
Nts: growth observed on treated surface
ME: microbicidal effect

Methodology checked for :
* N-Nc is not greater than 2 lg ;
* N-NC is not greater than 2 lg ;
* NC-NT is not greater than $\bar{a} \pm 0.3$ lg.

Test certificat N° 1951-1

First print date : 03/01/2011

Print date : 04/11/2011

5/7

Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,1	0,5	1	1,5	
407 Escherichia coli CIP 54.127- Col:CIP 54.127	dil : 10 ⁻³ Vc : 236;192 n: 2	dil : 10 ⁻³ Vc : 149;135 n: 2	dil : 10 ⁻³ Vc : 133;106 n: 2	-	dil : 10 ⁻⁰ Vc : >300;>300 n: 0	10 ⁻⁰ 1;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	
407 Escherichia coli CIP 54.127- Col:CIP 54.127	dil : 10 ⁻⁴ Vc : 21;24 n: 2	dil : 10 ⁻⁴ Vc : 11;17 n: 1	dil : 10 ⁻⁴ Vc : 15;13 n: 1	-	dil : 10 ⁻¹ Vc : >300;>300 n: 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	
407 Escherichia coli CIP 54.127- Col:CIP 54.127	dil : 10 ⁻⁵ Vc : 2;3 n: 0	dil : 10 ⁻⁵ Vc : 1;0 n: 0	dil : 10 ⁻⁵ Vc : 0;0 n: 0	-	dil : 10 ⁻² Vc : 44;41 n: 2	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	
407 Escherichia coli CIP 54.127- Col:CIP 54.127	Nc: 6,33 Nts: >100	NT: 6,15	NC: 6,08	10 ⁻⁶ Vc : >300;>300 n: 0 N: 7,47	10 ⁻⁷ 58;59 2	Nd: 4,63 ME: 1,7	0,7 ME >=4	< 0,1 ME >4	< 0,1 ME >4	

N: test suspension ;
NC: log number of cfu/ml per test surface of the neutralizer toxicity control ;
NT: log number of cfu/ml of the dilution-neutralization control ;
Nc: log number of cfu/ml per water control surface ;
Nd: log number of cfu/ml per test surface ;
Nts: growth observed on treated surface
ME: microbicidal effect

Methodology checked for :
* N-Nc is not greater than 2 lg ;
* N-NC is not greater than 2 lg ;
* NC-NT is not greater than $\bar{a} \pm 0.3$ lg.

Test certificat N° 1951-1

First print date : 03/01/2011

Print date : 04/11/2011

6/7

Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,1	0,5	1	1,5	
402 Pseudomonas aeruginosa DSM 939-Col:939	dil : 10 Vc : >300;>300 n: 0	dil : 10 Vc : >300;>300 n: 0	dil : 10 Vc : >300;>300 n: 0	-	dil : 10 Vc : >300;>300 n: 0	- 0 10 >300;>300 0	- 0 10 16;9 2	- 0 10 0;0 2	- 0 10 0;0 2	
402 Pseudomonas aeruginosa DSM 939-Col:939	dil : 10 Vc : 49;39 n: 2	dil : 10 Vc : 85;76 n: 2	dil : 10 Vc : 103;101 n: 2	-	dil : 10 Vc : >300;>300 n: 0	- 1 10 >300;>300 0	- 1 10 2;2 0	- 1 10 0;0 0	- 1 10 0;0 0	
402 Pseudomonas aeruginosa DSM 939-Col:939	dil : 10 Vc : 3;2 n: 0	dil : 10 Vc : 7;8 n: 0	dil : 10 Vc : 2;0 n: 0	-	dil : 10 Vc : >300;>300 n: 0	- 2 10 >300;>300 0	- 2 10 0;0 0	- 2 10 0;0 0	- 2 10 0;0 0	
402 Pseudomonas aeruginosa DSM 939-Col:939	Nc: 5,64 Nts: 3	NT: 5,91	NC: 6,01	- 6 10 Vc : 146;156 n: 2 N: 6,88	- 7 10 19;13 1	Nd: >5,48 ME: ME<4	2,1 3,54	< 0,1 ME>4	< 0,1 ME>4	

N: test suspension ;
NC: log number of cfu/ml per test surface of the neutralizer toxicity control ;
NT: log number of cfu/ml of the dilution-neutralization control ;
Nc: log number of cfu/ml per water control surface ;
Nd: log number of cfu/ml per test surface ;
Nts: growth observed on treated surface
ME: microbicidal effect

Methodology checked for :
* N-Nc is not greater than 2 lg ;
* N-NC is not greater than 2 lg ;
* NC-NT is not greater than $\bar{a} \pm 0.3$ lg.

Test certificate N° 1951-1

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 : 03/01/2011

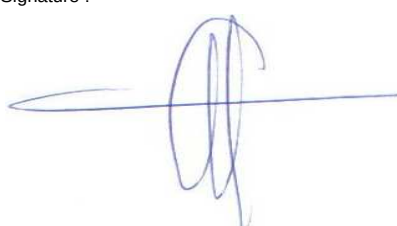
Print date : 04/11/2011

7/7

Conclusion :

According to the norm NF EN 13697 (November 2001), 08/24/14/10 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted to 1% (V/V) in presence of Bovine albumin 0,3 g/l, presents a bactericidal activity on surfaces, for 15 minutes contact time, between 18 and 25°C, towards the strain(s) : Staphylococcus aureus CIP 4.83, Enterococcus hirae CIP 58.55, Escherichia coli CIP 54.127, Pseudomonas aeruginosa DSM 939.
Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET Testing officer	M. SESQUES Doctor in microbiology - Technical director
on : 04/11/11	on : 04/11/11
Signature : 	Signature : 



Test certificate N°1125 -3 m2

Cancelled and replaced the version n°1125-2 m2

Yeasticidal efficiency test
according to the norm NF EN 1657 (April 2000)

Test method : Dilution / neutralization

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 : eboisumeau@roullier.com

Contact :

Surname : BOISUMEAU

First name Emmanuelle

Tel: 02-99-16-50-34

Fax : 02-99-16-52-75

E-mail: eboisumeau@roullier.com

Product :

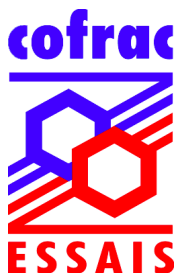
Codification : 308 **Hypred Force 7**

Batch number : KP27

Manufactured by : HYPRED SA

Accréditation :

Accreditation
N°1-1308



Accreditation of COFRAC laboratory section proves competence of laboratories only for test covered by accreditation. If particular notifications have been made in the method of indicated, these modifications or specifications are listed in the part "Comment" at the end of the test certificate.

This test certificate concerns only the tested product.

Duplication of this test certificate is only authorised in it's entirely

This test certificate is composed of 4 pages (this page included)



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° 1125-3 m2

First print date : 18/03/2004

Print date : 22/11/2011

2/4

Sample identification

Name of the product : 308 Hypred Force 7

Batch : KP27

Appearance : Transparent limpid product

Receipt date : 15/01/2004

Date of manufacture : 15/01/2004

Expiration date : 15/01/2005

Active principle:

Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 123 NF EN 1657 (Avril 2000)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Candida albicans DSM 1386-Col:1386	B 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)

Experimental conditions :

Test manager : A-F. GABILLET

Start of analysis : 08/03/2004

End of analysis : 18/03/2004

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

Interfering substance : 109 Bovine albumin 3 g/l

Contact time : 30 (min)

Test temperature : 10 (°C)

Incubation temperature : 30 (°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 : 02 99 16 50 72 - Fax : 02 99 16 52 75

FM064M

Test certificate N° 1125-3 m2

First print date : 18/03/2004

Print date : 22/11/2011

3/4

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	0,5	2		
188 Candida albicans DSM 1386 - 1386	Vc : 88;107 Nv: 975	Vc : 108;102 A: 105	Vc : 84;86 B: 85	Vc : 78;74 C: 76	Vc : 10^{-5} >150;>150 N: 30 000 000 N10 ⁷ 3 N10 ⁸ 0,3	Vc : Na ⁴ 10 ⁴ 10 ⁵	>150;>150 >1500 R<10E4 R<10E5	2;3 < 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



Test certificate N° 1125-3 m2

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 : 18/03/2004

Print date : 22/11/2011

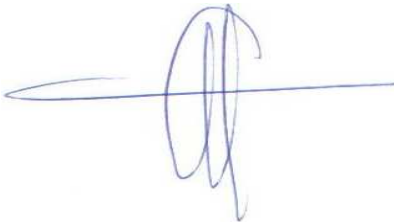
4/4

Conclusion :

In conformity with the norm NF EN 1657 (April 2000), KP27 batch of Hypred Force 7 product when diluted to 0,5% (V/V) in presence of Bovine albumin 3 g/l, presents a yeasticidal activity, for 30 minutes contact time, at 10°C, towards the strain (s) : Candida albicans DSM 1386.

Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET Testing officer	M. SESQUES Doctor in microbiology - Technical director
on : 22/11/11	on : 22/11/11
Signature : 	Signature : 



**Test d'efficacité pour l'activité levuricide de surfaces non-poreuses
selon la méthodologie de la norme NF EN 14349 (Avril 2008)**
HYPRED FORCE 7

DESTINATAIRE : HYPRED SA

I- IDENTIFICATION DE L'ECHANTILLON

- Nom du produit : **HYPRED FORCE 7**
- Numéro de lot : 03.02.91.11
- Date de fabrication : 02/03/11
- Date de péremption : 02/03/12
- Date de réception au laboratoire : 07/03/11
- Aspect du produit : Produit limpide transparent
- Conditions de stockage : à l'obscurité, à température ambiante
- Diluant du produit recommandé par le fabricant : eau du réseau

II- METHODE D'ESSAI ET VALIDATION

Méthode d'essai : Méthodologie de la norme NF EN 14349 (Avril 2008) adaptée à la levure, par dilution - neutralisation.

Neutralisant fabriqué dans l'eau distillée, stérilisé à l'autoclave :

- 3 % Polysorbate 80 (m/V),
- 3 % Saponine (m/V),
- 0,3 % Lécithine (m/V),
- 0,1 % L-Histidine (m/V),
- 0,5 % Thiosulfate de sodium (m/V).

III- CONDITIONS EXPERIMENTALES

- Période d'analyse : du 23/03/11 au 25/03/11
- Technique : dilution - neutralisation
- Analyse réalisée par : M. THERAUD
- Diluant du produit utilisé au cours de l'essai : eau dure 300 mg/kg de CaCO₃.
- Concentrations de produit testées (V/V) : 0,1% - 0,5% - 0,75% - 1% - 1,25%

FM 064K

PROCES VERBAL D'ESSAI

2094-1

Date de 1^{ère} impression : 01/04/11

Imprimé le : 01/04/11

Page 2 sur 3

- Aspect du produit et de ses dilutions : limpide
- Temps de contact : 30 minutes $\pm$ 10 secondes
- Température d'essai : 10°C $\pm$ 1°C
- Substance interférente : 3 g/l d'albumine bovine
- Température d'incubation : 30°C $\pm$ 1°C
- Technique de dénombrement : inclusion
- Identification de la souche utilisée : *Candida albicans* DSM 1386.
- Identification des surfaces utilisées : disques en acier inoxydable 1.4301, nuance 2B, finition bilatérale (selon l'EN 10088-1), de deux cm de diamètre.

IV- RESULTATS D'ESSAI

Essai de validation :

Souches d'essai	Suspension d'essai	Essai de validation		Contrôle de l'eau
	N	A	B	Nc
<i>Candida albicans</i> DSM 1386	(10 ⁻⁶) 46 ; 38 (10 ⁻⁷) 7 ; 4 N = 6	(10 ⁻²) >300 ; >300 (10 ⁻³) 115 ; 123 (10 ⁻⁴) 12 ; 8 A = 6,1	(10 ⁻²) >300 ; >300 (10 ⁻³) 66 ; 63 (10 ⁻⁴) 4 ; 5 B = 5,8	(10 ⁻²) 175 ; 197 (10 ⁻³) 21 ; 27 (10 ⁻⁴) 3 ; 0 Nc = 5,3 Nts > 100

N : logarithme du nombre d'ufc par échantillon de 0,05 ml de la suspension d'essai,

Nc : logarithme du nombre d'ufc/ml par surface témoin,

A : logarithme du nombre d'ufc/ml du témoin de toxicité du neutralisant,

B : logarithme du nombre d'ufc/ml du témoin d'inactivation par dilution-neutralisation,

Nts : témoin de récupération des micro-organismes,

Conditions de validation : N est compris entre 7,6 et 8,1 ; N-Nc $\leq$ 3 ; N-A $\leq$ 3 ; A-B $\leq$ 0,3

Bien que la valeur de N soit inférieure à la valeur attendue, cela n'ayant pas d'impact sur les résultats de l'essai, nous considérons que l'essai est validé.

