

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 31, 2017
L/N 30535

Report to: Mr. Jean-Paul Berland
DR. B DENTAL SOLUTIONS
25 Highland Park Village, Ste 100781
Dallas, TX 75205

Subject: Dental Cleaner Product Delivered to Laboratory.

Report of: Evaluation of Effectiveness of Antibacterial and Antifungal Properties

INTRODUCTION

A sample of a dental product in final marketing package labeled "DR. BERLAND'S Cleanadent™ Professional Strength Cleansing Crystals, 60-1.75g Packets, Made in USA, Distributed by Dr. B Dental Solutions, Dallas, TX 75201" was submitted in order to determine antimicrobial effectiveness of the product. The product would be prepared as instructed on the label and analyzed against several challenge microorganisms specified by the client.

RESULTS

Results are given in the Tables. Also see Appendices.

CONCLUSION

Based on the results of evaluation of the antimicrobial properties of the product against the challenge concentration of the typical oral microorganisms, we conclude that the product "DR. BERLAND'S Cleanadent™ Professional Strength Cleansing Crystals" is effective against the following microorganisms:

- Candida albicans, ATCC # 10231
- Streptococcus pyogenes, ATCC # 4543
- Staphylococcus sp., ATCC # 6538
- Streptococcus mutans, ATCC # 25175
- Actinomyces viscosus, ATCC # 15987

Report by: 
Adrian Piloto, B.S.


Galina Tuninskaya, M.S.

Read by: 
Elsa Rozas, B.S.

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TABLE I

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR "DR. BERLANDS'S CLEANADENT"

MICROORGANISM: CANDIDA ALBICANS

<i>Test</i>	<i>Results</i>
Sample Information	"Dr. Berland's Cleanadent™ Cleansing Crystals
Code	850927007039
Lot Number	1821209S
Preparation of Cleaner	
- Amount of Concentrate	1 Packet (1.75 g)
- Volume of Water	250 ml
- Temperature of Water	37°C (Warm)
Microorganisms	Candida albicans
ATCC No. (Batch No.)	10231
- Batch Number	162
Inoculum Concentration	
- by UV-VIS	1x10 ⁵ CFU/ml
- by Plating	7.0x10 ⁴ CFU/ml
Volume of Inoculums	0.1 ml
Volume of Extract	10 ml
Initial Concentration (Calculated)	0.69x10³CFU/ml
Contact Time	20 minutes
Concentration	
- 0 Time	< 1 CFU/ml
- In 20 Minutes	< 1 CFU/ml
Killing /Reduction Rate	99.86%

UV-VIS = UV/VIS Spectrophotometer
CFU/ml = Colony forming units per milliliter
TNTC = Too Numerous to Count
< = Less than

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TABLE II

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR "DR. BERLANDS'S CLEANADENT"

MICROORGANISM: STREPTOCOCCUS PYOGENES

<i>Test</i>	<i>Results</i>
Sample Information	"Dr. Berland's Cleanadent™ Cleansing Crystals
Code	850927007039
Lot Number	1821209S
Preparation of Cleaner	
- Amount of Concentrate	1 Packet (1.75 g)
- Volume of Water	250 ml
- Temperature of Water	37°C (Warm)
Microorganisms	Streptococcus pyogenes
ATCC No. (Batch No.)	4543
- Batch Number	57576853
Inoculum Concentration	
- by UV-VIS	1x10 ⁷ CFU/ml
- by Plating	2.27x10 ⁶ CFU/ml
Volume of Inoculums	0.1 ml
Volume of Extract	10 ml
Initial Concentration (Calculated)	2.25x10⁴CFU/ml
Contact Time	20 minutes
Concentration	
- 0 Time	< 1 CFU/ml
- In 20 Minutes	< 1 CFU/ml
Killing /Reduction Rate	99.996%

UV-VIS = UV/VIS Spectrophotometer
CFU/ml = Colony forming units per milliliter
TNTC = Too Numerous to Count
< = Less than

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TABLE III

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR "DR. BERLANDS'S CLEANADENT"

MICROORGANISM: STAPHYLOCOCCUS AUREUS

<i>Test</i>	<i>Results</i>
Sample Information	"Dr. Berland's Cleanadent™ Cleansing Crystals
Code	850927007039
Lot Number	1821209S
Preparation of Cleaner	
- Amount of Concentrate	1 Packet (1.75 g)
- Volume of Water	250 ml
- Temperature of Water	37°C (Warm)
Microorganisms	Staphylococcus aureus
ATCC No. (Batch No.)	6538
- Batch Number	63226711
Inoculum Concentration	
- by UV-VIS	1x10⁷CFU/ml
- by Plating	4.8x10⁶CFU/ml
Volume of Inoculums	0.1 ml
Volume of Extract	10 ml
Initial Concentration (Calculated)	4.75x10⁴CFU/ml
Contact Time	20 minutes
Concentration	
- 0 Time	< 1 CFU/ml
- In 20 Minutes	< 1 CFU/ml
Killing /Reduction Rate	99.998%

