

APPLIED CONSUMER SERVICES, INC.

11890 N.W. 87 COURT, UNIT #8, HIALEAH GARDENS, FL 33018
Phone: (305) 821-1677 Fax: (305) 821-0155 Website: appliedconsumer.com

August 3, 2018

L/N 32168

Report to: Dr. Lorin Berland
DR. B DENTAL SOLUTIONS
25 Highland Park Village, Ste 100781
Dallas, TX 75205

Subject: Dental Cleaner Product Delivered to Laboratory.

Report of: Partial Evaluation of Effectiveness of Antibacterial and
Antifungal Properties of Liquid Crystal Soak Cleanser Product

INTRODUCTION

A sample of a dental product labeled "Liquid Crystal Soak Cleanser" was submitted for an evaluation of antimicrobial effectiveness. The product would be prepared as instructed by the client and analyzed against several challenge microorganisms.

RESULTS

Results are given in the Tables. Also see Appendices.

CONCLUSION

Based on the partial evaluation of the product against the challenge concentration of the typical oral microorganisms, we conclude that the product identified as Liquid Crystal Soak Cleanser is highly effective against the following microorganisms:

- *Candida albicans*, ATCC # 10231
- *Staphylococcus aureus*, ATCC # 6538
- *Streptococcus mutans*, ATCC # 25175

Report by: Elsa Rozas, B.S. Galina Tuninskaya, M.S.

Read by: Adrian Poloto, B.S.

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TABLE I

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: CANDIDA ALBICANS

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	Candida albicans	
ATCC)	10231	
- Batch Number	162	
Inoculum Concentration		
- by MacForlen	1x10 ⁶ CFU/ml	
- by Plating	1.45x10 ⁶ CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	1.45x10⁴CFU/ml	
Results		
<u>Contact Time</u>	<u>Final Concentration</u>	<u>Killing/Reduction Rate</u>
- 0 Time (5 Seconds)	< 1 CFU/ml	99.99%
- 5 Minutes	< 1 CFU/ml	99.99%
- 10 Minutes	< 1 CFU/ml	99.99%
- 15 Minutes	< 1 CFU/ml	99.99%
- 20 Minutes	< 1 CFU/ml	99.99%

CFU/ml = Colony forming units per milliliter
< = Less than

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TABLE II

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: STAPHYLOCOCCUS AUREUS

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	Staphylococcus aureus	
ATCC No.	6538	
- Batch Number	63226711	
Inoculum Concentration		
- McForlen	1x10 ⁸ CFU/ml	
- by Plating	2.9x10 ⁷ CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	2.9x10⁵CFU/ml	
Results		
<u>Contact Time</u>	<u>Final Concentration</u>	<u>Killing/Reduction Rate</u>
- 0 Time (5 Seconds)	340 CFU/ml	99.88%
- 5 Minutes	< 1 CFU/ml	99.99%
- 10 Minutes	< 1 CFU/ml	99.99%
- 15 Minutes	< 1 CFU/ml	99.99%
- 20 Minutes	< 1 CFU/ml	99.99%

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TABLE III

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: STREPTOCOCCUS MUTANTS

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	Streptococcus mutans	
ATCC	25175	
- Batch Number	62284317	
Inoculum Concentration		
- by McFarlen	1x10 ⁷ CFU/ml	
- by Plating	1.43x10 ⁷ CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	1.43x10⁵CFU/ml	
Results		
<u>Contact Time</u>	<u>Final Concentration</u>	<u>Killing/Reduction Rate</u>
- 0 Time (5 Seconds)	< 1 CFU/ml	99.999%
- 5 Minutes	< 1 CFU/ml	99.999%
- 10 Minutes	< 1 CFU/ml	99.999%
- 15 Minutes	< 1 CFU/ml	99.999%
- 20 Minutes	< 1 CFU/ml	99.999%

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October 9, 2018
L/N 32607

Report to: Dr. Lorin Berland
DR. B DENTAL SOLUTIONS
25 Highland Park Village, Ste 100781
Dallas, TX 75205

Subject: Dental Cleaner Product Delivered to Laboratory.