FM 064K

PROCES VERBAL D'ESSAI

2094-1

Date de 1^{ère} impression : 01/04/11

Imprimé le : 01/04/11

Page 3 sur 3

Essai à proprement parlé :

Souches d'essai	Contrôle de l'eau	ESSAIS Concentrations testées en % (v/v)				
	Nc	0,1%	0,5%	0,75%	1%	1,25%
<i>Candida albicans</i> DSM 1386	(10 ⁻²) 175 ; 197 (10 ⁻³) 21 ; 27 (10 ⁻⁴) 3 ; 0 Nc = 5,3 Nts > 100	(10 ⁰) >300 ; >300 (10 ⁻¹) >300 ; >300 (10 ⁻²) 45 ; 54 Nd = 4,69 R = 0,6 Nts > 100	(10 ⁰) 0 ; 0 (10 ⁻¹) 0 ; 0 (10 ⁻²) 0 ; 0 Nd < 0,1 R > 5,2 Nts = 0	(10 ⁰) 0 ; 0 (10 ⁻¹) 0 ; 0 (10 ⁻²) 0 ; 0 Nd < 0,1 R > 5,2 Nts = 0	(10 ⁰) 0 ; 0 (10 ⁻¹) 0 ; 0 (10 ⁻²) 0 ; 0 Nd < 0,1 R > 5,2 Nts = 0	(10 ⁰) 0 ; 0 (10 ⁻¹) 0 ; 0 (10 ⁻²) 0 ; 0 Nd < 0,1 R > 5,2 Nts = 0

N : logarithme du nombre d'ufc par échantillon de 0,05 ml de la suspension d'essai,

Nc : logarithme du nombre d'ufc/ml par surface témoin,

Nd : logarithme du nombre d'ufc/ml par surface d'essai,

R : réduction du nombre de cellules viables (R=Nc-Nd).

V- CONCLUSION

Selon la méthodologie de la norme NF EN 14349 (Avril 2008), le lot 03.02.91.11 du produit HYPRED FORCE 7 de la société HYPRED SA, lorsqu'il est dilué à 0,5% (v/v), en conditions de saleté de bas niveau (3 g/l d'albumine bovine), présente une activité levuricide sur les surfaces, en 30 minutes de temps de contact, à 10°C, vis-à-vis de la souche de *Candida albicans* DSM 1386.

Les souches sont conservées et contrôlées selon la norme NF EN 12353.

VI- SIGNATURES

Fait à DINARD, le 01/04/11

Rédigé par :	Validé par :
M. THERAUD Responsable des essais	M. SESQUES Directeur technique



Test certificate N° 1965 -1

Yeasticidal efficiency test according

to the norm : NF EN 1650 (October 2008)

Address : _____

Address : HYPRED SA

Customer identity _____

Name : HYPRED SA
Address : 55 bd Jules Verger

35803 Dinard Cedex

Tel : Fax : E-mail : idemoment@roullier.com

Contact : _____

Surname : DEMOMENT First name Isabelle

Tel: 0299165035 Fax : 0299165275 E-mail: idemoment@roullier.com

Product : _____

Codification : 1154 HYPRED FORCE 7
Batch number : 08/24/14/10

Accreditation : _____

Accreditation
N° 1-1308

cofrac

ESSAIS

Accreditation of COFRAC laboratory section proves competence of laboratories only for test covered by accreditation. If particular notifications have been made in the method of indicated , these modifications or specifications are listed in the part "Comment" at the end of the test certificate.

This test certificate concerns only the tested product .

Duplication of this test certificate is only authorised in it's entirely

This test certificate is composed of 4 pages (this page included)



Test certificate N° 1965-1

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 :08/10/10

Print date :29/10/10

2/4

Sample identification

Name of the product : 1154 HYPRED FORCE 7

Batch : 08/24/14/10

Appearance : Transparent limpid product

Receipt date : 13/09/10

Date of manufacture : 24/08/10

Expiration date 24/08/11

Active principle:

Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 158 NF EN 1650 (Octobre 2008)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Candida albicans DSM 1386-Col:1386	B neutralizer

Appearance :

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

Experimental conditions :

Test manager :A-F. GABILLET

Start of analysis : 06/10/10

End of analysis : 08/10/10

Tested concentrations of the product : 0,05 % (V/V)
0,1
0,3
0,6
1

Interfering substance : 134 Bovine albumin 0,3 g/l

Contact time : 15 (min)

Test temperature : 20 (°C)

Incubation temperature : 30 (°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 : 02 99 16 50 72 - Fax : 02 99 16 52 75

FM064J

Test certificate N° 1965-1

First print date : 08/10/10

Print date : 29/10/10

3/4

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	0,3	0,6	1
403 Candida albicans DSM 1386- Col:1386	Vc : 53;52 Nv: 525 Nv0: 53	Vc : 58;65 A: 62	Vc : 53;60 B: 57	Vc : 50;53 C: 52	10^{-5} 5 Vc : 167;189 N 10 ⁷ 1,77 N0 10 ⁶ 1,77 Q : OK	10^{-6} 6 16;19	Vc : >330;>330 Na : >3300 R(lg) : R<4	256;212 2340 2,88	0;0 <140 R>4	0;0 <140 R>4	0;0 <140 R>4

Vc : number of colony-forming unit(s) per plate
N : number of cells per ml in the test suspension
Nv : number of cells per ml in the validation suspension
Na : number of survivors per ml in the test mixture

R : logarithm reduction
A : number of survivors in the experimental conditions
B : number of survivors in the neutralizer control or filtration control
C : number of survivors in the dilution-neutralization or the membrane filtration method validation

A test is validated for :
N between 1,5 - 5 10^7 (lg: 7.17 - 7.70)
N0 between 1,5 - 5 10^6 (lg: 6.17 - 6.70)
Nv0 between 30 and 160
A, B and C equal to or greater than 0.5Nv0
Q between 5 et 15



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FM064J

Test certificate N° 1965-1

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 :08/10/10

Print date :29/10/10

Conclusion :

4/4

In conformity with the norm NF EN 1650 (October 2008), 08/24/14/10 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted to 0,3% (V/V) in presence of Bovine albumin 0,3 g/l, presents a yeasticidal activity, for 15 minutes contact time, at 20°C, towards the strain(s) : Candida albicans DSM 1386.
Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET Testing officer	M. SESQUES Technical director
on : 29/10/10	on : 29/10/10
Signature : 	Signature : 



Test certificate N°1949 -3

Cancelled and replaced the version n°1949-2

Yeasticidal efficiency test
according to the methodology of the norme NF EN 13697
(November 2001)

Address :

Address : HYPRED SA

Customer identity

Name : HYPRED SA

Address : 55 bd Jules Verger

35803

Dinard Cedex

Tel :

Fax :

E-mail : idemoment@roullier.com

Contact :

Surname : DEMOMENT

First name Isabelle

Tel: 0299165035

Fax : 0299165275

E-mail: idemoment@roullier.com

Product :

Codification : 1154 HYPRED FORCE 7

Batch number : 08/24/14/10

Manufactured by : HYPRED SA

This test certificate concerns only the tested product .

Duplication of this test certificate is only authorised in it's entirely

This test certificate is composed of 4 pages (this page included)



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° 1949-3

First print date : 17/09/2010

Print date : 15/11/2011

2/4

Sample identification

Name of the product : 1154 HYPRED FORCE 7

Batch : 08/24/14/10

Appearance : Transparent limpid product

Receipt date : 13/09/2010

Date of manufacture : 24/08/2010

Expiration date : 24/08/2011

Active principle:

Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 153 NF EN 13697 (Novembre 2001)

Strain(s)	Neutralizing agent
Candida albicans DSM 1386-Col:1386	B 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)

Experimental conditions :

Test manager : A-F. GABILLET

Start of analysis : 15/09/2010

End of analysis : 17/09/2010

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

Interfering substance : 134 Bovine albumin 0,3 g/l

Contact time : 15 (min)

Test temperature : 18-25 (°C)

Incubation temperature : 30 (°C)

Diluent described in the norm Hard water

Stability of the mixture of interfering substance and diluted product not concerned



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

FM064I

Test certificat N° 1949-3

First print date : 17/09/2010

Print date : 15/11/2011

3/4

Results

Tested strain(s)	Validation test			Bactericidal or Fungicidal tested suspension	Operating method at the concentration %					
	Water control	Dilution-neutralization control	Neutralizer toxicity control			0,1	0,5	1	1,5	
403 Candida albicans DSM 1386- Col:1386	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0	dil : 10 ⁻² Vc : >300;>300 n: 0	-	dil : 10 ⁻⁰ Vc : 0;0 n: 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	10 ⁻⁰ 0;0 2	
403 Candida albicans DSM 1386- Col:1386	dil : 10 ⁻³ Vc : 34;46 n: 2	dil : 10 ⁻³ Vc : 61;44 n: 2	dil : 10 ⁻³ Vc : 64;62 n: 2	-	dil : 10 ⁻¹ Vc : 0;0 n: 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	10 ⁻¹ 0;0 0	
403 Candida albicans DSM 1386- Col:1386	dil : 10 ⁻⁴ Vc : 5;0 n: 0	dil : 10 ⁻⁴ Vc : 3;8 n: 0	dil : 10 ⁻⁴ Vc : 3;2 n: 0	-	dil : 10 ⁻² Vc : 0;0 n: 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	10 ⁻² 0;0 0	
403 Candida albicans DSM 1386- Col:1386	Nc: 5,60 Nts: >100	NT: 5,72	NC: 5,80	10 ⁻⁵ Vc : >300;>300 n: 0 N: 6,23	10 ⁻⁶ 30;38 2	Nd: < 0,1 ME: ME>3	< 0,1 ME>3	< 0,1 ME>3	< 0,1 ME>3	

N: test suspension ;
NC: log number of cfu/ml per test surface of the neutralizer toxicity control ;
NT: log number of cfu/ml of the dilution-neutralization control ;
Nc: log number of cfu/ml per water control surface ;
Nd: log number of cfu/ml per test surface ;
Nts: growth observed on treated surface
ME: microbicidal effect

Methodology checked for :
* N-Nc is not greater than 2 lg ;
* N-NC is not greater than 2 lg ;
* [NC-NT] is not greater than $\bar{a} \pm 0.3$ lg.



Test certificate N° 1949-3

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 : 17/09/2010

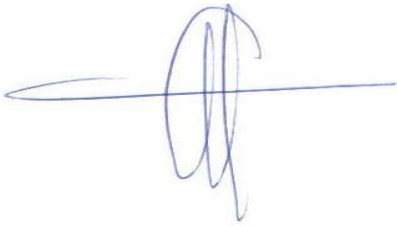
Print date : 15/11/2011

4/4

Conclusion :

According to the norm NF EN 13697 (November 2001), 08/24/14/10 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted to 0,1% (V/V) in presence of Bovine albumin 0,3 g/l, presents a yeasticidal activity on surfaces, for 15 minutes contact time, between 18°C and 25°C, towards the strain(s) : Candida albicans DSM 1386.
Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET Testing officer	M. SESQUES Doctor in microbiology - Technical director
on : 15/11/11	on : 15/11/11
Signature : 	Signature : 

Test report N° 109068287 / \$ 247 231m8

Published the 14/10/2009 Page 1 / 4

First Edition the 14/11/2003

\$247231m8.doc

Antiseptics and chemicals disinfectants used in liquid form
And miscible with water.

Determination of virucide activity - Viruses of vertebrate
adapted of Standard AFNOR NF T 72 180 (December 1989)
and according to the protocol of the AFSSA of Fougères relating to the
homologation of disinfecting for agricultural use

Name of the product : **HYPRED FORCE 7**

Batch number : **Réf JP67**

Buyer : **LMH**
55 Bd Jules Verger
35 800 DINARD

Virus strain used : **H.C.C 's disease virus**

Conditions of analysis : **with organics materials**

This report regards only the tested product.

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ZOOPOLE BIOLOGIE VÉTÉRINAIRE – AGRO-ALIMENTAIRE – ENVIRONNEMENT

LDA22 ■ 7 rue du Sabot B.P. 54 ■ 22440 Ploufragan
Tél. 02 96 01 37 22 ■ Fax 02 96 01 37 50 ■ Site internet : <http://www.lda22.com>

Conseil
Général

Côtes d'Armor

relevons les défis de la qualité



1. IDENTIFICATION OF THE TESTING LABORATORY

Laboratoire de Développement et d'Analyses
Service de Virologie
7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product	: HYPRED FORCE 7
Batch number	: Réf JP67
Packaging	: Non commercial packaging
Name of the buyer	: LMH
Product send by	: LMH
Date of delivery	: 22/08/2003
Storage conditions	: At room temperature
Appearance of product	: clear liquid
Period of analysis	: Started the 26/08/2003 finished the 26/09/2003

3. EXPERIMENTAL CONDITIONS

Test temperature	: 20°C +/- 1°C
Diluent used for product test solution	: Distilled water
Virus strain used	: H.C.C 's disease virus
Culture media	: MEM with 2% and 10% SVF
Condition of analysis	: with organics materials
Cell line	: NBL2
Method	: Sifting method

4. DETERMINATION OF THE METHOD : PRELIMINARY TESTS

4.1 CYTOTOXICITY caused by product solutions (Sifting method)

To chek for possible structural alteration of cells by the product, a 2% concentration of disinfectant is prepared and is filtered on sephadex LH20 column. The lysat is distributed on cells. Any microscopic changes in cells are recorded when reading the tests for CPE.

4.2 INFECTIVITY ASSAY.

	HYPRED FORCE 7 F1 (stop filtration) = 2 %	Virus control F2
Titre of virus	6.04	5.79

Viruses titres are given as Logarithmic and Infectious Units / ml.

Titre virus = Titre virus control ± 0.25 , according to the norm (+/- 0.5).

5. VIRUCIDAL ACTIVITY OF PRODUCT

5.1 Concentration of protein in virus suspension

The protein rate of the viral solution calculated by the Kit BCA (PIERCE) method is conform according to the norm conditions : 1mg/ml $\pm 0,5$.