UV-VIS = UV/VIS Spectrophotometer
CFU/ml = Colony forming units per milliliter
TNTC = Too Numerous to Count
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TABLE IV

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR "DR. BERLANDS'S CLEANADENT"

MICROORGANISM: STREPTOCOCCUS MUTANS

<i>Test</i>	<i>Results</i>
Sample Information	"Dr. Berland's Cleanadent™ Cleansing Crystals
Code	850927007039
Lot Number	1821209S
Preparation of Cleaner	
- Amount of Concentrate	1 Packet (1.75 g)
- Volume of Water	250 ml
- Temperature of Water	37°C (Warm)
Microorganisms	Streptococcus mutans
ATCC No. (Batch No.)	25175
- Batch Number	62248317
Inoculum Concentration	
- by UV-VIS	1x10 ⁸ CFU/ml
- by Plating	1.53x10 ⁷ CFU/ml
Volume of Inoculums	0.1 ml
Volume of Extract	10 ml
Initial Concentration (Calculated)	1.51x10⁵CFU/ml
Contact Time	20 minutes
Concentration	
- 0 Time	< 1 CFU/ml
- In 20 Minutes	< 1 CFU/ml
Killing /Reduction Rate	99.999%

UV-VIS = UV/VIS Spectrophotometer
CFU/ml = Colony forming units per milliliter
TNTC = Too Numerous to Count
< = Less than

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TABLE V

SUMMARY OF ANTIMICROBIAL - EFFECTIVENESS TESTING FOR "DR. BERLANDS'S CLEANADENT"

MICROORGANISM: ACTINOMYCES VISCOSUS

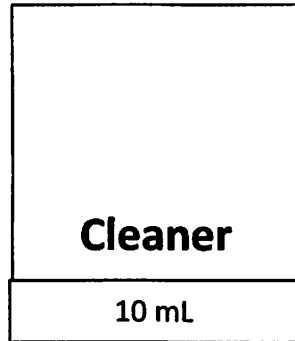
<i>Test</i>	<i>Results</i>
Sample Information	"Dr. Berland's Cleanadent™ Cleansing Crystals"
Code	850927007039
Lot Number	1821209S
Preparation of Cleaner	
- Amount of Concentrate	1 Packet (1.75 g)
- Volume of Water	250 ml
- Temperature of Water	37°C (Warm)
Microorganisms	Actinomyces viscosus
ATCC No. (Batch No.)	15987
- Batch Number	58233233
Inoculum Concentration	
- by UV-VIS	1x10⁷CFU/ml
- by Plating	0.15x10⁷CFU/ml
Volume of Inoculums	0.1 ml
Volume of Extract	10 ml
Initial Concentration (Calculated)	1.49x10⁴CFU/ml
Contact Time	20 minutes
Concentration	
- 0 Time	< 1 CFU/ml
- In 20 Minutes	< 1 CFU/ml
Killing /Reduction Rate	99.993%

UV-VIS = UV/VIS Spectrophotometer
CFU/ml = Colony forming units per milliliter
TNTC = Too Numerous to Count
< = Less than

