

HELP CONTROL E-COLI, SALMONELLA, MRSA, & MOLD...

BY CHANGING YOUR LIGHT BULBS and USING
TRANSPARENT PURE-LIGHT® SANI-LIGHT® COATING!



“BACTERIAL SURVIVAL ON SANI-LIGHT® COATED GLASS EXPOSED TO PURE-LIGHT® COATED LED LIGHT BULBS”

The Revolutionary Pure-Light® Super-Oxygen® Light Activated Technology...is simply amazing.

PLT has taken NASA inspired technology, improved on it, made it affordable and usable in open public and indoor settings. (MSDS=0-0-0 and can provide 24hr protection with humans/animals/plants present.)

» PLT Does not use or need UV light; Actually helps eliminate harmful Ozone; Works indoors or outdoors; Lasts up to 1-5+ years depending upon the application.

The referenced lab study by the Nation's Leading Environmental Testing firm, EMSL ANALYTICAL, actually demonstrates that by using the Pure-Light Super-Oxygen LED light bulbs and the Pure-Light Sani-Light Indoor transparent coating, E-COLI, SALMONELLA, AND MRSA can be substantially controlled and even eliminated within 24 hours or less. Additional studies have shown that mold and odor are also controlled in the same manner. *(Additional studies can be obtained by request.)*

... The Sani-Light coated slides samples were exposed to PURE-LIGHT coated LED light bulbs at intervals of 5 feet and 8 feet from the lights and tested at 24 hours to determine organism survival/reduction. Conclusion: "...Bacterial reduction of Salmonella and MRSA inoculated onto the surfaces of PURE-LIGHT SANI-LIGHT® coated slides ranged from 97 to 99.9%..." The E-Coli samples were so reduced that it was unmeasurable at both 5 ft and 8 ft distances.

- **The NASA technology behind the Pure-Light Super-Oxygen Light™ bulbs has been shown to Breakdown 99.9% of bacteria, viruses, fungi, mold including deadly MRSA, Cold & Flu viruses, E-COLI, SARS, STAPH, CRE, Salmonella, Anthrax, Plague... even those viruses/bacteria that have become resistant to antibiotics.**
- **Additionally, the process breaks down toxic indoor air pollutants like formaldehyde, carbon monoxide, methane, benzene and other VOCs into harmless components. *(The main components of deadly "Smog")***
- **ANTI-ALLERGEN..The process also dissolves Pollen and other allergens helping to make your building more hypo-allergenic.**
- **ELIMINATES ODORS without masking them with fragrances such as tobacco smoke, cigar smoke, pet odors...even can help get rid of skunk odor.**
- **Eradicates need for harmful chemical sanitizers**
- **Pure-Light is actually good for plants, demonstrating an ability to accelerate their growth while controlling fungus and mildew.**





EMSL ANALYTICAL, INC.



As the nation's leading environmental testing firm, EMSL's network of nationwide laboratories has been providing quality analytical services since 1981. We offer a wide array of analytical testing services to support environmental investigations focused on asbestos, microbiology, lead paint, environmental chemistry, indoor air quality, industrial hygiene and food testing. Additionally, we also provide materials testing, characterization, and forensic laboratory services for a wide range of commercial, industrial, regulatory, and law enforcement clients.

Our unmatched capacity coupled with a company-wide focus on customer satisfaction makes no project too large or too small. Our corporate research and development capabilities allow us to bring new methodologies on line quickly to meet new industry challenges and client needs. In recruiting and retaining talented and motivated scientists on a national scope, our expertise is marshaled throughout a nationwide network of analytical laboratories. We are committed to providing reliable, defensible data in a standardized and user-friendly format.

Testing Laboratory

- Lab Services at EMSL:**
- **Materials Testing**
 - **Environmental**
 - **Microbiology**
 - **Indoor Air Quality**
 - **Asbestos & Minerals**
 - **Industrial Hygiene**
 - **Chemical Analysis**
 - **Chemical Analysis**
 - **Fire & Smoke**
 - **Radiochemistry**
 - **Pharmaceutical Testing**
 - **Lead & Metals**
 - **Legionella Analysis**
 - **Food**



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FINAL REPORT

Bacterial Survival on PURE-LIGHT SANI-LIGHT
coated Glass Slides

Order Number:371809760

PREPARED FOR

PURE-LIGHT Technologies LLC

Michael A. Spears

7/5/2018

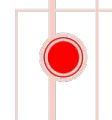
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Number:371809760

Order



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CERTIFICATE OF ANALYSIS

CLIENT: **PURE-LIGHT TECHNOLOGIES, LLC.**

CONTACT: **TROY BUTLER**

PROJECT: BACTERIAL SURVIVAL ON PURE-LIGHT SANI-LIGHT COATED GLASS SLIDES

PRODUCT: N/A

SAMPLE RECEIVED: PURE- LIGHT SANI-LIGHT COATED GLASS SLIDES

REPORT DATE: **7/5/18**

CHALLENGE BACTERIA: **ESCHERICHIA COLI - ATCC 25922**

SALMONELLA ENTERICA - ATCC 14028

METHICILLIN RESISTANT STAPHYLOCOCCUS AUREUS – ATCC 43300

I. EXPERIMENTAL SUMMARY

Glass slides coated with PURE-LIGHT SANI-LIGHT® solution were inoculated in triplicate with a suspension of Escherichia coli, Salmonella enterica, and methicillin-resistant Staphylococcus aureus. One group of slides was exposed to PURE-LIGHT coated LED light bulbs at counter and floor levels and another group was not exposed to the light also at counter and floor levels. All slides were tested after 24 hours to determine organism survival.