5.2 Remarque :

According to the norm NFT 72180, a small precipitation in the tube invalidates the test.

Lack of precipitation is validate before and after agitation of test-tubes preceding the taking of sampling for titration of virus. This is notified on the report for each concentration of the product.

If a precipitation is observed, before or after agitation of the tubes, the notation is :

+: Local precipitate = "tortillon"

++ : Small precipitates in the whole tube

+++ : Important precipitate in the whole tube

In case of precipitation, the disinfectant should be tested with "viruses carrier" method, derived from norms NFT72180 and NFT72190.

Final concentration	2%	1.5%	1%	0.8%
First test	ND	+	OK	OK
Second test	+++	Clear (+)	Clear	ND
Third test	ND	+	(+)	(+)

5.3 Contact times virus/disinfectant 30 minutes

FIRST TEST

	Virus control	HYPRED FORCE 7 1 % final concentration	HYPRED FORCE 7 0.8 % final concentration
Precipitation ?	None	+	+
pH	7.1	7	7
Viral titre	6.92	≤ 3.13	≤ 2.74
Reduction in virus titre		≥ 3.79	≥ 4.18

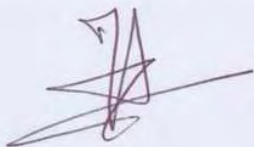
Viruses titres are given as Logarithmic and Infectious Units / ml.

6. CONCLUSION

In these describe conditions , and according to the norm AFNOR NFT 72 180,
the product HYPRED FORCE 7 possesses virucidal activity
for the strain H.C.C 's disease virus ,
result in a ≥ 4.18 log reduction in titre ,
at a final concentration of 0.8 % ,
with organics materials ,
and a 30 minutes contact time.

Ploufragan, le 14 octobre 2009

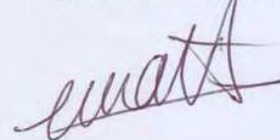
Marie-Agnès BAUDOUARD
Engineer in Virology Laboratory.



Docteur Jean-Philippe BUFFEREAU
Manager in Virology Laboratory



Evelyne LEMAITRE
Engineer in Virology Laboratory.



Test report N° 109068287 / \$ 247 252m4

Published the 14/10/2009 Page 1 / 4

First Edition the 02/02/2004

\$247252m4.doc

Antiseptics and chemicals disinfectants used in liquid form
And miscible with water.

Determination of virucide activity - Viruses of vertebrate
adapted of Standard AFNOR NF T 72 180 and NF T 72 190

Viruses carrier method

Name of the product : **HYPRED FORCE 7**

Batch number : **Réf KP27**

Buyer : **LMH**
55 Bd Jules Verger
35 800 DINARD

Virus strain used : **Talfan's disease virus**

Conditions of analysis : **With interfering substance 1%**
(Bovine Albumine and yeast extract)

This report regards only the tested product.

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ZOOPOLE BIOLOGIE VÉTÉRINAIRE – AGRO-ALIMENTAIRE – ENVIRONNEMENT

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Conseil
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relevons les défis de la qualité



1. IDENTIFICATION OF THE TESTING LABORATORY

Laboratoire de Développement et d'Analyses
Service de Virologie
7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product : HYPRED FORCE 7
Batch number : Réf KP27
Packaging : Non commercial packaging
Name of the buyer : LMH
Product send by : LMH
Date of delivery : 15/01/2004
Storage conditions : At room temperature
Period of analysis : Started the 16/01/2004 finished the 30/01/2004

3. EXPERIMENTAL CONDITIONS

Test temperature : At room temperature
Diluent used for product test solution : Distilled water
Virus strain used : Talfan's disease virus
Culture media : MEM with 2% and 10% SVF
Condition of analysis : With interfering substance 1% (Bovine Albumine and yeast extract)
Cell line : PK 15

4. GERM CARRIER METHODOLOGY

The objective of germ carrier method, adapted of standards NF T 72180 et NF T 72190, is to quantified reduction in virus titre when an assay produces precipitation with interfering substances (yeast extract and bovine albumin).

Virus is dried on glass carrier. Then dilutions of disinfectant are put down on the carrier. The contact time is 30 mn at room temperature. The whole test is transferred in liquid media and is vortexed.
Each test is centrifuge on a Sephadex LH20 column in order to stop the disinfectant.

In the describe conditions, precipitation has been observed for a contact time of 30 mn for the next final concentrations of disinfectant:

Final Concentration	2 %	1.5 %	1 %	0.8 %
result	+++	+	(+)	(+)

+ : Local precipitate = "tortillon"
++ : Small precipitates in the whole tube
+++ : Important precipitate in the whole tube

5. PRELIMINARY TESTS

5.1 Verification of the non CYTOTOXICITY of product solutions (sifting method)

Serial dilution of disinfectant are prepared in distilled water and after filtration in Sephadex column, dilution are tested with PK15 cells.

5.2 INFECTIVITY ASSAY.

	HYPRED FORCE 7 1.5 %	Virus control
Titre of virus	6.92	7.29

Viruses titres are given as Logarithmic and Infectious Units / ml.

Titre virus = Titre virus control $\pm$ 0.37, according to the norm (+/- 0.5).

6. VIRUCIDAL ACTIVITY OF PRODUCT

6.1 Concentration of protein in virus suspension

Viruses are produced with 5% of calf serum. The protein rate of the viral solution calculated by the Kit BCA (PIERCE) method is upper than 1,5mg/ml. It is nothing regarding the protein rate of the interfering substances.

6.2 Contact times virus/disinfectant 30 minutes

FIRST TEST

	HYPRED FORCE 7 1.5 % final concentration	HYPRED FORCE 7 1 % final concentration	HYPRED FORCE 7 0.8 % final concentration
Log Virus control	6.78	6.78	6.78
Log virus test	≤ 3.34	≤ 3.94	4.63
Reduction in virus titre	≥ 3.44	≥ 2.84	2.15

Viruses titres are given as Logarithmic and Infectious Units / ml.

SECOND TEST

	HYPRED FORCE 7 1.5 % final concentration	HYPRED FORCE 7 1 % final concentration
Log Virus control	6.92	6.92
Log virus test	≤ 3.94	≤ 3.94
Reduction in virus titre	≥ 2.98	≥ 2.98

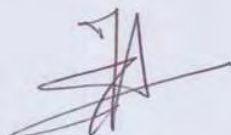
Viruses titres are given as Logarithmic and Infectious Units / ml

7. CONCLUSION

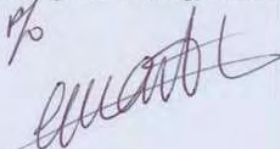
In these describe conditions , and according to "viruses carrier method",
the product HYPRED FORCE 7 possesses virucidal activity
for the strain Talfan's disease virus ,
result in ≥ 2.98 log reduction in titre ,
at a final concentration of 1 % ,
With interfering substance 1% (Bovine Albumine and yeast extract),
and a 30 minutes contact time.

Ploufragan, le 14 octobre 2009

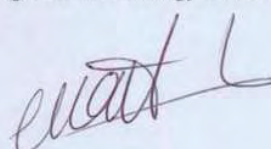
Marie-Agnès BAUDOUARD
Engineer in Virology Laboratory.



Docteur Jean-Philippe BUFFEREAU
Manager in Virology Laboratory.



Evelyne LEMAITRE
Engineer in Virology Laboratory.



Test report N° 110018508 / \$ 247 388m

Published the 28/12/2010 Page 1 / 5

First Edition the 2 June 2010

247388m.doc

***Determination of virucide activity of antiseptics and chemicals
disinfectants used in veterinary field
adapted from NF EN 14675 Standard (July 2006)***

Name of the product : **HYPRED FORCE 7**

Batch number : **02.10.06.10**

Sponsor : **LABORATOIRE DE MICROBIOLOGIE ET D'HYGIENE
55, bd Jules Verger BP 10180
35803 DINARD Cedex FRANCE**

Virus strain used : **ECBO virus**

Interfering substance : **dirty conditions : BSA 3 g/L**

- ☒ Reference conditions [ECBO – 10°C – 30mn]
☐ Additional conditions

This report regards only the tested product.

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It allow 5 pages and 0 annexe



ZOOPOLE BIOLOGIE VÉTÉRINAIRE – AGRO-ALIMENTAIRE – ENVIRONNEMENT

LDA22 ■ 7 rue du Sabot B.P. 54 ■ 22440 Ploufragan
Tél. 02 96 01 37 22 ■ Fax 02 96 01 37 50 ■ Site internet : <http://www.lda22.com>

Conseil
Général

*Côtes d'Armor,
relevons les défis de la qualité*



1. IDENTIFICATION OF THE TESTING LABORATORY

Laboratoire de Développement et d'Analyses
Service de Virologie
7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN France
<http://www.lda22.com>

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product : HYPRED FORCE 7
Batch number : 02.10.06.10
Packaging : Non commercial packaging
Name of the buyer : LABORATOIRE DE MICROBIOLOGIE ET D'HYGIENE
Terms and conditions : Your request of 08/03/2010
Product send by : Mme Gabillet
Date of delivery : 10/03/2010
Storage conditions : At room temperature, apart from sunlight
Appearance of product : Clear liquid
Period of analysis : Started the 16/03/2010 finished the 02/06/2010

3. EXPERIMENTAL CONDITIONS

Test temperature : 10°C +/- 1°C
Diluent used for product test solution : Hard water
Concentrations tested : 1,5% - 1,25% - 1% - 0,8% - 0,5%
Contact time : 30 minutes
Interfering substance : dirty conditions : BSA 3 g/L

Virus strain used : ECBO virus
Culture media : MEM with 2% and 10% FBS
Cellular system : MDBK
Incubation conditions : 37°C +/-1°C + 5% CO2

Method : Dilution method and after gel filtration

4. PREPARATION OF DISINFECTANT CONCENTRATIONS

Dilutions of disinfectant are prepared in hard water.

Dilutions	Aspect of preparation	Comment
10 %	Clear	
1.875 %	Clear	

5. DILUTION METHOD

5.1 DETERMINATION OF SUBCYTOTOXIC DILUTION OF DISINFECTANT

Serial dilutions of disinfectant are prepared in diluent and are inoculated into cellular system to determinate the subcytotoxic dilution.
The subcytotoxic dilution is 0,001 %.

5.2 CHECK OF CELLULAR SENSITIVITY TO VIRUS

We check if the cellular system previously incubated or not with the disinfectant at a concentration equal or lower than the concentration subcytotoxic is capable of developing a viral infection.
The difference in virus titre should be $\leq 0,5$ log.

	HYPRED FORCE 7 D1 (stop dilution) = 0.001 %	Virus control D2
Viral titre	7,62	7,62

Viruses titres are given as Logarithmic and Infectious Units / ml.

Virus titre (D1) = Virus titre Control (D2) ± 0 , according to the standard (+/- 0.5).

If the product is used at the concentration of 1%, the required dilution is 100 causing a dilution of 1000 of viral suspension. The logarithm of virus titre is 7.2 UI/ml. The difference between the logarithm of the virus titre and the logarithm of the required dilution is 4.6.

It is insufficient (<5), to carry out analysis with the method of dilution.

6. GEL FILTRATION METHOD

If the reduction of residual infectivity is insufficient (≤ 5 logs), gel filtration is used to eliminate the cytotoxicity.

6.1 PRIMILARY TESTS

6.1.1 Verifying the absence of toxicity of the filtrate (dilution 1:20)

The filtrate product fitted on Sephadex LH20 or Microspin 400 HR columns is inoculated into cellular system to verify the absence of toxicity.

The filtrate diluted to 1/20th is not toxic.

6.1.2 Check of cellular sensitivity to virus

Cells are treated with the filtrate diluted to 0.15% in order to test the ability of cells to develop viral infection. The difference between log of viral titer obtained on untreated cells and the log of viral titer obtained in cells treated should not exceed 0.5.

	HYPRED FORCE 7 F1 (stop filtration) = 0.15 %	Virus control F2
Viral titre	7,25	7,5

Viruses titres are given as Logarithmic and Infectious Units / ml.

Virus titre (F1) = Virus titre Control (F2) ± 0.25 , according to the standard (+/- 0.5).

6.2 VIRUCIDAL ACTIVITY TESTS

6.2.1 First Test

Contact time virus/disinfectant 30 minutes

	Virus control	HYPRED FORCE 7 1.5 % final concentration	HYPRED FORCE 7 1.25 % final concentration	HYPRED FORCE 7 1 % final concentration
<i>Precipitation ?</i>	None	Opaque	Opaque	Opaque
Viral titre	7,375	$\leq 2,5$	$\leq 2,5$	2,625
Reduction in virus titre		$\geq 4,875$	$\geq 4,875$	4,75

Viruses titres are given as Logarithmic and Infectious Units / ml.

6.2.2 Second Test

Contact time virus/disinfectant 30 minutes

	Virus control	HYPRED FORCE 7 1 % final concentration	HYPRED FORCE 7 0.8 % final concentration	HYPRED FORCE 7 0.5 % final concentration
<i>Precipitation ?</i>	None	Opaque	Trouble	None
Viral titre	7,25	$\leq 2,5$	3,5	3,75
Reduction in virus titre		$\geq 4,75$	3,75	3,5

Viruses titres are given as Logarithmic and Infectious Units / ml.

