



# EMSL Analytical, Inc.

2500 Gateway Centre Blvd., Suite 600 Morrisville, NC 27560  
919-465-3900/919-465-3950  
raleighlab.com

EMSL Order: 292010314  
Customer ID: UVIN42  
Customer PO:  
Project ID:

**Attention:** Nick Medendorp  
UV Innovators  
401 Harrison Oaks Blvd, Suite 230  
Cary, NC 27513

**Phone:** 919-608-2947  
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**Project:** Klebsiella pneumoniae ATCC BAA1705

Report Date: 10/8/2020

Revision: 0.00

## Antimicrobial Efficacy of Ultraviolet Germicidal Irradiation (Test Method ASTM E3135)

Number of test conditions: 4  
Date Incolulum created: 10/6/2020  
Date Samples treated: 10/6/2020  
Organism: Klebsiella pneumoniae ATCC BAA 1705  
Incubation Temperature: 35  
Incubation Period: 48  
Media, Lot & Expiration: TSA Lot # 134657 Exp. 11/23/20  
Counted by & Date: Goldstein 10/8/20

NOTES:  
  
NC= Negative Control  
PC Positive Control  
  
Dry time 40 minutes  
No growth on environmental controls

	Raw Counts					
Test Name:	NC1	NC2	NC3	PC1	PC2	PC3

Dilution	NC1	NC2	NC3	PC1	PC2	PC3
10 <sup>-1</sup>	0	0	0	ND	ND	ND
10 <sup>-2</sup>	ND	ND	ND	TNTC	TNTC	TNTC
10 <sup>-3</sup>	ND	ND	ND	TNTC	TNTC	TNTC
10 <sup>-4</sup>	ND	ND	ND	TNTC	TNTC	TNTC
10 <sup>-5</sup>	ND	ND	ND	47	20	21
10 <sup>-6</sup>	ND	ND	ND	3	1	2
10 <sup>-7</sup>	ND	ND	ND	0	0	0

Positive Control Average: 2,933,333.33  
STD: 15.31

ND= Not Done, TNTC=Too numerous to count

**Alan Goldstein**  
Laboratory Manager  
or Other Approved Signatory

EMSL maintains liability limited to cost of analysis. Interpretation and use of test results are the responsibility of the client. This report relates only to the samples reported above and may not be reproduced, except in full, without written approval by EMSL. EMSL bears no responsibility for sample collection activities or analytical method limitations. The report reflects the samples as received. When the information supplied by the customer can affect the validity of the result it will be noted on the report.



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Notes:  
T1=1 second  
T2=2 seconds  
T3=4 seconds  
T4=8 seconds

Test Name:	T1a	T1b	T1c	T2a	T2b	T2c	T3a	T3b	T3c	T4a	T4b	T4c
mJ/cm2 :	14.36	14.27	14.27	28.54	28.53	28.55	56.99	56.97	57.33	113.20	113.30	113.20

Dilution	RAW COUNTS											
	T1a	T1b	T1c	T2a	T2b	T2c	T3a	T3b	T3c	T4a	T4b	T4c
10 <sup>-1</sup>	TNTC	TNTC	TNTC	TNTC	TNTC	TNTC	20	0	3	20	1	4
10 <sup>-2</sup>	84	52	183	33	5	15	4	0	0	5	0	1
10 <sup>-3</sup>	6	7	20	4	0	3	1	0	0	0	0	0
10 <sup>-4</sup>	1	2	5	0	0	0	0	0	0	0	0	0
10 <sup>-5</sup>	0	0	1	0	0	0	0	0	0	0	0	0
10 <sup>-6</sup>	0	0	0	0	0	0	0	0	0	0	0	0
10 <sup>-7</sup>	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND

ND\*=Sample contaminated and unable to accurately count.

POSITIVE CONTROL AVERAGE: 2,933,333.33

	T1	T2	T3	T4
AVERAGE DOSE:	14.300	28.540	57.097	113.233
AVERAGE COUNT:	10,633.33	1,766.67	76.67	83.33
STD:	68.30	14.19	10.79	10.21
% KILLED:	99.638	99.940	99.997	99.997
LogR:	2.44	3.22	4.58	4.55

% Kill=(positive control count-test count)/positive control count\*100

LogR = (log10 positive control count)-(log10 test count)

ND= Not Done, TNTC=Too numerous to count

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