Uncoated control slides were tested using the same organisms under the same conditions as a baseline for comparison purposes.



II. PROCEDURE

Uncoated and client provided PURE-LIGHT SANI-LIGHT® coated glass slides were inoculated in triplicate with suspensions of *E. coli*, *S. enterica*, and methicillin-resistant *S. aureus* (MRSA). The slides were placed in a secure location at both counter height and floor level with one group exposed to PURE-LIGHT coated LED light bulbs and another group not exposed to the light for 24 hours. After 24 hours all slides were collected and plated onto TSA agar to determine organism survival.

III. EXPERIMENTAL RESULTS

PURE-LIGHT SANI-LIGHT® Coated Glass Slides

Initial (time zero) inoculum levels

Salmonella - 370,000,000 per slide

MRSA – 590,000,000 per slide

E. coli – 2,000,000 per slide

24 Hour Recovery



| PURE-LIGHT SANI-LIGHT® Coated Slides with light exposure-Counter Height | | | | |
|---|--------------------------------------|----------------|---------------|-------------------|
| Test Organism | Treatment | CFU per sample | | Percent Reduction |
| | | (average) | Log Reduction | |
| <i>Salmonella</i> | Uncoated control slides | 20,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 11,000 | 3.26 | 99.95 |
| MRSA | Uncoated control slides | 48,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 49,000 | 2.99 | 99.9 |
| <i>E. coli</i> | Uncoated control slides | <10000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | <100 | N/A | N/A |

| Pure- Light Coated Slides without light exposure-Counter Height | | | | |
|---|--------------------------------------|----------------|---------------|-------------------|
| Test Organism | Treatment | CFU per sample | | Percent Reduction |
| | | (average) | Log Reduction | |
| <i>Salmonella</i> | Uncoated control slides | 6,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 10,000 | 2.79 | 99.83 |
| MRSA | Uncoated control slides | 18,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 60,000 | 2.48 | 99.67 |
| <i>E. coli</i> | Uncoated control slides | 10,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | <100 | N/A | N/A |



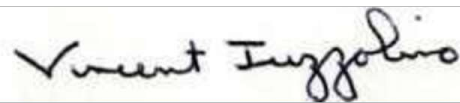
| Pure- Light Coated Slides with light exposure-Floor Level | | | | |
|---|--------------------------------------|----------------|---------------|-------------------|
| Test Organism | Treatment | CFU per sample | | Percent Reduction |
| | | (average) | Log Reduction | |
| <i>Salmonella</i> | Uncoated control slides | 5,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 23,000 | 2.34 | 99.54 |
| MRSA | Uncoated control slides | 44,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 90,000 | 2.70 | 99.8 |
| <i>E. coli</i> | Uncoated control slides | <10000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | <100 | N/A | N/A |

| Pure- Light Coated Slides without light exposure-Floor Level | | | | |
|--|--------------------------------------|----------------|---------------|-------------------|
| Test Organism | Treatment | CFU per sample | | Percent Reduction |
| | | (average) | Log Reduction | |
| <i>Salmonella</i> | Uncoated control slides | 5,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 23,000 | 2.34 | 99.54 |
| MRSA | Uncoated control slides | 44,000,000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | 90,000 | 2.70 | 99.8 |
| <i>E. coli</i> | Uncoated control slides | <10000 | | |
| | PURE-LIGHT SANI-LIGHT® coated slides | <100 | N/A | N/A |



IV. CONCLUSIONS/OBSERVATIONS

Bacterial reduction of Salmonella and MRSA inoculated onto the surfaces of PURE-LIGHT SANI-LIGHT® coated slides ranged from 97 to 99.9% when compared to the same organisms inoculated at the same levels onto uncoated slides and exposed to the same conditions. The greatest reduction was observed in the organism average of the slide group exposed to the PURE-LIGHT LED light bulbs at counter height (about 5 feet below light bulbs) while the least reduction was observed in the organism average of the slide group not exposed to the PURE-LIGHT LED light bulbs at Floor level. Reduction of *E. coli* could not be accurately determined as the recovery of the uncoated control slides at 24 hours was below detection limits. It appears the survivability of *E. coli* after 24 hours was very low regardless of the slide type the organism was inoculated on.



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