Report of: Partial Evaluation of Effectiveness of Antimicrobial Properties of
Liquid Crystal Soak Cleanser Product

INTRODUCTION

A sample of a dental product labeled "Liquid Crystal Soak Cleanser" was submitted for an evaluation of antimicrobial effectiveness. The product would be prepared as instructed by the client and analyzed against several challenge microorganisms.

RESULTS

Results are given in the Tables. Also see Appendices.

CONCLUSION

Based on the partial evaluation of the product against the challenge concentration of the typical oral microorganisms, we conclude that the product identified as Liquid Crystal Soak Cleanser is highly effective against the following microorganisms:

- E.Coli, ATCC # 11229
- Actinomyces viscosus, ATCC # 15987
- Pseudomonas aeruginosa, ATCC # 15442

Report by:


Elsa Rozas, B.S.


Galina Tuninskaya, M.S.

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October 9, 2018
L/N 32607

TABLE I

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: ESCHERICHIA COLI

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	E.Coli	
ATCC	11229	
- Batch Number	63526925	
Inoculum Concentration		
- by MacForlen	1x10 ⁷ CFU/ml	
- by Plating	8.9x10 ⁷ CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	8.9x10⁵CFU/ml	
Results		
Contact Time	Final Concentration	Killing/Reduction Rate
- 0 Time (5 Seconds)	TNTC	N/A
- 5 Minutes	< 1 CFU/ml	99.999%
- 10 Minutes	< 1 CFU/ml	99.999%
- 15 Minutes	< 1 CFU/ml	99.999%
- 20 Minutes	< 1 CFU/ml	99.999%

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SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: ACTINOMYCES VISCOSUS

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	Actinomyces viscosus	
ATCC No.	15987	
- Batch Number	58233233	
Inoculum Concentration		
- McForlen	1x10⁷CFU/ml	
- by Plating	1.2 x10⁷CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	1.2x10⁵CFU/ml	
Results		
<u>Contact Time</u>	<u>Final Concentration</u>	<u>Killing/Reduction Rate</u>
- 0 Time (5 Seconds)	< 1 CFU/ml	99.999%
- 5 Minutes	< 1 CFU/ml	99.909%
- 10 Minutes	< 1 CFU/ml	99.909%
- 15 Minutes	< 1 CFU/ml	99.909%
- 20 Minutes	< 1 CFU/ml	99.909%

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SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR PRODUCT "Liquid Crystal Soak Cleanser"

MICROORGANISM: PSEUDOMONAS AERUGINOSA

<i>Test</i>	<i>Results</i>	
Sample Information	"Pilot FI-BAM2880"	
Code	N/Av	
Lot Number	P180606	
Formulated:	06/06/2018	
Preparation of Cleaner		
- Amount of Product	8 ml	
- Volume of Water (Tap)	150 ml	
- Temperature of Water	Room temperature (25°C)	
Microorganisms	Pseudomonas aeruginosa	
ATCC	15442	
- Batch Number	63229753	
Inoculum Concentration		
- by McFarlen	1.0x10⁷CFU/ml	
- by Plating	1.3x10⁷CFU/ml	
Volume of Inoculums	0.1 ml	
Volume of Cleaner	10 ml	
Initial Concentration in Product	1.3x10⁵CFU/ml	
Results		
Contact Time	Final Concentration	Killing/Reduction Rate
- 0 Time (5 Seconds)	110 CFU/ml	99.9%
- 5 Minutes	< 1 CFU/ml	99.999%
- 10 Minutes	< 1 CFU/ml	99.999%
- 15 Minutes	< 1 CFU/ml	99.999%
- 20 Minutes	< 1 CFU/ml	99.999%

CFU/ml = Colony forming units per milliliter
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