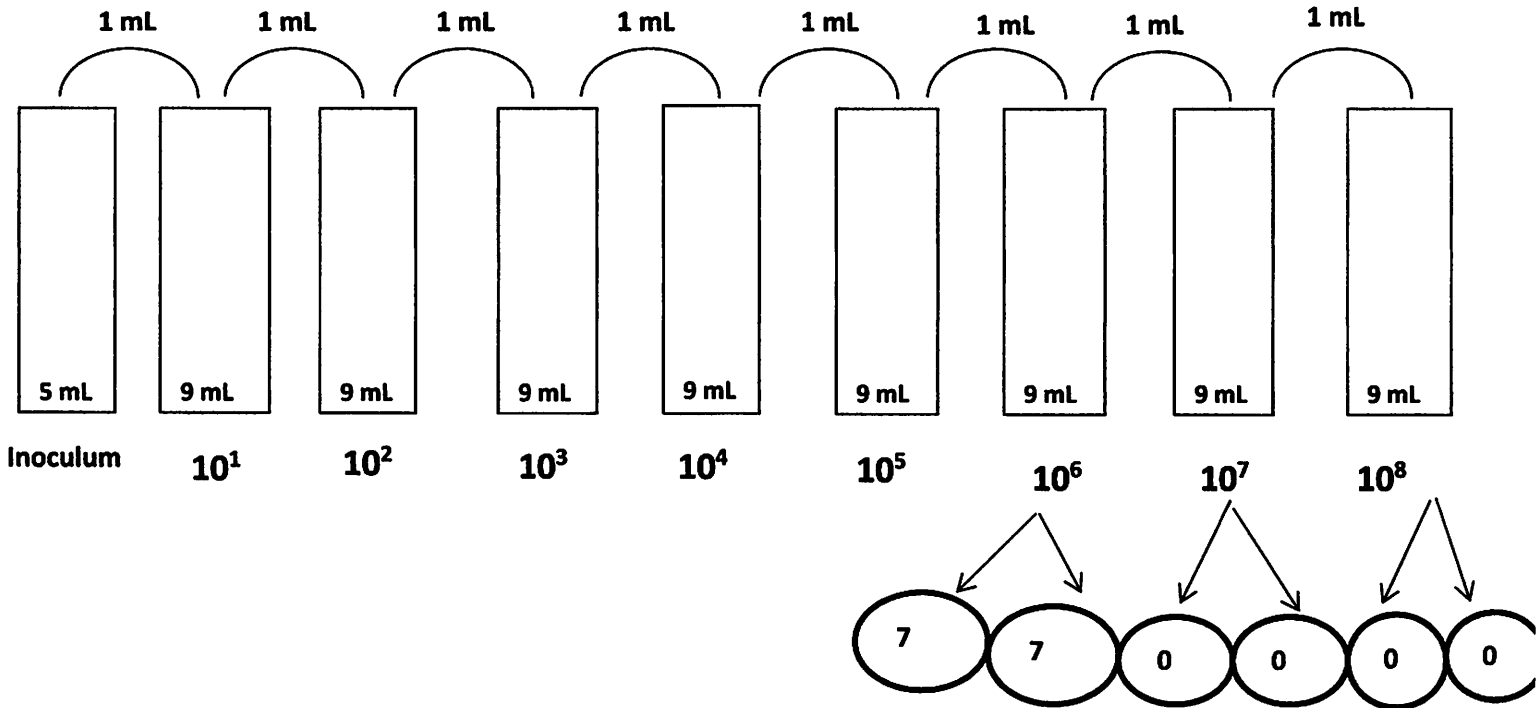
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Candida albicans