6.2.3 Inactivation control (formaldehyde 37%) – Contact time 30 minutes

	Virus Control	Formaldéhyde 37 %
<i>Précipitation ?</i>	None	None
Viral titre	7,25	5,75
Reduction in virus titre		1,5

Viruses titres are given as Logarithmic and Infectious Units / ml.

The difference between the reference virus and virus control in the test is between -0.5 and -2.5 after 30 minutes according to the standard.

7. CONCLUSION

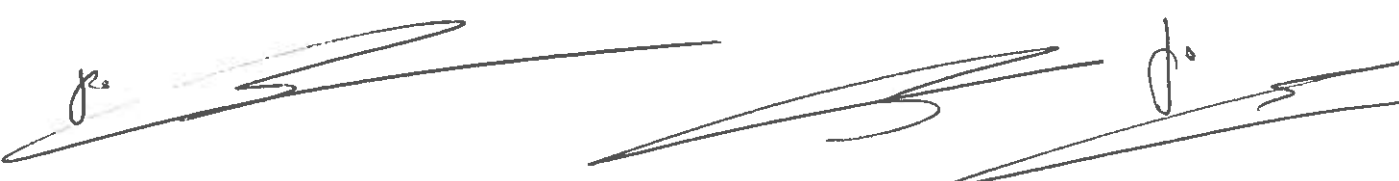
In these describe experimental conditions according to adaptation from NF EN 14675 Standard
the product HYPRED FORCE 7 possesses virucidal activity
against ECBO virus,
resulting in a titre reduction of 4 logs at least,
at a final concentration of 1 % ,
with interfering substance : dirty conditions : BSA 3 g/L,
a 30 minutes contact time.
and a 10°C (+/- 1) temperature

At Ploufragan, the 28 December 2010

Marie-Agnès BAUDOUARD
Engineer in Virology Laboratory

Docteur Jean-Philippe BUFFEREAU
Manager in Virology Laboratory

Evelyne LEMAITRE
Engineer in Virology Laboratory





Test certificate N° 1744

virucidal efficiency test according
to the norm : NF EN 13610 (July 2003)

Address :

Address : HYPRED SA

Customer identity :

Name : HYPRED SA

Address : 55 bd Jules Verger

35803

Dinard Cedex

Tel :

Fax :

E-mail : idemoment@roullier.com

Contact :

Surname : DEMOMENT

Tel : 0299165035

First name Isabelle

Fax : 0299165275

E-mail: idemoment@roullier.com

Product :

Codification : 1056 HYPRED FORCE 7

Batch number : 10/06/85/09

Accreditation :

Accreditation
N°1-1308



Accreditation of COFRAC laboratory section proves competence of laboratories only for test covered by accreditation. If particular notifications have been made in the method of indicated , these modifications or specifications are listed in the part "Comment" at the end of the test certificate.

This test certificate concerns only the tested product .

Duplication of this test certificate is only authorised in it's entirely

This test certificate is composed of 4 pages (this page included)



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° 1744

First print date : 14/10/2009

Print date : 16/12/2009

2/4

Sample identification

Name of the product : 1056 HYPRED FORCE 7

Batch : 10/06/85/09

Appearance : Transparent limpid product

Receipt date : 07/10/2009

Date of manufacture : 06/10/2009

Active principle:

Not filled

Diluent of the product recommended by the manufacturer : Tap water

Identification of the used method :

Method : 146 NF EN 13610 (Juillet 2003)

Test method : Dilution / neutralization

Strain(s)	Neutralizing agent
Phage P001-Col:4262 Phage P008-Col:10567	B neutralizer B 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)

Experimental conditions :

Test manager : M. THERAUD

Start of analysis : 13/10/2009

End of analysis : 14/10/2009

Tested concentrations of the product : 0,01 % (V/V)
0,25
0,5
0,75
1

Interfering substance : 251

Contact time : 15 (min)

Test temperature : 20 (°C)

Incubation temperature : 30 (°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 : 02 99 16 50 72 - Fax : 02 99 16 52 75

FM064H

Test certificate N° 1744

First print date : 14/10/2009

Print date : 16/12/2009

3/4

Results

Tested strain(s)		Validation test				Virucidal tested suspension	Operating method at the concentration %					
		Virucidal suspension	Experimental conditions	Non toxicity of the neutraliser or reference filtration	Inactivation by dilution/neutralisation or filtration			0,01	0,25	0,5	0,75	1
10E-1 : 10E0 : 394 Phage P001-Col:4262	Pc :	58;65	Pc : 70;78	Pc : 76;33	Pc : 27;29	10^{-6} 10^{-7} Pc : >200;>200 22;15 $N.10^9$: 1,85	Pc :	>200;>200	11;8	5;9	0;2	0;2
	Pc :	>200;>200	Pc : >200;>200	Pc : >200;>200	Pc : >200;>200		Pc :	>200;>200	43;39	32;41	11;2	1;0
	Nv:	61500	A: 7400	B: 5450	C: 2800		Na:	>1.10E6	20500	18250	<7,5.10E3	<7,5.10E3
							R.10 ⁴	R<10E4	0,9	1,01	R>10E4	R>10E4
10E-1 : 10E0 : 393 Phage P008-Col:10567	Pc :	74;62	Pc : 90;151	Pc : 59;31	Pc : 15;30	10^{-6} 10^{-7} Pc : 272;290 21;20 $N.10^9$: 2,74	Pc :	>300;>300	5;9	1;6	2;2	3;2
	Pc :	>300;>300	Pc : >300;>300	Pc : >300;>300	Pc : >300;>300		Pc :	>300;>300	68;65	48;49	24;14	29;29
	Nv:	68000	A: 12050	B: 4500	C: 2250		Na:	>1,5.10E6	33250	24250	9500	14500
							R.10 ⁴	R<10E4	0,8	1,1	2,9	1,9

Pc : Number of plaques on Petri dishes

N : PFU in microbial tested suspension

Nv : PFU in validation microbial tested suspension

Na : PFU in assay mix

R : viable viruses reduction

A : PFU in experimental conditions

B : PFU in neutralizer non toxicity or filtration control validation

C : PFU in dilution/neutralization or filtration validation



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° 1744

First print date : 14/10/2009

Print date : 16/12/2009

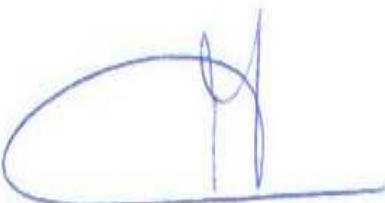
Conclusion :

4/4

In conformity with the norm NF EN 13610 (July 2003), 10/06/85/09 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted to 0.5% (V/V) in presence of skimmed milk 1%, presents a virucidal activity, for a 15 minute contact time, at 20°C, towards the phages P001 (DSM 4262) and P008 (DSM 10567), lytic for *Lactococcus lactis* sp. *lactis* (DSM 4366).

Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
M. THERAUD Testing officer	A-F. GABILLET Testing officer
on : 16/12/09	on : 16/12/09
Signature : 	Signature : 



Institut de
Recherche
Microbiologique

TEST REPORT

N°246/0610-2

DELIVERED TO:

LMH

55 boulevard Jules Verger,

35800 DINARD

PRODUCT:

HYPRED FORCE 7

APPARATUS:

MISTER III

TEST REQUEST OF:

May 31, 2010

REFERENCE ANALYSIS:

246/0610

TEST:

Determination of the virucidal activity towards phages of a process of airborne surface disinfection relative to viruses. Virus carrying method.

Test on *Bacteriophage P001* (DSM 4262)

This report contains 6 pages in English.

It relates only to the product submitted for testing.

Issuing date: September 2, 2010

Philippe STROHL
Veterinary surgeon, Scientific director

I - COMPLETE IDENTIFICATION OF THE PRODUCT AND THE APPARATUS

Name of the product: HYPRED FORCE 7

- **Batch number:** Xp 83
- **Density:** 1.025
- **Manufacturer:** HYPRED S.A.
55 boulevard Jules Verger
BP 10180
35803 DINARD CEDEX

Date of reception at I.R.M.: June 1, 2010

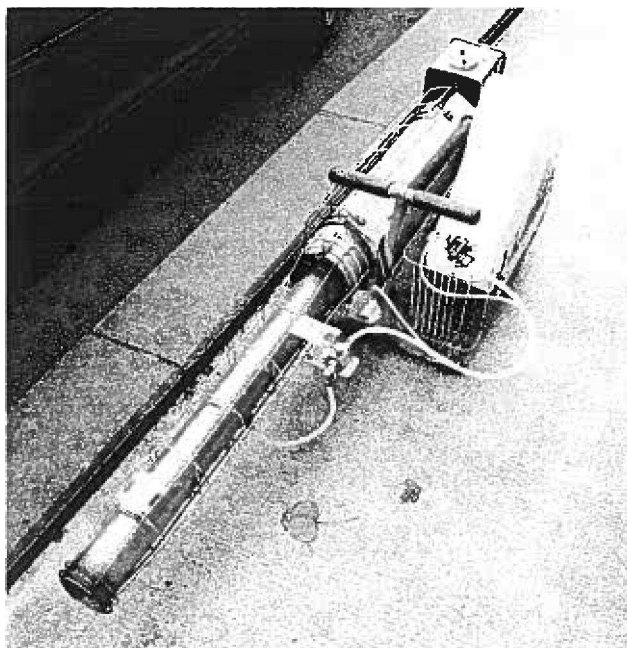
Storage conditions: In the laboratory, at room temperature.

Centesimal composition: not specified.

Proportion test recommended: 2.5 ml/m³

Apparatus: MISTER III

- **Manufacturer:** OCENE
Avenue de Monthorin
35420 LOUVIGNE DU DESERT
- **Serial #:** not specified
- **Photograph of the test apparatus:**



II - EXPERIMENTAL CONDITIONS

Process: Dispersion with no human presence, via an automatic apparatus, of a liquid intended for the disinfection of surfaces of buildings.

Test period: June 10 - 17, 2010

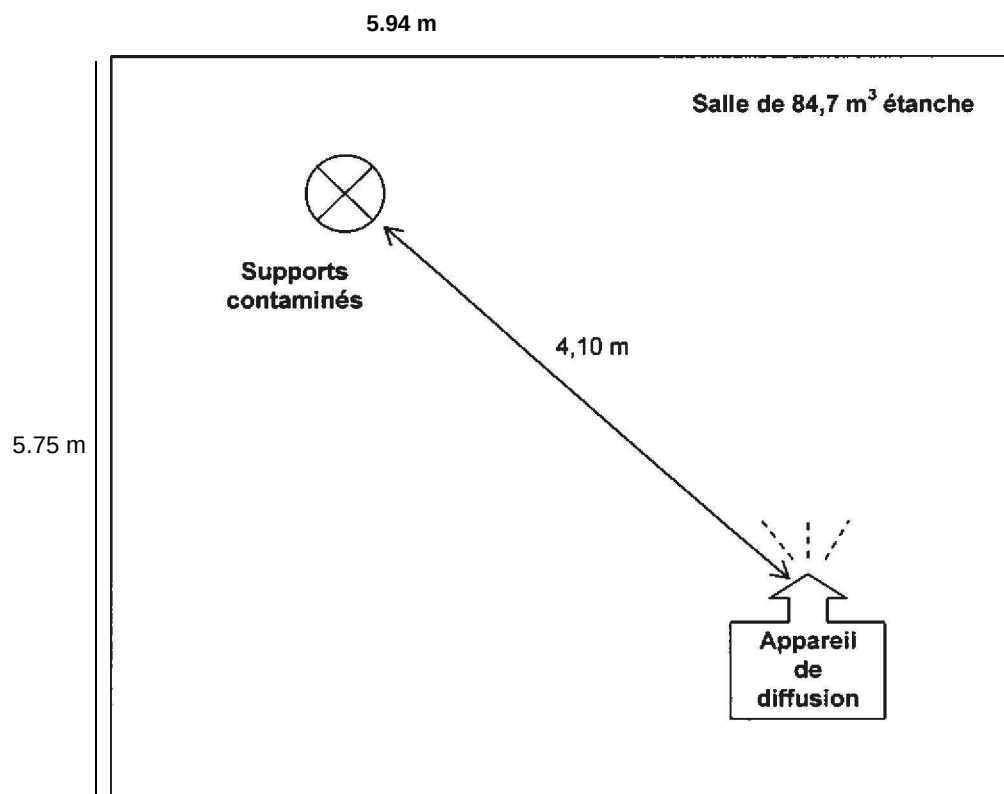
Test room: Dedicated room, in the facilities of I.R.M.

- Description: Ground and walls covered with tiles up to the ceiling, smooth ceiling, coated with washable vinyl paint, one glazed door and one window.
- Volume: $5.75 \times 5.94 \times 2.48 = 84.7 \text{ m}^3$
- Ratio
$$\frac{\text{surface}}{\text{volume}} = \frac{125.4}{84.7} = 1.5$$

Supports: stainless steel supports

- Height of exposure of the supports: 112 cm
- Distance from the source: 4.10 m
- Position of the supports: horizontal

Diagram of the test room:



I

84.7 m³ room, airtight
Contaminated supports
Diffusion apparatus

Phage tested for:

P001 (DSM 4262)

incubation for 24h at 37°C ± 1°C

lytic for the Lactococcus strain, subspecies lactis F7/2 (DSM 4366)

Interfering substance: reconstituted skimmed milk

Time of diffusion of the product: 2 minutes and 22 seconds

Duration of exposure of the supports from the end of diffusion until their withdrawal from the room: 2 hours

Diffused quantity: 226 g, corresponding to an actual diffusion of 2.60 ml/m³

Measured flow of the apparatus: 93,03 ml/min

Thermohygrometric conditions:

■ Temperature:	- beginning:	22.0°C
	- end:	21.7°C
■ Relative humidity:	- beginning:	64.4%
	- end:	63.8%

Technique for stopping the virucidal and cytotoxic action of the product: the support is placed in 10 ml of SM buffer.

