

**CLIENT:** Inpro Corporation

Attn: Matt Bennett S 80 W 18766 Apollo Dr. Muskego, WI 53150

Report No.: 07S10003444-07S10003445/R1 Date: 4/27/2010

The following samples were submitted by the client as:

1) BioPolyPETG + G2 Material 2) BioPolyPETG + G2 Material

**SAMPLE DESCRIPTION:** White and Green Tiles

**DATE OF RECEIPT:** 3/16/10

**TESTING PERIOD:** 3/18/10 - 4/15/10

**TESTS REQUESTED:** Fungal Resistance Testing, ASTM G-21

Bacterial Resistance Testing, ASTM G-22

**TEST RESULTS:** Page 3-4

**CONCLUSIONS:** The submitted samples were found to be fungus and bacteria

resistant when tested as specified.

SIGNED FOR AND ON BEHALF OF SGS U.S. TESTING COMPANY INC.

Erin Ricciardi

Manager, Microbiology

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#### PROCEDURE:

### A. **ASTM G-21**

The testing was conducted in accordance with the procedures outlined in ASTM G-21-96, "Determining Resistance of Synthetic Polymeric Materials to Fungi".

The samples were placed on a mineral salts medium and sprayed with a combined Inoculum of the following spore suspensions.

<u>Organism</u>	ATCC #
Aspergillus niger	9642
Penicillium funiculosum	11797
Chaetomium globosum	6205
Gliocladium virens	9645
Aureobasidium pullulans	15233

After inoculation with the above organisms, samples were evaluated by rating the extent of developing visible growth (including microscopic growth). Samples and controls were placed in a "tropical test chamber" and incubated at a temperature of  $30 \pm 10^\circ$  and relative humidity greater than 85%. The total incubation period was 28 days.

### B. **ASTM G-22**

The testing was conducted in accordance with the procedures outlined in ASTM G-22-96, "Standard Practice for Determining Resistance of Plastics to Bacteria".

The samples were placed on a mineral salts medium and inoculated with the test organism *Pseudomonas aeruginosa*, ATCC #13388. The test sample and controls were then incubated 21 days at 35° - 37°C.

Samples were evaluated by rating the development and extent of microbial growth on the sample or in the surrounding medium.



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### **TEST RESULTS:**

# A. ASTM G-21

## **Evaluation of Fungal Growth**

Sample	Replicates	Day 0	Day 7	Day 14	Day 21	Day 28
1)BioPolyPETG + G2 Material	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
2)BioPolyPETG + G2 Material	1	0	0	0	0	0
	2	0	0	0	0	0
	3	0	0	0	0	0
Controls Positive (paper/cork) Positive (viability) Negative (glass slide)		0/0 0 0	4/4 4 0	4/4 4 0	4/4 4 0	4/4 4 0

ASTM Rating Observed Growth on Specimens		
0	None	
1	Traces of Growth (less than 10%)	
2	Light Growth (10-30%)	
3	Medium Growth (30-60%)	
4	Heavy Growth (60% to complete coverage)	

## Summary:

The submitted samples did not support fungal growth. The positive and viability controls supported heavy growth, while the negative did not support growth, thus validating the test procedure.



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## **TEST RESULTS (Continued):**

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### B. ASTM G-22

Sample	Replicates	Day 0	Day 7	Day 14	Day 21
1) BioPoly PETG + G2 Material	Inoculated- 1	0	0	0	0
	Inoculated- 2	0	0	0	0
	Inoculated- 3	0	0	0	0
2) BioPoly PETG + G2 Material	Inoculated- 1	0	0	0	0
	Inoculated- 2	0	О	0	0
	Inoculated- 3	0	0	0	0
1) BioPoly PETG + G2 Material	Uninoculated - 1	0	0	0	0
	Uninoculated – 2	0	0	0	0
	Uninoculated – 3	0	O	0	0
2) BioPoly PETG + G2 Material	Uninoculated - 1	0	0	0	0
	Uninoculated – 2	0	0	0	0
	Uninoculated - 3	0	0	0	0
Controls					
Positive (tubing)		0	4	4	4
Negative (glass slide)		0	0	0	0

All positive ratings confirmed as *Pseudomonas aeruginosa*, the test organism.

### Summary:

The submitted samples did not support bacterial growth. The positive control supported heavy growth, while the negative did not, thus validating the test results.

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End of Report