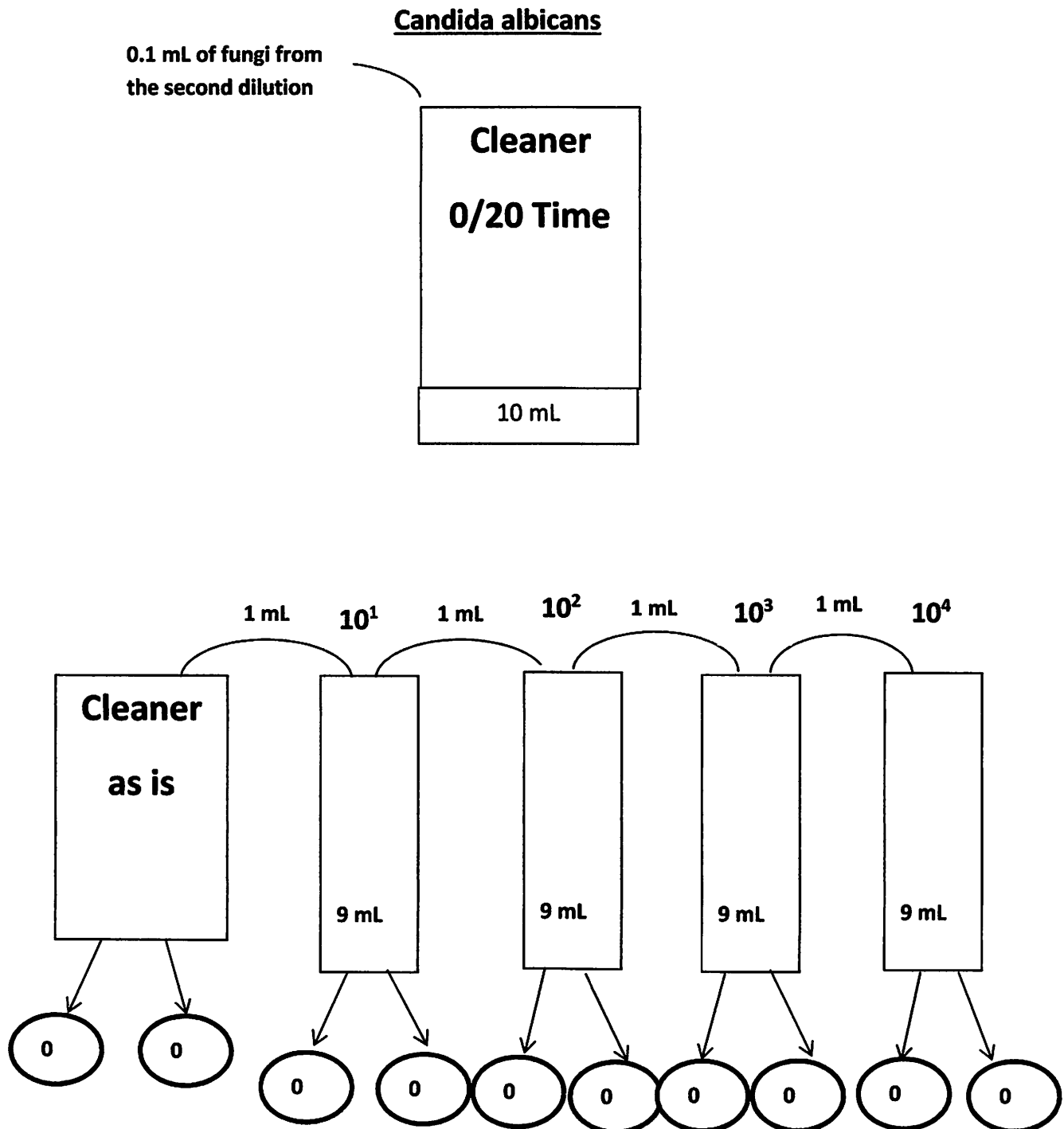


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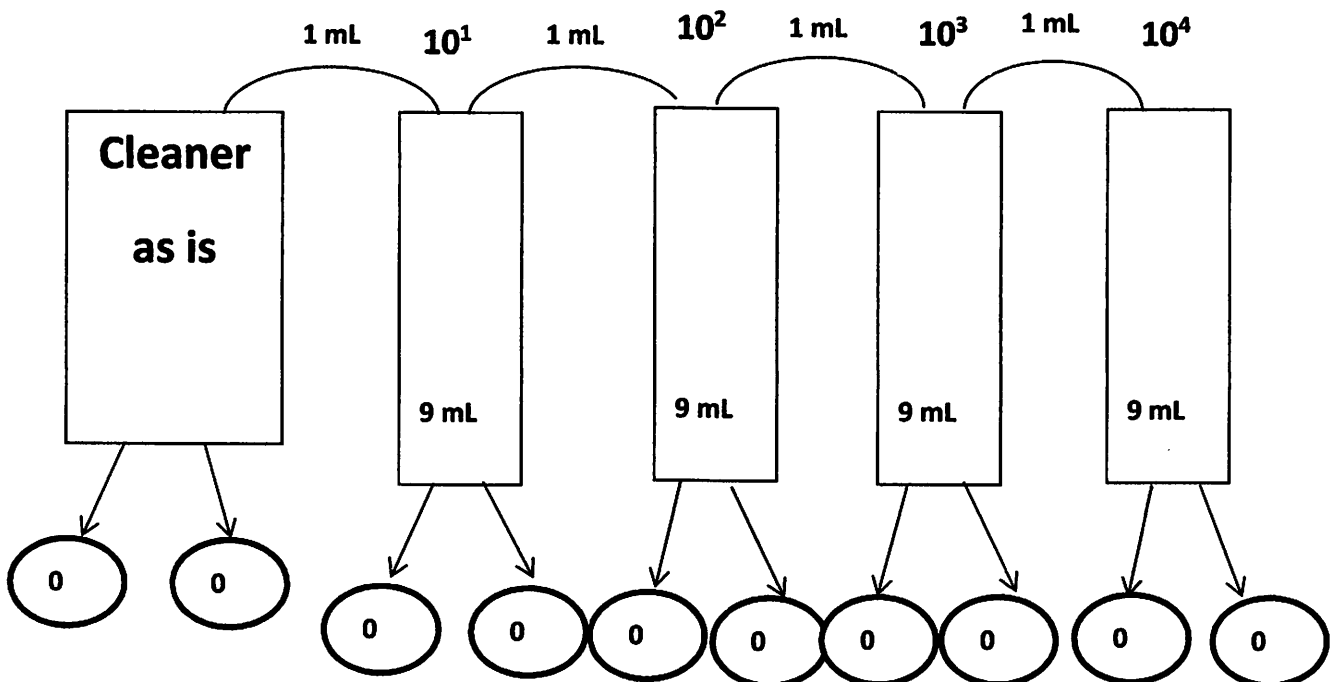
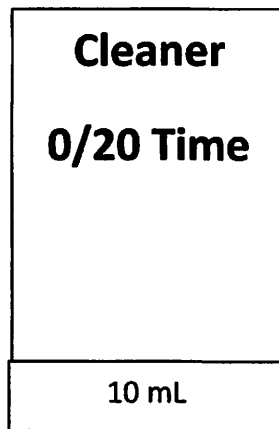
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Actinomyces viscosus

