



BACKGROUND COVID-19 FIELD VERIFICATION TESTING REPORT

CLIENT: New Jersey Institute of Technology
333 Martin Luther King Blvd
Newark, NJ 07102

SITE LOCATION: New Jersey Institute of Technology
333 Martin Luther King Blvd
Newark, NJ 07102

AREAS TESTED: Campus Center
Robert W. Van Houten Library

SCOPE OF WORK: Background ATP Cleaning Verification Testing

CLIENT CONTACT(S): Mitchell Gayer
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SITE EVALUATION CONDUCTED: 08/19/20

DATE OF REPORT: 08/21/20

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{Omega Project#: 20-1175}

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Executive Summary:

On 08/19/20 Omega Environmental Services conducted background ATP cleaning verification testing in the Campus Center and Robert W. Van Houten Library.

The purpose of this testing was to establish background control limit criteria for ATP concentrations post-disinfection testing.

Parameter	Results
Adenosine Triphosphate (ATP) Direct Reads: Bioluminescence Meter (Detects Bacteria and Bio-Load)	Baseline Control Limit = Average + (3 Standard Deviations), Excluding Outliers

Project Overview/Scope of Work:

The New Jersey Institute of Technology contracted Omega Environmental Services to conduct routine ATP and SARS-CoV-2 (COVID-19) environmental sampling to test the efficacy of in-house cleaning techniques. In order to determine an acceptable control limit background ATP testing was conducted before the campus was reoccupied with students.

Bio-Load Sampling & Analysis Protocol:

While a COVID-19 PCR DNA sequencing field testing method has become available, pre-screen methods that apply to overall bacteria cleaning are being employed to more efficiently clear areas and reduce testing costs.

- ESTABLISHMENT OF “NORMAL HOSPITAL BACKGROUND”: Except for biological research laboratories and university health services, typical university indoor areas and surfaces are not expected to be completely sterile due to student/visitor access without full PPE. Therefore, Omega established “normal background bio-load levels” before the campus was reoccupied with students.
- REAL-TIME FIELD SCREEN USING ATP DIRECT-READ BIO-LUMINESCENCE METER AND WHITE CLOTH TESTS: An Omega field IH inspected the most densely occupied buildings on campus and collected ATP swabs on a rotating component basis to develop control limits criteria that will be used in future sampling events.

Definitions:

ATP - Adenosine Triphosphate
HPC - Heterotrophic Plate Count
PCR - Polymerase Chain Reaction Polymerase
RLU – Relative Light Unit

ATP Direct Read: Bio-Luminescence Meter (*Hygiena/Ensure*) Data:

Test No.	Building	Surface	Result RLU	Notes
1	Campus Center	Wooden Tabletop	103	
2	Campus Center	Door Handle	99	
3	Campus Center	Door Push Bar	21	
4	Campus Center	Wooden Tabletop	14	
5	Campus Center	Phone Receiver	24	
6	Campus Center	Wooden Tabletop	14	
7	Campus Center	ATM Keypad	1375	
8	Campus Center	Wooden Tabletop	833	
9	Campus Center	Wooden Tabletop	718	
10	Campus Center	Door Push Bar	10	
11	Campus Center	Stair Railing	58	
12	Campus Center	Door Handle	5	
13	Campus Center	Stair Railing	92	
14	Campus Center	Door Handle (Men's Bathroom	14	
15	Campus Center	Elevator Call Button	37	
16	Campus Center	Stair Railing	71	
17	Campus Center	Door Handle	46	
18	Houten Library	Computer Mouse	6	
19	Houten Library	Computer Mouse	4	
20	Houten Library	Computer Mouse	19	
21	Houten Library	Computer Mouse	138	
22	Houten Library	Computer Mouse	9	
23	Houten Library	Door Push Pad (Men's Bathroom)	23	
24	Houten Library	Door Push Pad (Women's Bathroom)	11	
25	Houten Library	Computer Keyboard	13	
26	Houten Library	Computer Keyboard	25	
27	Houten Library	Computer Keyboard	8	
28	Houten Library	Computer Keyboard	20	
29	Houten Library	Computer Keyboard	25	
30	Houten Library	Computer Keyboard	6	
31	Houten Library	Printer Screen	22	
32	Houten Library	Printer Screen	27	
33	Houten Library	Stair Railing	23	

34	Houten Library	Stair Railing	7	
35	Houten Library	Laminate Tabletop	9	
36	Houten Library	Laminate Tabletop	3	
37	Houten Library	Laminate Tabletop	51	
38	Houten Library	Laminate Tabletop	112	
39	Houten Library	Laminate Tabletop	6	

Baseline Pass RLU Limit:

- The Baseline Control Limit is equal to the average + (3 * Standard Deviation), excluding outliers

Control Limit Calculation	
min	3
max	1375
average	105
S.D.	35.2
Upper C.L.	211