Reference of the texts used:

NF EN 13610 (July 2003)

NF T 72-281 (May 2009)

III— PRELIMINARY TESTS

Concentration of the inoculum N (UFP/ml)	Reference values	Test results
$N = 1,2 \times 10^8$	$N1 = 117$	$n1 = 113$ $n2 = 125,5$
N1 = count for the suspension of phages n1 = validation of the support in inclusion n2 = validation for the collected liquid in inclusion		

The test is validated if:

- N is at least 2×10^7 UFP/ml (minimum value to obtain 1×10^6 UPF/support for test supports and reference supports)
- n1 and n2 are at least equal to $0,5 \times N1$

⇒ **The method used allows to stop the virucidal activity of phages, so the experimental conditions described are applicable in the test proper.**

IV - RESULTS

Experimental results:

Reference viral conc. (T) (log UFP/support)		Tested viral conc. (E) (log UFP/support)		
T1	T2	E1	E2	E3
6.4	6.6	< 2.0	< 2.0	< 2.0

Calculation of the logarithmic reduction:

Reference viral conc. (T)	Tested viral conc. (E)	d = reduction rate = disinfecting activity
(log UFP/support) Average of the 2 supports	(log UFP/support) Average of the 3 supports	
T = 6.5	E < 2.0	d > 4 5
d = log (Ave T) - log (Ave E)		

⇒ **According to standard NF EN 13610 (July 2003), phage virucidal processes are processes which cause a reduction of viral concentration higher than or equal to 4.0 log.**

V— CONCLUSION

The test carried out shows that the apparatus/product pair **MISTER III / HYPRED FORCE 7** causes a logarithmic reduction over 4.5 log and thus has a proven virucidal effect on phages as tested on the reference bacteriophage P001 (DSM 4262), in airborne mode, for an amount of 2.6 ml/m³ and 2 hours contact time, after the time necessary for the diffusion of the product.

END OF THE TEST REPORT



Institut de
Recherche
Microbiologique

TEST REPORT

N°246/0610-1

DELIVERED TO:

LMH

55 boulevard Jules Verger, 35800 DINARD

PRODUCT:

HYPRED FORCE 7

APPARATUS:

MISTER III

TEST REQUEST OF:

May 31, 2010

REFERENCE ANALYSIS:

246/0610

TEST:

Determination of the virucidal activity of a process of airborne surface disinfection relative to viruses of vertebrates. Virus carrying method.

Test on *Bovine Enterovirus*, type 1 (ECBO)

This report contains 6 pages in English.

It relates only to the product submitted for testing.

Issuing date: September 2, 2010

Philippe STROHL
Veterinary surgeon, Scientific director

I - COMPLETE IDENTIFICATION OF THE PRODUCT AND THE APPARATUS

Name of the product: HYPRED FORCE 7

- **Batch number:** Xp 83
- **Density:** 1.025
- **Manufacturer:** HYPRED S.A.
55 boulevard Jules Verger
BP 10180
35803 DINARD CEDEX

Date of reception at I.R.M.: June 1, 2010

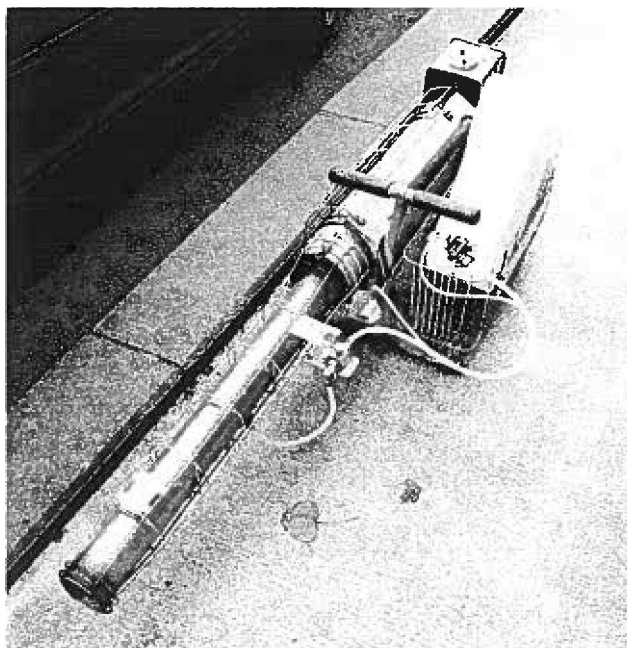
Storage conditions: In the laboratory, at room temperature.

Centesimal composition: not specified.

Proportion test recommended: 2.5 ml/m³

Apparatus: MISTER III

- **Manufacturer:** OCENE
Avenue de Monthorin
35420 LOUVIGNE DU DESERT
- **Serial #:** not specified
- **Photograph of the test apparatus:**



II - EXPERIMENTAL CONDITIONS

Process: Dispersion with no human presence, via an automatic apparatus, of a liquid intended for the disinfection of surfaces of buildings.

Test period: June 10 - 17, 2010

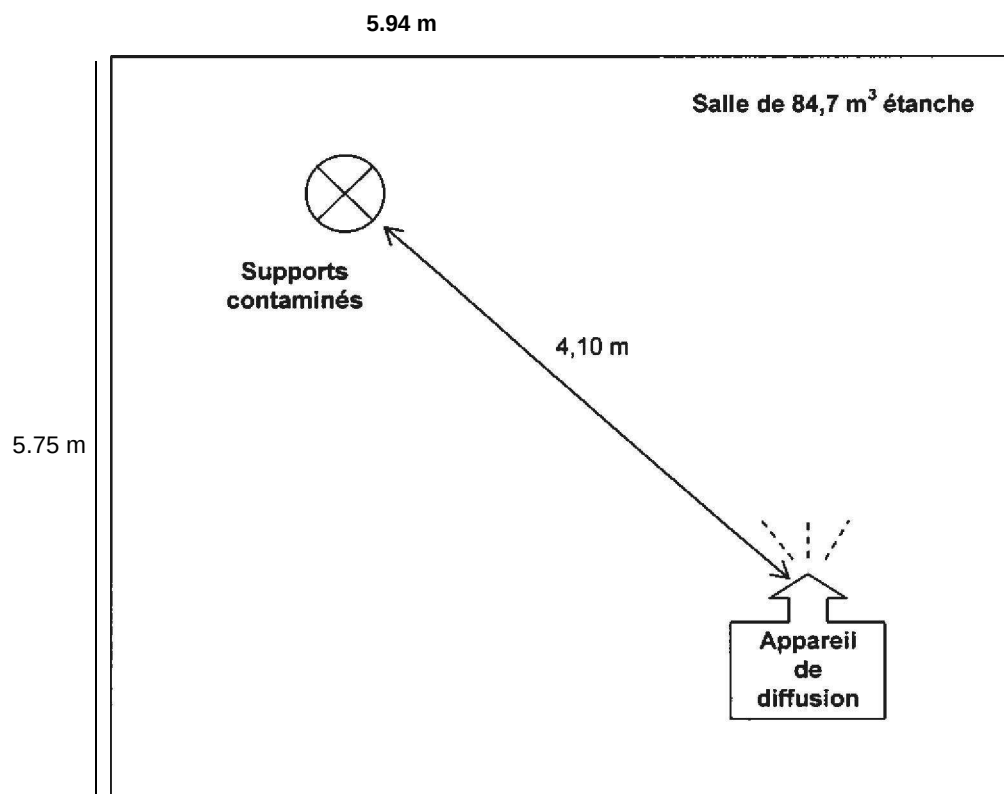
Test room: Dedicated room, in the facilities of I.R.M.

- Description: Ground and walls covered with tiles up to the ceiling, smooth ceiling, coated with washable vinyl paint, one glazed door and one window.
- Volume: $5.75 \times 5.94 \times 2.48 = 84.7 \text{ m}^3$
- Ratio
$$\frac{\text{surface}}{\text{volume}} = \frac{125.4}{84.7} = 1.5$$

Supports: stainless steel support

- Height of exposure of the supports: 112 cm
- Distance from the source: 4.10 m
- Position of the supports: horizontal

Diagram of the test room:



I

84.7 m³ room, airtight
Contaminated supports
Diffusion apparatus

Virus tested for:

Bovine enterovirus type 1 (ECBO) ATCC VR-248
incubation with 5% CO₂, at 37°C, cultivated on MDBK cells

Interfering substance: reconstituted skimmed milk

Time of diffusion of the product: 2 minutes and 22 seconds

Duration of exposure of the supports from the end of diffusion until their withdrawal from the room: 2 hours

Diffused quantity: 226 g, corresponding to an actual diffusion of 2.60 ml/m³

Measured flow of the apparatus: 93,03 ml/min

Thermohygrometric conditions:

■ Temperature:	- beginning:	22.0°C
	- end:	21.7°C
■ Relative humidity:	- beginning:	64.4%
	- end:	63.8%

Technique for stopping the virucidal and cytotoxic action of the product: the support is placed in 10 ml of collected liquid (PBS buffer), then molecular sifting is performed on Sephadex LH20 gel.

Reference of the texts used:

NF EN 14675 (July 2006)

NF T 72-281 (May 2009)

Virus carrying method – document of CNEVA Fougères (April 1997)

III— PRELIMINARY TESTS

1 - Determination of the cytotoxicity of the collected liquid on cells

Test	TESTED DILUTIONS OF FILTRATE				
	undiluted filtrate	diluted filtrate, 1/10	diluted filtrate 1/100	diluted to filtrate, 1/1000	diluted to filtrate, 1/10000
Cyto 1	+	+	+	+	+
Cyto 2	+	+	+	+	+
+: intact cellular layer 0: no cell multiplication					

=> The filtrate of the undiluted collected liquid has no cytotoxic activity on cells.

2 - Viral titration of the assay suspensions

	Tested viral suspension: N1	Viral suspension in contact with the support in the collected liquid then filtered on Sephadex LH20 gel: N2
Virus concentration (log DICT ₅₀ /ml)	7.4 0.005 N1 = 5.1	4.9

=> The method used is validated if the difference between N2 and 0,005N1 is < 0.5 log. The SEPHADEX gel does not retain viruses and they are not adsorbed on the support.

3 - Control of the effectiveness of the stopping of virucidal action of the collected liquid

Test	Virus concentration (log DICT ₅₀ /ml)		Difference in viral concentration
	Viral suspension in contact with the collected liquid	Reference viral suspension: N2	
C1	4.8	4.9	0.1
C2	4.6		0.3

The collected liquid and filtrate on Sephadex LH20 gel stop virucidal activity if the difference between the concentrations of the viral suspensions is < 0.5 log.

IV - RESULTS

Experimental results:

Reference viral conc. (T) (log DICT ₅₀ / support)		Reference viral conc. (T) (log DICT ₅₀ / support)		
T1	T2	E1	E2	E3
5.9	5.9	< 1.6	< 1.6	< 1.6

Calculation of the logarithmic reduction:

Reference viral conc. (T)	Tested viral conc. (E)	d = reduction ratio = disinfecting activity
(log DICT ₅₀ /support) Average of the 2 supports	(log DICT ₅₀ /support) Average of the 3 supports	
T = 5.9	E < 1.6	D > 4.3
d = log (Ave T) - log (Ave E)		

=> According to standard NF EN 14675 (July 2006), virucidal processes are processes which cause a reduction of viral concentration higher than or equal to 4.0 log.

V— CONCLUSION

The test carried out shows that the apparatus/product pair **MISTER III / HYPRED FORCE 7** causes a logarithmic reduction over 4.3 log and thus has a proven virucidal effect on *bovine Enterovirus* type 1 (ECBO) ATCC VR-248, in airborne mode, for an amount of 2.6 ml/m³ and 2 hours contact time, after the time necessary for the diffusion of the product.

END OF THE TEST REPORT



Institut de
Recherche
Microbiologique

TEST REPORT

N°504/1210-2/M-1

ISSUED TO: **HYPRED**
55 boulevard Jules Verger
BP 10180
35803 DINARD CEDEX

PRODUCT: **HYPRED FORCE 7**

APPARATUS: **Thermonébulisateur Mister III**

TEST REQUEST DATE: 07 December 2010

REFERENCE ANALYSE : 504/1210

TEST: Methods for airborne disinfection of surfaces.
Determination of bactericidal, levuricidal, fungicidal and sporicidal activity
according to the standard **AFNOR NF T 72-281** (May 2009)

Partial test on *Pseudomonas aeruginosa* CIP 103.467, *Staphylococcus aureus*
CIP 4.83, *Escherichia coli* CIP 54.127 et *Enterococcus hirae* CIP 58.55 with a
temperature of 10°C at the beginning of the test

This report contains of 7 pages.