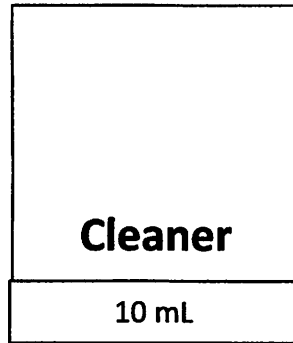
0.1 mL of bacteria
from the first dilution



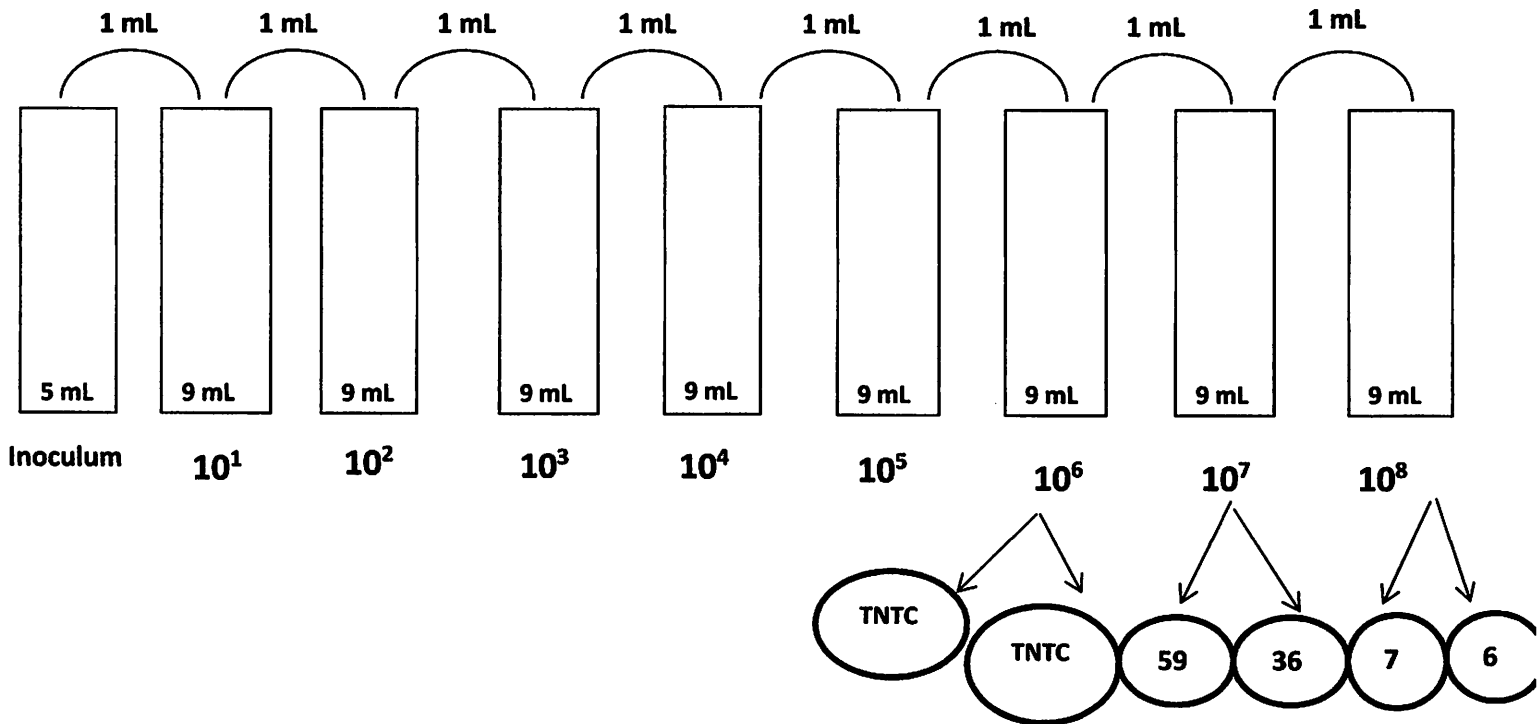
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Staphylococcus aureus



