

# CLEANING LABORATORY EVALUATION SUMMARY

SCL #: 2023

DateRun: 02/21/2023

Experimenters: Alicia McCarthy, Zoe Lawson, Namrata Chauhan, Mei Jin

ClientType: Cleaner Manufacturer

ProjectNumber: Project #1

Substrates: Paper

PartType: Coupon

Contaminants: Toilet Paper

Cleaning Methods: Immersion/Soak

Analytical Methods: Visual

Purpose: To evaluate the efficacy of 2-ply toilet paper degradation immersed in a product solution over the span of 10 days.

Experimental Procedure: Initial ratings and photos of newly unwrapped 2-ply square toilet paper coupons. The toilet paper coupons were immersed in a solution, either a product/autoclaved minimal media or a control of Deionized (DI) water/ autoclaved minimal media mixture, and incubated at 30°C for 240 hours (10 days). Three evaluators rated the visual degradation at 0hr, 24 hr, 48hr, 144hr, 192hr, and 240hr after shaking the flasks manually for five seconds at each time point using the following rating key:

Rating	Description
1	Completely degraded
2	Mostly degraded
3	Partially degraded
4	Slight degradation
5	No degradation

## Protocol for 1L of Minimal Media:

- 7.50 g Bacto peptone media
- 3.27g Bushnell Hass Broth
- 1 Liter DI Water

Results: Over the span of 240 hours (10 days), the Instant Power RV & Marine Holding Tank Treatment increased in turbidity and the degraded toilet paper became black. Similar in turbidity and toilet paper color, the Instant Power Septic Shock and Roebic K-37 Septic Treatment were both visibly degraded by 240 hours. The Roebic RV & Marine Holding Tank Treatment degraded only a little more than the control and was not as cloudy as the other products or control after 192 hours.

## Instant Power RV & Marine Holding Tank Treatment

Hour	Evaluation Ratings			Average Rating
0	5	5	5	5
24	5	4.5	4.5	4.7
48	3	3	3	3
144	2.5	2.5	2.5	2.5
192	2	2.5	2.5	2.3
240	1.5	2	2	1.8

## Roebic RV & Marine Holding Tank Treatment

Hour	Evaluation Ratings			Average Rating
0	5	5	5	5
24	4	4	4	4
48	4	4	4	4
144	3.5	3.5	3.5	3.5
192	3.5	3.5	3.5	3.5
240	3.5	3.5	3.5	3.5

# CLEANING LABORATORY EVALUATION SUMMARY

## Instant Power Septic Shock

Hour	Evaluation Ratings			Average Rating
0	5	5	5	5
24	4	4	4	4
48	2	2	2	2
144	1.5	1.5	2	1.7
192	1	1.5	1.5	1.3
240	1	1	1.5	1.2

## Roebic K-37 Septic Treatment

Hour	Evaluation Ratings			Average Rating
0	4.5	5	5	4.8
24	3.5	4	4	3.8
48	2.5	2.5	2.5	2.5
144	2.5	2.5	2.5	2.5
192	2	2	2	2
240	1.5	1.5	1.5	1.5

## Control (DI Water/Minimal Media)

Hour	Evaluation Ratings			Average Rating
0	5	5	5	5
24	5	5	5	5
48	4.5	4.5	4.5	4.5
144	4.5	4.5	4.5	4.5
192	4.5	4.5	4.5	4.5
240	4.5	4.5	4.5	4.5

Overall, the product with the best 2-ply toilet paper degradation after 240 hours was the Instant Power Septic Shock (1.2), the Roebic K-37 Septic Treatment came in second (1.5), and the Instant Power RV & Marine Holding Tank Treatment (1.8) in third. The least effective product at degrading the 2-ply toilet paper was the Roebic RV & marine Holding Tank Treatment (3.5).

Summary:

Substrates:		Paper				
Contaminants:		Toilet Paper				
Company Name:	Product Name:	Conc.:	Efficiency:	Effective:	Observations:	
Instant Power	RV & Marine Tank Treatment	6.25ml product/ 500ml minimal media		<input checked="" type="checkbox"/>	Average Rating: 1.8	
ROEBIC Laboratories, Inc.	RV and Marine Holding Tank Treatment	6.25 product/500ml minimal media		<input type="checkbox"/>	Average Rating: 3.5	
Instant Power	Septic Shock	6.25ml product/ 500ml minimal media		<input checked="" type="checkbox"/>	Average Rating: 1.2	
ROEBIC Laboratories, Inc.	K-37 Septic Tank Treatment	6.25ml product/ 500ml minimal media		<input checked="" type="checkbox"/>	Average Rating 1.5	

Conclusion:

Both Instant Power products were more effective than the Roebic comparative products at degrading 2-ply toilet paper over 240 hours.