It applies only to the product submitted to test

Issue date : 28 January 2011

Re-Issue date : 04 April 2011

Seule la version française fait foi / Only the French version is valid

Amandine CARRE
Microbiologist
Test manager

Philippe STROHL
Doctor of veterinary medicine
Scientific Director

I - COMPLETE IDENTIFICATION OF THE SAMPLE

Product name: **HYPRED FORCE 7**

▪ **Batch number:** 12.27.98.10

▪ **Density:** 1.025

Manufacturer: **HYPRED**
 55 boulevard Jules Verger
 BP 10180
 35803 DINARD CEDEX

I.R.M. reception date: 31 December 2010

Storage conditions: in the laboratory at room temperature

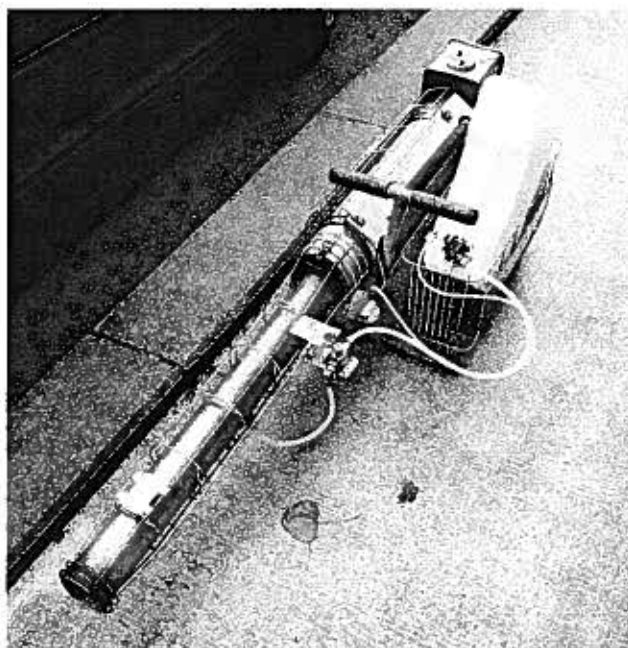
Percentage composition: not indicated

Recommended test quantity: 2.6 ml/m³

Apparatus: **Thermonébulisateur Mister III**

▪ **Manufacturer:** **OCENE**
 Avenue de Monthorin
 35420 LOUVIGNE du DESERT

▪ **Pictures :**



II - EXPERIMENTAL CONDITIONS

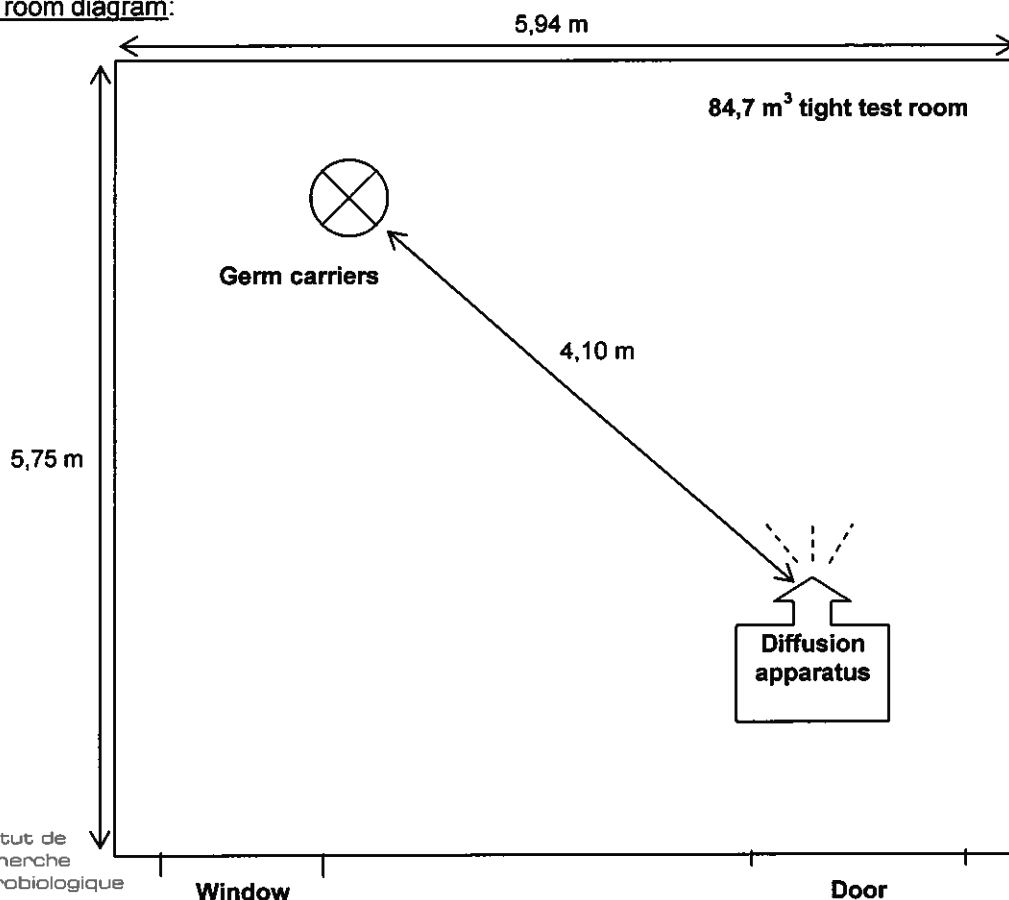
Procedure: Dispersion by an automated apparatus of a liquid intended for the disinfection of room surfaces (no human presence).

Test period: from 06 to 08 January 2011

Test room :

- **Description :**
Tiled floor, walls and roof smooth ceiling painted with a washable vinylic paint.
One door and one window.
No cold surfaces.
 - **Volume :** $5.75 \times 5.94 \times 2.48 = 84.7 \text{ m}^3$
 - **Ratio :** $\frac{\text{surface}}{\text{volume}} = \frac{125.4}{84.7} = 1,5$
- Supports :** Stainless steel disk, diameter = 40 mm.
- **Carrier exposition height :** 102 cm
 - **Distance from source :** 4,10 m
 - **Position of carrier :** vertical
 - **Orientation:** 3 carriers of which the microbial inoculum is directed to the opposite direction to the apparatus of disinfection.

Test room diagram:



Stains tested :

- Bacteria : *Pseudomonas aeruginosa* CIP 103.467
Staphylococcus aureus CIP 4.83
Escherichia coli CIP 54.127
Enterococcus hirae CIP 58.55

Product diffusion time: 1 minute

Exposure time from the end of the 1st diffusion to recuperation of supports: 4 hours

Quantity diffused: 214 g representing a real diffusion of 2.47 ml/m³

Apparatus gauged flow rate: 208.78 ml/min

Thermohygrometric conditions:

- temperature :
 - start: 11°C
 - end: 10.4°C
- relative humidity :
 - start: 66.8%
 - end: 62.6%

Remark: The obligatory temperature required by the standard AFNOR NF T 72-281 (May 2009) at the beginning of the test is included between 18°C and 22°C

References and type of membranes used :

- SARTORIUS 13 006 47 ACN, cellulose nitrate, porosity 0,45 µm, white, grid pattern.

Use of an ultrasonic vibrator : none.

Neutralizer(s) added to count medium or diluent: none.



III - PRELIMINARY TEST

Strains, original collection and number in the collection	Titer of inoculum N (cfu/ml)	Reference values	Validation values
<i>Pseudomonas aeruginosa</i> CIP 103.467	$N = 3.5 \times 10^8$	N1 = 35 N2 = 36 N1 = 35	n1 = 26.5 n2 = 37 n3 = 24
<i>Staphylococcus aureus</i> CIP 4.83	$N = 5.0 \times 10^8$	N1 = 50 N2 = 44 N1 = 50	n1 = 46.5 n2 = 52 n3 = 44.5
<i>Escherichia coli</i> CIP 54.127	$N = 3.6 \times 10^9$	N1 = 35.5 N2 = 29 N1 = 35.5	n1 = 36.25 n2 = 28.5 n3 = 34
<i>Enterococcus hirae</i> CIP 58.55	$N = 5.1 \times 10^8$	N1 = 58 N2 = 52 N1 = 58	n1 = 59 n2 = 56 n3 = 60
N1 = enumeration of microorganisms suspension (count by inclusion). N2 = enumeration of microorganisms suspension (membrane filtration method). n1 = validation for the recovery liquid by inclusion. n2 = validation for the recovery liquid on membrane. n3 = validation of the test surface by inclusion.			

The test is valid if:

- N is between 10^8 and 5×10^9 CFU/ml for bacteria; at least 10^8 CFU/ml for yeasts, 5×10^7 CFU/ml for moulds and at least 2×10^7 CFU/ml for the bacterial spores
- n1 and n3 are equal to or greater than $0.5 \times N1$;
- n2 is equal to or greater than $0.5 \times N2$.

⇒ The described experimental conditions are thus applicable in the main test for the employed quantities.

The preliminary tests and the test have been carried at the same time

IV - TEST

Table of results of the test for demonstration of the disinfectant activity of the combination **Thermonébulisateur Mister III / HYPRED FORCE 7**, according to the standard AFNOR NF T 72-281 (May 2009)

Strains, original collection and number in the collection	Enumeration of microorganisms recovered	Test enumeration			Standard enumeration	
		E1	E2	E3	T1	T2
<i>Pseudomonas aeruginosa</i> CIP 103.467	1 ml de la dilution 10 ⁻³	0	0	0	31 +	50 +
	1 ml de la dilution 10 ⁻²	0	0	0		
	1 ml de la dilution 10 ⁻¹	0	0	0		
	1 ml de l'erien*	0	0	0		
	Filtration de 10 ml	0	0	0		
	Filtration de 87 ml	0	0	0		
	n°1 Inclusion du support : n°2	0 0				
<i>Staphylococcus aureus</i> CIP 4.83	1 ml de la dilution 10 ⁻³	0	0	0	202 +	186 +
	1 ml de la dilution 10 ⁻²	0	0	0		
	1 ml de la dilution 10 ⁻¹	0	0	0		
	1 ml de l'erien*	0	0	0		
	Filtration de 10 ml	0	0	0		
	Filtration de 87 ml	0	0	0		
	n°1 Inclusion du support : n°2	0 0				
<i>Escherichia coli</i> CIP 54.127	1 ml de la dilution 10 ⁻³	0	0	0	107 +	75,5 +
	1 ml de la dilution 10 ⁻²	0	0	0		
	1 ml de la dilution 10 ⁻¹	0	0	0		
	1 ml de l'erien*	0	0	0		
	Filtration de 10 ml	0	0	0		
	Filtration de 87 ml	0	0	0		
	n°1 Inclusion du support : n°2	0 0				
<i>Enterococcus hirae</i> CIP 58.55	1 ml de la dilution 10 ⁻³	0	0	0	218 +	200 +
	1 ml de la dilution 10 ⁻²	0	0	0		
	1 ml de la dilution 10 ⁻¹	0	0	0		
	1 ml de l'erien*	0	0	0		
	Filtration de 10 ml	0	0	0		
	Filtration de 87 ml	0	0	0		
	n°1 Inclusion du support : n°2	0 0				

*The carrier is put in 100 ml of recovery liquid, 1 ml is then sampled twice, and 1 ml is used for 10^{-1} to 10^{-3} dilutions

n'1 : mean number of microorganisms found in 100 ml of recovery liquid

n'2 : mean number of microorganisms found in carriers in inclusion

+ : count values > 330 (or 165 for moulds)

Calculation of the log reduction of the combination **Thermonébulisateur Mister III / HYPRED FORCE 7**, according to the standard AFNOR NF T 72-281 (May 2009):

Tested strains	T = Support counts Controls (mean of 2 supports)	E = Count of test supports n'1 + n'2 (mean of 3 supports)	d = reduction rate = disinfectant activity
<i>Pseudomonas aeruginosa</i> CIP 103.467	$T = 4.1 \times 10^6$	E = 0	d = 6.6 log
<i>Staphylococcus aureus</i> CIP 4.83	$T = 2.0 \times 10^7$	E = 0	d = 7.3 log
<i>Escherichia coli</i> CIP 54.127	$T = 9.3 \times 10^6$	E = 0	d = 7.0 log
<i>Enterococcus hirae</i> CIP 58.55	$T = 2.1 \times 10^7$	E = 0	d = 7.3 log
d = log T – log E			

Minimum reduction rate required to satisfy the standard AFNOR NF T 72-281 (May 2009):

- Bactericidal activity ≥ 5 log

V - CONCLUSION

The partial test demonstrates that the combination **Thermonébulisateur Mister III / HYPRED FORCE 7** present a bactericidal activity on *Pseudomonas aeruginosa* CIP 103 467, *Staphylococcus aureus* CIP 4.83, *Escherichia coli* CIP 54.127 and *Enterococcus hirae* CIP 58.55 when used for airborne surface disinfection according to the standard AFNOR NF T 72-281 (May 2009) for a quantity of 2.47 g/m³ and for 4 hours of contact time, after the diffusion of the product and for an initial temperature at the beginning of the test of 11°C.