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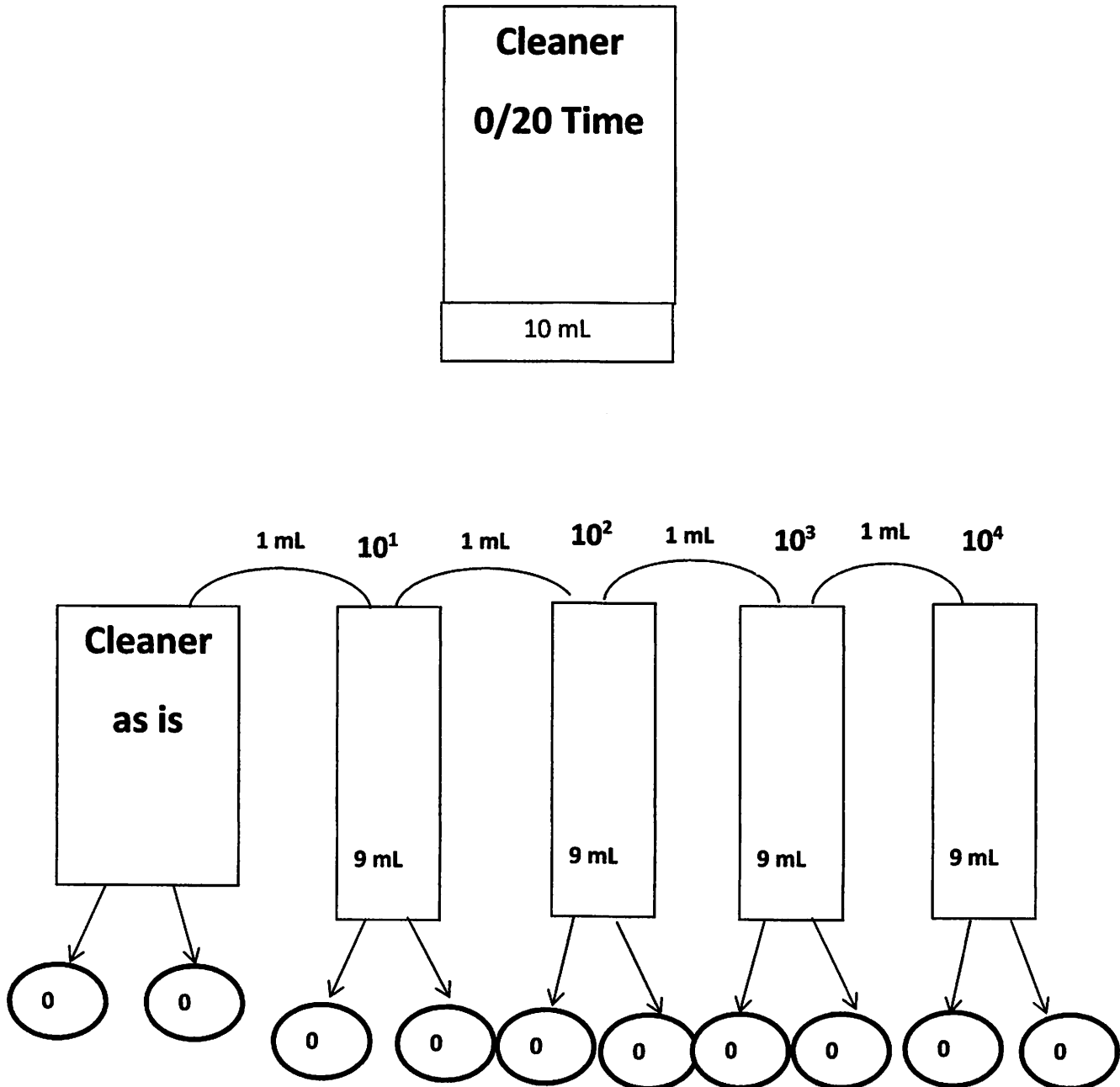
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Staphylococcus aureus

0.1 mL of bacteria from
the second dilution

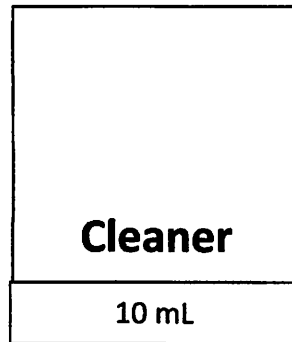


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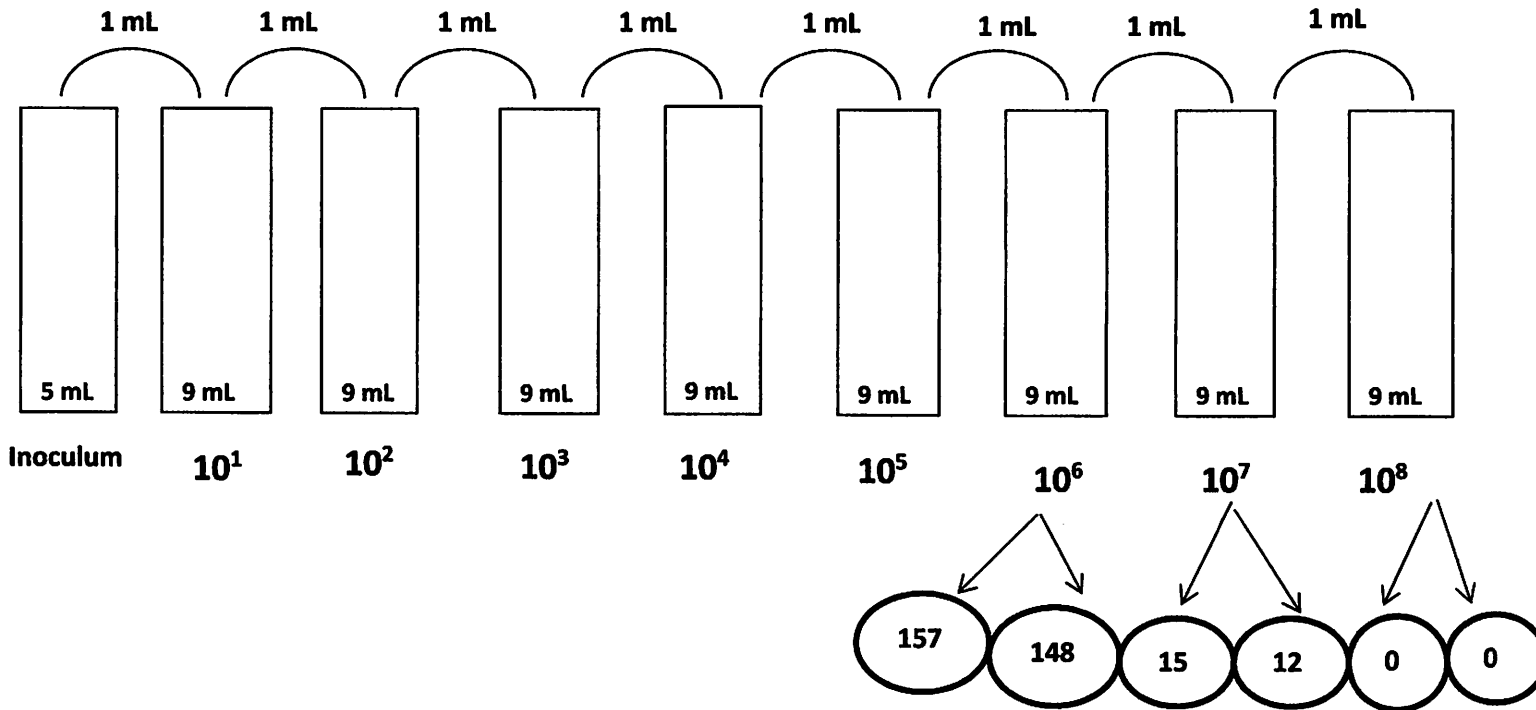
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Streptococcus mutans



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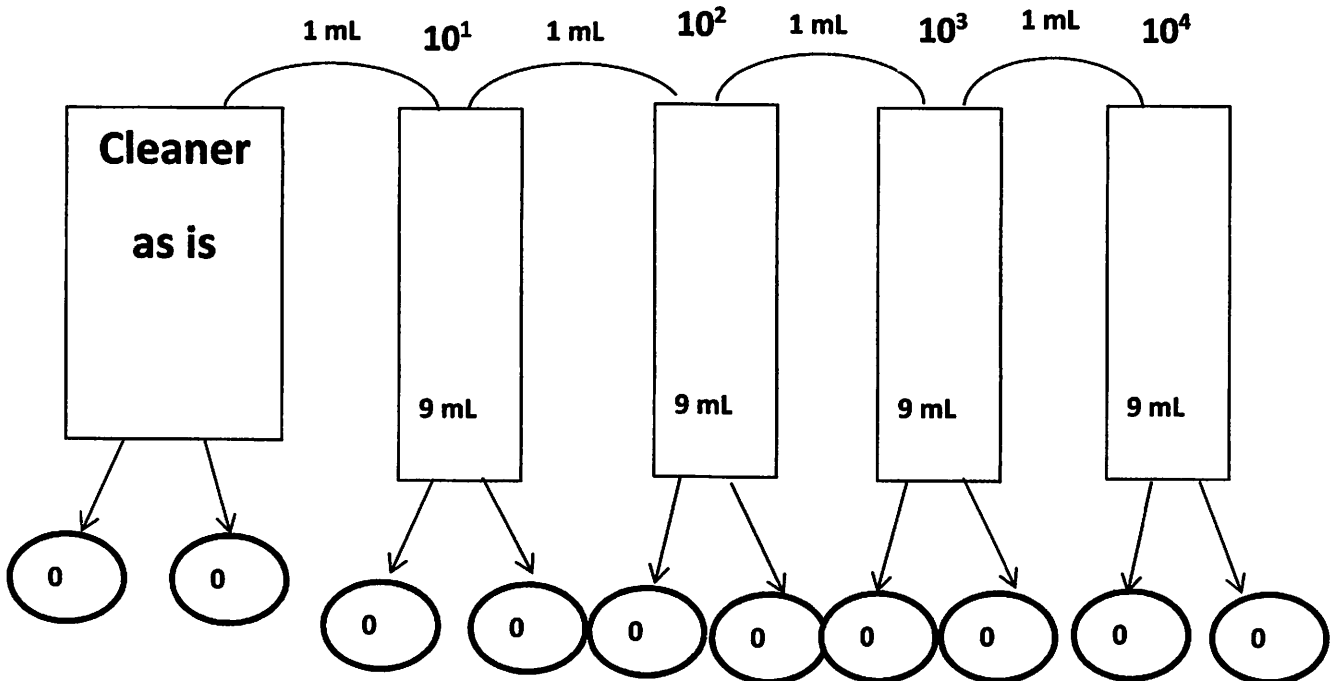
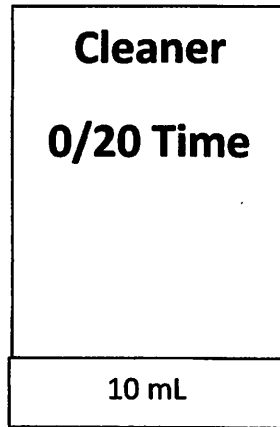
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Streptococcus mutans