END OF THE TEST REPORT





Test certificate N° 924

Bactericidal efficiency test according to the norm NF EN 1656 (April 2000)

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 : eboisumeau@roullier.com

Contact : _____

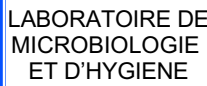
Surname : BOISUMEAU First name Emmanuelle

Tel: 02-99-16-50-34 Fax : 02-99-16-52-75 E-mail: eboisumeau@roullier.com

Product : _____

Codification : 600 **HYPRED FORCE 7**

Batch number : PP40



1629

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

Print date : 18/03/08

2/4

Diluent of the product recommended by the manufacturer : Tap water

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

Stability of the mixture of interfering substance and diluted product : No precipitate during assay



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FM 064H -5

Test certificate N° 924

First print date : 31/08/06

Print date : 18/03/08

Results

3/4

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	0,2	0,3	0,4	0,5
293 Salmonella enterica subsp.enterica-Col:CIP 80.39	Vc : 123;138 Nv: 1305	Vc : 126;135 A: 131	Vc : 124;129 B: 127	Vc : 126;108 C: 117	10^{-6} Vc : >300;>300 N: 315 000 000 10^{-7} N10 ⁷ 31,5 10^{-8} N10 ⁸ 3,2	Vc : Na: 10^{-4} 10^{-5}	>300;>300 >3000 R<10E4 R<10E5	>300;>300 >3000 R<10E4 R<10E5	45;56 505 6237623762 0,6	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

FM 064G-5

Test certificate N° 924

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

First print date : 31/08/06

Print date : 18/03/08

Conclusion :

4/4

According to the norm NF EN 1656 (April 2000), PP40 batch of HYPRED FORCE 7 product of HYPRED SA firm, when diluted at 0,4% (V/V) in presence of Bovine albumin 3 g/l, presents a bactericidal activity for 30 minutes contact time, at 10 °C, towards the strain(s) : Salmonella enterica subsp. enterica. Strains are preserved and checked according to EN 12353.

Comments :

Written by:	Approved by:
A-F. GABILLET	M. THERAUD
on : 18/03/08	on : 18/03/08
Signature : 	Signature : 



Institut de
Recherche
Microbiologique

TEST REPORT

N° 174/0407/M-4

DUPLICATA

ISSUED TO: **LMH**
55 boulevard Jules Verger
BP 10180
35803 DINARD CEDEX

PRODUCT: **HYPRED FORCE 7**

TEST REQUEST DATE: 02 April 2007

ANALYSIS REFERENCE: 174/0407

TEST: Determination of 5-spectrum (strain) bactericidal activity in the presence of a reference interfering substance, in accordance with standard AFNOR NF T 72-170 (November 1988).

Dilution-neutralization method.

Partial test on *Mycobacterium smegmatis* CIP 73 26 with a mix comprising a final test concentration of 1% bovine albumin + 1% yeast extract as interfering substance.

This report contains 5 pages.

This report applies only to the product submitted to test.

Issue date: 17 April 2007
Re-issue date: 06 August 2009

Only the french version is valid / Seule la version française fait foi

Amandine Carré
Microbiologist
Test manager

Philippe Strohl
Doctor of veterinary medicine
Scientific Director

I - COMPLETE SAMPLE IDENTIFICATION

Product name: **HYPRED FORCE 7**

* Batch number: QP 48

I.R.M. reception date: 07 March 2007

Storage conditions: Laboratory counter top, ambient temperature

Analysis period: April 2007

Active substance(s) and concentration(s): Not indicated

Aspect of product and its dilutions: Clear yellow fluid

II - EXPERIMENTAL CONDITIONS

Contact time: 5 minutes

Test temperature: 20°C ± 1°C

Product diluent used during the tests: sterile distilled water

Bacterial strains:

Maintained according to standard NF EN 12353 (September 2006) and verified according to standard AFNOR T 72-140 (August 1988).

Mycobacterium smegmatis CIP 73 26

Interfering substance:

Mix comprising a final test concentration of 1% bovine albumin + 1% yeast extract

Stability in the presence of the product: No precipitate

III - PROCEDURE FOR PRELIMINARY TESTS

Neutralizer:

- * description: sterile distilled water solution comprising 10% (v/v) tween 80, 6% (m/v) saponin, 2% (m/v) lecithin, 0.2% (m/v) L-cysteine, 0.2% (m/v) L-histidine and 0.5% (m/v) sodium thiosulphate.
- * preparation mode: heat dissolution of ingredients and autoclave sterilization, 121°C/15 minutes.

Neutralizer(s) added to count medium and concentration(s):

- * 0.5% (v/v) tween 80,
- * 0.07% (m/v) egg lecithin.

Other additions to count medium: none

IV - RESULTS OF PRELIMINARY TESTS IN DESCRIBED CONDITIONS

Product concentration	Strain, collection of origin and number in the collection	N	n'	n' ₁	n' ₂
1.5% (v/v)	<i>Mycobacterium smegmatis</i> CIP 73 26	189	171	170	183
N : microorganism suspension count (agar medium pour plate procedure) n' : microorganism suspension count following contact with a product-neutralizer mix n' ₁ : microorganism suspension count following contact with the interfering substance n' ₂ : microorganism suspension count following contact with the neutralizer					

Preliminary tests are validated if N, n' ₁, and n' ₂ are similar and $n' \geq 0.5 n'_2$

The neutralizer composition is validated with the product **HYPRED FORCE 7** for all concentrations not exceeding 1.5% (v/v) for the strain *Mycobacterium smegmatis* CIP 73 26.

V - MAIN TEST**Experimental results:**

Strain, collection of origin and number in the collection	N	n'	n' ₁	n' ₂	n Concentration in contact with the microorganisms as a percentage (v/v)					pH	
					1.5	1.2	1.0	0.8	0.4	Cmin	Cmax
<i>Mycobacterium smegmatis</i> CIP 73 26	189	171	170	183	25	147	+	+	+	6.5	5.8
+ : more than 300 colonies n : count of surviving microorganisms after contact with the product N : microorganism suspension count (agar medium pour plate procedure) n' : microorganism suspension count following contact with a product-neutralizer mix n' ₁ : microorganism suspension count following contact with the interfering substance n' ₂ : microorganism suspension count following contact with the neutralizer											

Concentrations are bactericidal when:

N, n', n'₁ and n'₂ are similar
 and n is less than $\frac{n'_2}{10}$

VI - CONCLUSION

The product **HYPRED FORCE 7** does not present mycobactericidal activity in accordance with the standard AFNOR NF T 72-170 (November 1988), after 5 minutes of contact at 20°C in the presence of a mix comprising a final test concentration of 1% bovine albumin + 1% yeast extract.

On the reference strain *Mycobacterium smegmatis* CIP 73 26, use of the product **HYPRED FORCE 7** results in a log reduction of 4.9.



LABORATOIRE D'ETUDES ET DE RECHERCHES EN
PATHOLOGIE ANIMALE ET ZONOSSES

22, rue Pierre Curie
BP 67
94703 Maisons Alfort Cedex
Tel : 01 49 77 13 00

Dossier suivi par : Claude KAISER

Objet : Essai désinfectant/virus aphteux

ACTIVITE VIRUCIDE DU PRODUIT - FORCE 7 - SUR LE VIRUS APHTEUX

Diluant du produit	: Eau distillée stérile
Technique	: Méthodologie décrite dans la norme NF T 72-180 (Décembre 89), adaptée aux virus et aux conditions nécessaires à l'agrément des désinfectants (instructions ministérielles du 8 avril 1987).
Virus et lignée cellulaire	: Virus aphteux de type O BFS cultivé sur cellules IBRS-2 (rein de porc)
Milieu interférant	: Mélange albumine bovine 1% + extrait de levure 1% (concentrations finales en contact avec le désinfectant)
Temps de contact	: 30 minutes à 20°C

RAPPORT D'ESSAI

Identification du produit :

- Nom : **FORCE 7**
- Demandeur : LMH (Laboratoire de microbiologie et d'hygiène)
- Date d'arrivée : 19/04/2005
- Numéro de dossier : D-05-2305
- Echantillon : N° AFSSA 04-03670
- Conditions de stockage : Température ambiante
- Références de l'envoi : CFX 05 00023 du 11/04/05
- Numéro du lot reçu : MP05

Date de réalisation des essais : Mai et Juin 2005

1- Essais préliminaires : Etude de la cytotoxicité du désinfectant

Dilution du mélange réactionnel	10 -1	10-2	10-3	Aspect du mélange réactionnel	PH du mélange réactionnel
Concentration du désinfectant					
2%	T	NT	NT	trouble	5,5
1%	T	NT	NT	Limpide	6
0,75%	T	NT	NT	Limpide	6
0,5%	T	NT	NT	Limpide	6

NT : Non Toxique

T : Toxique

2- Essais définitifs (en présence de matières interférentes)

Concentration du produit	0,5%	0,75%	1%	2%
Titre résiduel	3,2	2,6	< ou égal à 1	< ou égal à 1
Titre du témoin	7	7	7	7
Baisse du titre viral	3,8	4,4	> ou égal à 6	> ou égal à 6

Le titre est exprimé par le logarithme décimal de la D.C.P.50/ml

Le contrôle de la dilution d'arrêt de l'action antivirale a été effectué pour les concentrations du produit de 0,5% et 0,75% (dilutions -2 et -3 du mélange réactionnel)

Conclusions

Suivant les critères établis dans le cadre de l'agrément des désinfectants utilisables en cas de maladies légalement contagieuses , (chute de titre viral de 4 log 10 en 30 minutes et à 20°C en présence de matière organique) ,le produit **FORCE 7** est actif à la dose de **0,75%** (V/V) sur le virus aphteux de type O BFS.

C.Kaiser

Secteur des maladies
Vésiculo-aphteuses





Test report N° 109068287 / \$ 247 347m5

Published the 14/10/2009 Page 1 / 5

First Edition the 01/12/2006

\$247347m5.doc

Antiseptics and chemicals disinfectants used in liquid form
And miscible with water.

Determination of virucide activity - Viruses of vertebrate
adapted of Standard AFNOR NF T 72 180 (December 1989)
and according to the protocol of the AFSSA of Fougères relating to the
homologation of disinfecting for agricultural use

Name of the product : **HYPRED-FORCE 7**

Batch number : **réf PP40**

Buyer : **LMH**
55 Bd Jules Verger
35803 DINARD

Virus strain used : **Newcastle's disease virus**

Conditions of analysis : **with organics materials**

This report regards only the tested product

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ZOOPOLE BIOLOGIE VÉTÉRINAIRE – AGRO-ALIMENTAIRE – ENVIRONNEMENT

LDA22 ■ 7 rue du Sabot B.P. 54 ■ 22440 Ploufragan

Tél. 02 96 01 37 22 ■ Fax 02 96 01 37 50 ■ Site internet: <http://www.lda22.com>

Conseil
Général

Côtes d'Armor

relevons les défis de la qualité

Côtes d'Armor

1. IDENTIFICATION OF THE TESTING LABORATORY

Laboratoire de Développement et d'Analyses
Service de Virologie
7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product	: HYPRED-FORCE 7
Batch number	: réf PP40
Packaging	: Non commercial packaging
Product send by	: LMH
Date of delivery	: D07/07/2006
Storage conditions	: At room temperature
Appearance of product	: clear liquid
Period of analysis	: Started the 24/07/2006 finished the 01/12/2006

3. EXPERIMENTAL CONDITIONS

Test temperature	: 20°C +/- 1°C
Diluent used for product test solution	: Distilled water
Virus strain used	: Newcastle's disease virus
Culture media	: MEM with 2% and 10% SVF
Condition of analysis	: with organics materials
Cell line	: RK13
Method	: Dilution method

4. DETERMINATION OF THE METHOD : PRELIMINARY TESTS

4.1 Determination of subcytotoxic dilution of disinfectant (Dilution method)

To check for possible alteration of cells by the product, serial dilutions of disinfectant are prepared in water and are inoculated into eggs. Eggs are incubated at 37°C and embryos development is recorded.
The subcytotoxic dilution is 0,1%. If the product is used at the concentration of 1%, the required dilution is 10. The logarithm of virus titre is 9 UI/ml. The difference between the logarithm of the virus titre and the logarithm of the required dilution is 8.
It is sufficient (≥ 4), to carry out analysis with the method of dilution.

4.2 Control of efficacy of the stop of disinfectant and sensitivity of cells to the virus.

	HYPRED-FORCE 7 D1 (stop dilution) = 0,01%	Virus control D2
Titre of virus	10	10,2

Viruses titres are given as Logarithmic and Infectious Units / ml.

Titre virus = Titre virus control $\pm 0,2$, according to the norm (+/- 0.5).

5. VIRUCIDAL ACTIVITY OF PRODUCT

5.1 Concentration of protein in virus suspension

The viral solution used in these tests was produced on eggs and the protein rate is superior to 1mg/ml $\pm 0,5$.

5.2 Remarque :

According to the norm NFT 72180, a small precipitation in the tube invalidates the test.

Lack of precipitation is validate before and after agitation of test-tubes preceding the taking of sampling for titration of virus. This is notified on the report for each concentration of the product.

If a precipitation is observed, before or after agitation of the tubes, the notation is :

+: Local precipitate = "tortillon"

++ : Small precipitates in the whole tube

+++ : Important precipitate in the whole tube

In case of precipitation, the disinfectant should be tested with "viruses carrier" method, derived from norms NFT72180 and NFT72190.

Final Concentration	2%	1.5%	1%	0.5%
pH	6.08	6.26	6.48	6.70
Results	opaque	clear	clear one filament	clear

5.3 Contact times virus/disinfectant 30 minutes

FIRST TEST

	Virus control	HYPRED-FORCE 7 0,5 % final concentration	HYPRED-FORCE 7 0,75 % final concentration
Precipitation ?	None	Filaments	Filaments
pH	7.2	6.7	6.6
Viral titre	11.3	3.7	≤ 3.1
Reduction in virus titre		7.6	≥ 8.2

Viruses titres are given as Logarithmic and Infectious Units / ml.

SECOND TEST

	Virus control	HYPRED-FORCE 7 0,5 % final concentration
<i>Precipitation ?</i>	None	trouble
pH	7.17	6.66
Viral titre	10.5	3.3
Reduction in virus titre		7.2

Viruses titres are given as Logarithmic and Infectious Units / ml.

6. CONCLUSION

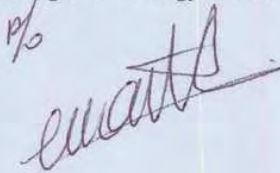
In these describe conditions , and according to the norm AFNOR NFT 72 180,
the product HYPRED-FORCE 7 possesses virucidal activity
for the strain Newcastle's disease virus ,
result in a reduction in titre upper than 4 log,
at a final concentration of 0.5 % ,
with organics materials ,
and a 30 minutes contact time.

Ploufragan, the 14 October 2009

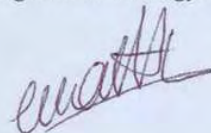
Marie-Agnès BAUDOUARD
Engineer in Virology Laboratory.



Docteur Jean-Philippe BUFFEREAU
Manager in Virology Laboratory.

p/s


Evelyne LEMAITRE
Engineer in Virology Laboratory.



Test report N° 109068287 / \$ 247 348m5

Published the 14/10/2009 Page 1 / 5

First Edition the 01/12/2006

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Antiseptics and chemicals disinfectants used in liquid form
And miscible with water.

Determination of virucide activity - Viruses of vertebrate
adapted of Standard AFNOR NF T 72 180 (December 1989)
and according to the protocol of the AFSSA of Fougères relating to the
homologation of disinfecting for agricultural use

Name of the product : **HYPRED-FORCE 7**

Batch number : **Ref PP40**

Expiry date :

Manufacturer:

Buyer : **LMH**
55 Bd Jules Verger
35803 DINARD Cedex

Virus strain used : **Classical Swine Fever 's disease virus**

Conditions of analysis : **with organics materials**

This report regards only the tested product

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7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product	: HYPRED-FORCE 7
Batch number	: Ref PP40
Packaging	: Non commercial packaging
Name of the buyer	: LMH
Product send by	: LMH
Date of delivery	: 07/07/2006
Storage conditions	: At room temperature
Appearance of product	: clear liquid
Period of analysis	: Started the 28/08/2006 finished the 1/12/2006

3. EXPERIMENTAL CONDITIONS

Test temperature	: 20°C +/- 1°C
Diluent used for product test solution	: Distilled water
Virus strain used	: Classical Swine Fever 's disease virus
Culture media	: MEM with 2% and 10% SVF
Condition of analysis	: with organics materials
Cell line	: PK 15
Method	: Sifting method

4. DETERMINATION OF THE METHOD : PRELIMINARY TESTS

4.1 *CYTOTOXICITY caused by product solutions* (Sifting method)

To chek for possible structural alteration of cells by the product, a 2% concentration of disinfectant is prepared and is filtered on sephadex LH20 column. The lysat is distributed on cells. Any microscopic changes in cells are recorded when reading the tests for CPE.
Non cytotoxicity is observed.

4.2 INFECTIVITY ASSAY.

	HYPRED-FORCE 7 F1 (stop filtration) = 0,5%	Virus control F2
Titre of virus	8.54	8.33

Viruses titres are given as Logarithmic and Infectious Units / ml.

Titre virus = Titre virus control ± 0.21 , according to the norm (+/- 0.5).

5. VIRUCIDAL ACTIVITY OF PRODUCT

5.1 Concentration of protein in virus suspension

The viral solution used in these tests was produced on eggs and the protein rate is superior to 1mg/ml $\pm 0,5$.

5.2 Remarque :

According to the norm NFT 72180, a small precipitation in the tube invalidates the test.

Lack of precipitation is validate before and after agitation of test-tubes preceding the taking of sampling for titration of virus. This is notified on the report for each concentration of the product.

If a precipitation is observed, before or after agitation of the tubes, the notation is :

+ : Local precipitate = "tortillon"

++ : Small precipitates in the whole tube

+++ : Important precipitate in the whole tube

In case of precipitation, the disinfectant should be tested with "viruses carrier" method, derived from norms NFT72180 and NFT72190.

Final concentration	2%	1.5%	1%	0.5%
PH	6.08	6.26	6.48	6.70
Results	opaque	clear	clear one filament	clear

5.3 Contact times virus/disinfectant 30 minutes

FIRST TEST

	Virus control	HYPRED-FORCE 7 0.5 % final concentration
Precipitation ?	None	little trouble
pH	6.9	5.7
Viral titre	6.46	≤ 2.34
Reduction in virus titre		≥ 4.12

Viruses titres are given as Logarithmic and Infectious Units / ml.

SECOND TEST

	Virus control	HYPRED-FORCE 7 0.5 % final concentration
<i>Precipitation ?</i>	None	little trouble
pH	6.81	6.01
Viral titre	6.77	≤ 2.34
Reduction in virus titre		≥ 4.43

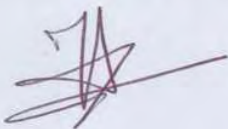
Viruses titres are given as Logarithmic and Infectious Units / ml.

6. CONCLUSION

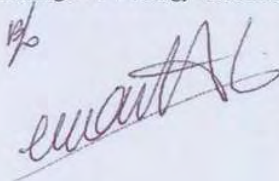
In these describe conditions , and according to the norm AFNOR NFT 72 180,
the product HYPRED-FORCE 7 possesses virucidal activity
for the strain Classical Swine Fever 's disease virus ,
result in a reduction in titre upper than 4 log,
at a final concentration of 0.5 % ,
with organics materials ,
and a 30 minutes contact time.

Ploufragan, the 14 October 2009

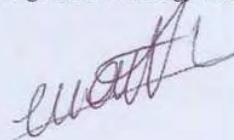
Marie-Agnès BAUDOUARD
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Docteur Jean-Philippe BUFFEREAU
Manager in Virology Laboratory



Evelyne LEMAITRE
Engineer in Virology Laboratory.



Test report N° 109068287 / \$ 247 346m5

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First Edition the 01/12/2006

\$247346m5.doc

Antiseptics and chemicals disinfectants used in liquid form
And miscible with water.

Determination of virucide activity - Viruses of vertebrate
adapted of Standard AFNOR NF T 72 180 (December 1989)
and according to the protocol of the AFSSA of Fougères relating to the
homologation of disinfecting for agricultural use

Name of the product : **HYPRED-FORCE 7**

Batch number : **réf PP40**

Buyer : **LMH**
55 Bd Jules Verger
35803 DINARD

Virus strain used : **Myxomatosis 's disease virus**

Conditions of analysis : **With organic material**

This report regards only the tested product

The reproduction of this report is allowed with a whole photographic "fac-similé"

It allows 5 pages and 0 annexes

1. IDENTIFICATION OF THE TESTING LABORATORY

Laboratoire de Développement et d'Analyses
Service de Virologie
7, Rue du Sabot
B.P 54
22440 PLOUFRAGAN

2. IDENTIFICATION OF THE PRODUCT AND THE REQUEST

Name of the product	: HYPRED-FORCE 7
Batch number	: réf PP40
Packaging	: Non commercial packaging
Name of the buyer	: LMH
Product send by	: LMH
Date of delivery	: 07/07/2006
Storage conditions	: At room temperature
Appearance of product	: clear liquid
Period of analysis	: Started the 29/09/2006 finished the 01/12/2006

3. EXPERIMENTAL CONDITIONS

Test temperature	: 20°C +/- 1°C
Diluent used for product test solution	: Distilled water
Virus strain used	: Myxomatosis 's disease virus
Culture media	: MEM with 2% and 10% SVF
Condition of analysis	: With organic material
Cell line	: RK13
Method	: Dilution method

4. DETERMINATION OF THE METHOD : PRELIMINARY TESTS

4.1 Determination of subcytotoxic dilution of disinfectant (Dilution method)

To check for possible alteration of cells by the product, serial dilutions of disinfectant are prepared in water and are inoculated into eggs. Eggs are incubated at 37°C and embryos development is recorded.
The subcytotoxic dilution is 0,001%. If the product is used at the concentration of 1%, the required dilution is 1000.
The logarithm of virus titre is 7 UI/ml. The difference between the logarithm of the virus titre and the logarithm of the required dilution is 4.
It is sufficient (≥ 4), to carry out analysis with the method of dilution.

4.2 Control of efficacy of the stop of disinfectant and sensitivity of cells to the virus.

	HYPRED-FORCE 7 D1 (stop dilution) = 0,01%	Virus control D2
Titre of virus	4,79	5,01

Viruses titres are given as Logarithmic and Infectious Units / ml.

Titre virus = Titre virus control $\pm 0,22$, according to the norm (+/- 0.5).

5. VIRUCIDAL ACTIVITY OF PRODUCT

5.1 Concentration of protein in virus suspension

The viral solution used in these tests was produced on eggs and the protein rate is superior to 1mg/ml $\pm 0,5$.

5.2 Remarque :

According to the norm NFT 72180, a small precipitation in the tube invalidates the test.

Lack of precipitation is validate before and after agitation of test-tubes preceding the taking of sampling for titration of virus. This is notified on the report for each concentration of the product.

If a precipitation is observed, before or after agitation of the tubes, the notation is :

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In case of precipitation, the disinfectant should be tested with "viruses carrier" method, derived from norms NFT72180 and NFT72190.

Final concentration	2%	1.5%	1%	0.5%
PH	6.08	6.26	6.48	6.70
Results	opaque	clear	clear	clear

5.3 Contact times virus/disinfectant 30 minutes

FIRTH TEST

	Virus control	HYPRED-FORCE 7 0,5 % final concentration	HYPRED-FORCE 7 0,75 % final concentration	HYPRED-FORCE 7 1 % final concentration
Precipitation ?	None	None	filaments	filaments
pH	7.3	7.01	6.86	6.77
Viral titre	6.25	≤ 4.04	≤ 4.21	≤ 4.34
Reduction in virus titre		≥ 2.21	≥ 2.03	≥ 1.90

Viruses titres are given as Logarithmic and Infectious Units / ml.

SECOND TEST

	Virus control	HYPRED-FORCE 7 0,5 % final concentration
<i>Precipitation ?</i>	None	None
pH	7.08	6.65
Viral titre	5.31	≤ 4.04
Reduction in virus titre		≥ 1.27

Viruses titres are given as Logarithmic and Infectious Units / ml.

6. CONCLUSION

In these describe conditions , and according to the norm AFNOR NFT 72 180,

the product HYPRED-FORCE 7

for the strain Myxomatosis 's disease virus ,

result in a $\geq 2,2$ log reduction in titre ,

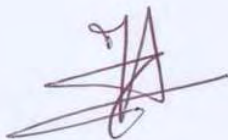
at a final concentration of 0,5 % ,

With organic material ,

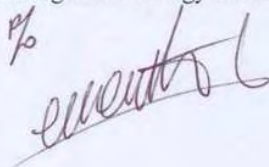
and a 30 minutes contact time.

Ploufragan, the 14 October 2009

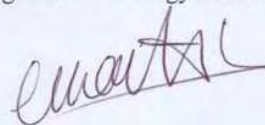
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DIN-PCF-001: A study to determine the virucidal efficacy of one test article at three concentrations against avian (H5N1) Influenza NIBRG-14 [H5N1] virus

Study Summary

Table 1: Summary of Study for Test Article Hypred Force 7

Test Article Name:	Hypred Force 7
Test Article Batch Number:	QP4B
Study dates	04ARP2007 – 02JUN2007
Virus Strain	Influenza A NIBRG-14 (H5N1)
Positive Control	Citrate Buffer 0.9M pH:3.5
Negative Control	Diluent only control
Test Concentration(s)	1% (v/v), 0.5% (v/v), 0.1% (v/v)
Diluent	Hard Water
Test Contact Time Point(s)	30 minutes
Test Temperature	Ambient (24.9°C – 25.3°C)
Interfering Substances	Yeast and BSA
Method for detoxification of test article	Sephadex™ Filtration

Summary of Virucidal Activity

Incubation time point	Test Concentration (v/v)	Reduction in virus titre	
		(-log ₁₀ TCID ₅₀ /ml)	(%)
30 minutes	1.0%	≥4.50	≥99.997%
30 minutes	0.5%	≥4.50	≥99.997%
30 minutes	0.1%	0.50	68.377%
30 minutes	Positive Control	2.25	99.438%
N/A	Negative Control	0.50	68.377%

DIN-PCF-001: A study to determine the virucidal efficacy of one test article at three concentrations against avian (H5N1) Influenza NIBRG-14 [H5N1] virus

CONCLUSIONS

There was complete inactivation of Avian Influenza A NIBRG-14 [H5N1] virus beyond cytotoxic level after treatment with Force 7 at test concentrations 1% and 0.5% (v/v) over the 30 minute incubation time point.

Force 7 at test concentration 1% (v/v) reduced the viral titre of Avian Influenza A NIBRG-14 [H5N1] virus by $\geq 4.50 - \log_{10}$ TCID₅₀/ml ($\geq 99.997\%$) over the 30 minute incubation time point.

Force 7 at test concentration 0.5% (v/v) reduced the viral titre of Avian Influenza A NIBRG-14 [H5N1] virus by $\geq 4.50 - \log_{10}$ TCID₅₀/ml ($\geq 99.997\%$) over the 30 minute incubation time point.

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