0.1 mL of bacteria
from the first dilution

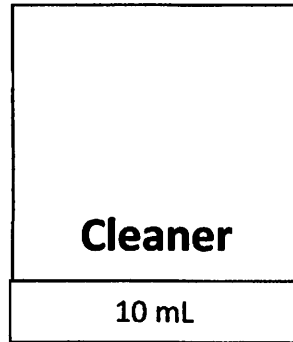


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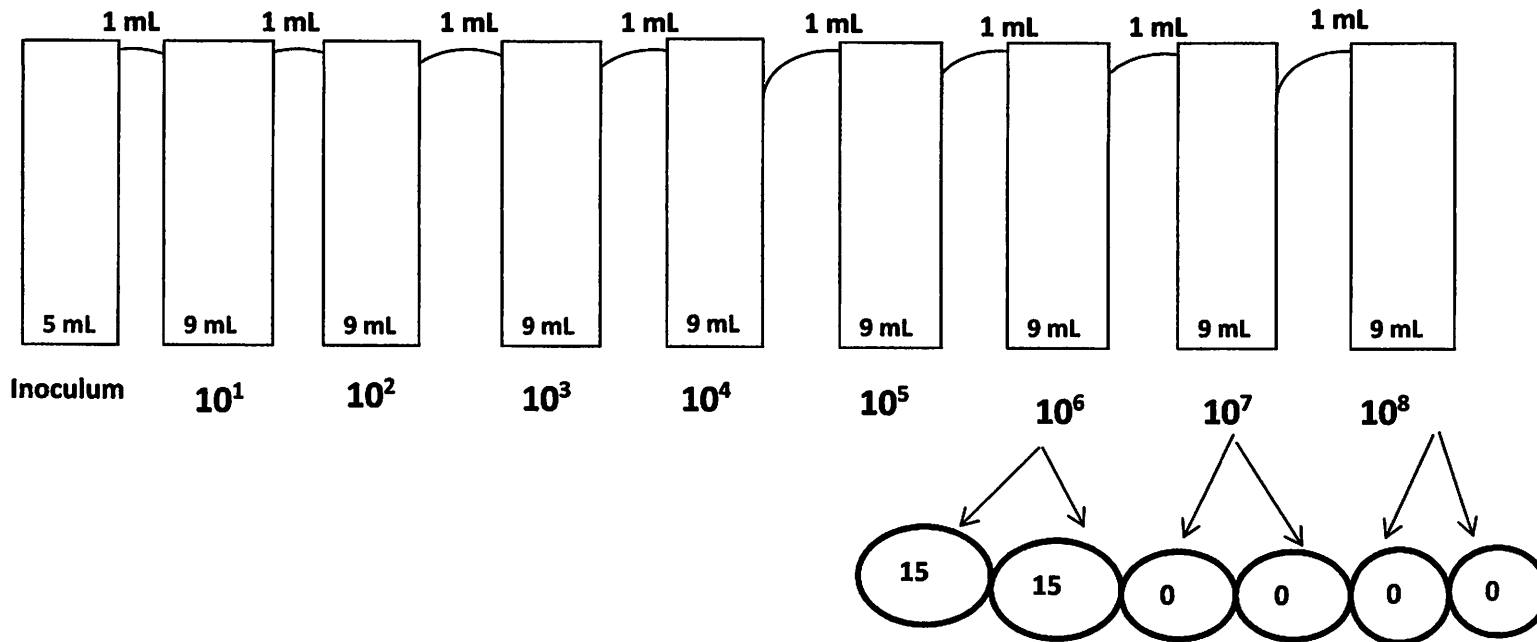
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Actinomyces viscosus



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Actinomyces viscosus

0.1 mL of bacteria
from the first dilution

