



**BIOLOGICAL CONSULTING SERVICES**  
*OF NORTH FLORIDA, INC.*

May 30, 2017

Ying Fong  
Talun Eco-Products Inc.  
669 Cooper St.  
Ottawa ON K1R 5J3  
613-890-1665

Client ID: H191704003, H191704014, H191704030, H191703023

BCS ID: 1705140, 1705143, 1705145, 1705149

Dear Ying Fong,

We have completed the analysis of the submitted samples as outlined below.

Project Name: HPC, Fecal, and Salmonella

Analysis	Method
Salmonella	EPA 1682; BCS SOP M-4 (ISO17025 and TNI Accredited)
Fecal Coliforms MPN	EPA 1681; SM 9221E; BCS SOP B-4 (ISO17025 and TNI Accredited)
Heterotrophic Plate Count	SM 9215; BCS SOP M-7 (ISO17025 and TNI Accredited)

Following, you will find our report on the results of the analysis conducted on the referenced samples. Should you have any questions, please do not hesitate to contact me.

Sincerely,

Bonnie Mull, MPH  
Laboratory Operations Manager

**BCS LABORATORIES, INC. — GAINESVILLE**  
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FL DOH #E82924, ISO/IEC 17025:2005 L2422 (L-A-B), PA DEP# 68-03950, EPA# FLO1147  
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Client: Talun Eco-Products Inc.  
 Analysis: *Salmonella*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704003 Sample Date/Time: N/A  
 BCS Sample ID: 1705140 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 97.1  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 10:54 Analysis Stop Date: May 16, 2017 9:36  
 Analyst: Wei-yea Hsu, M.S. Qualifier: U  
 Primary Value:  $\leq 0.07$  Salmonella MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.3$  Salmonella MPN/4 dry grams  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

Client: Talun Eco-Products Inc.  
 Analysis: *Fecal Coliforms MPN*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704003 Sample Date/Time: N/A  
 BCS Sample ID: 1705140 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 97.1  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 10:54 Analysis Stop Date: May 13, 2017 12:36  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Fecal Coliforms MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.2$  Fecal coliforms/dry gram  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

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Client: Talun Eco-Products Inc.  
 Analysis: *Heterotrophic Plate Count*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704003 Sample Date/Time: N/A  
 BCS Sample ID: 1705140 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250g % Solids: 97.1  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 10:54 Analysis Stop Date: May 17, 2017 16:00  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Microorganisms CFU/mL  
 Secondary Value:  $\leq 0.2$  Microorganisms CFU/dry gram  
 Analysis Notes: Bacteria undetected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units. Phylogenetic taxonomic identification was not initiated due to absence of bacteria.

Client: Talun Eco-Products Inc.  
 Analysis: *Salmonella*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704014 Sample Date/Time: N/A  
 BCS Sample ID: 1705143 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 95.9  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 10:57 Analysis Stop Date: May 16, 2017 9:36  
 Analyst: Wei-yea Hsu, M.S. Qualifier: U  
 Primary Value:  $\leq 0.07$  Salmonella MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.3$  Salmonella MPN/4 dry grams  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

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Client: Talun Eco-Products Inc.  
 Analysis: *Fecal Coliforms MPN*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704014 Sample Date/Time: N/A  
 BCS Sample ID: 1705143 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 95.9  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 10:57 Analysis Stop Date: May 13, 2017 12:36  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Fecal Coliforms MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.2$  Fecal coliforms/dry gram  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

Client: Talun Eco-Products Inc.  
 Analysis: *Heterotrophic Plate Count*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704014 Sample Date/Time: N/A  
 BCS Sample ID: 1705143 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 % Solids: 95.9  
 Amount Analyzed: 49.95 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:10 Analysis Stop Date: May 17, 2017 16:00  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Microorganisms CFU/mL  
 Secondary Value:  $\leq 0.2$  Microorganisms CFU/dry gram  
 Analysis Notes: Bacteria undetected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units. Phylogenetic taxonomic identification was not initiated due to absence of bacteria.

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Client: Talun Eco-Products Inc.  
 Analysis: *Salmonella*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704030 Sample Date/Time: N/A  
 BCS Sample ID: 1705145 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 93.0  
 Amount Analyzed: 49.94 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:00 Analysis Stop Date: May 16, 2017 9:36  
 Analyst: Wei-yea Hsu, M.S. Qualifier: U  
 Primary Value:  $\leq 0.07$  Salmonella MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.3$  Salmonella MPN/4 dry grams  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

Client: Talun Eco-Products Inc.  
 Analysis: *Fecal Coliforms MPN*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704030 Sample Date/Time: N/A  
 BCS Sample ID: 1705145 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 93.0  
 Amount Analyzed: 49.94 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:00 Analysis Stop Date: May 13, 2017 12:36  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Fecal Coliforms MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.2$  Fecal coliforms/dry gram  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

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Client: Talun Eco-Products Inc.  
 Analysis: *Heterotrophic Plate Count*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191704030 Sample Date/Time: N/A  
 BCS Sample ID: 1705145 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 93.0  
 Amount Analyzed: 49.94 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:00 Analysis Stop Date: May 17, 2017 16:00  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Microorganisms CFU/mL  
 Secondary Value:  $\leq 0.2$  Microorganisms CFU/dry gram  
 Analysis Notes: Bacteria undetected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units. Phylogenetic taxonomic identification was not initiated due to absence of bacteria.

Client: Talun Eco-Products Inc.  
 Analysis: *Salmonella*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191703023 Sample Date/Time: N/A  
 BCS Sample ID: 1705149 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 92.9  
 Amount Analyzed: 50.01 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:03 Analysis Stop Date: May 16, 2017 9:36  
 Analyst: Wei-yea Hsu, M.S. Qualifier: U  
 Primary Value:  $\leq 0.07$  Salmonella MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.3$  Salmonella MPN/4 dry grams  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

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Client: Talun Eco-Products Inc.  
 Analysis: *Fecal Coliforms MPN*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191703023 Sample Date/Time: N/A  
 BCS Sample ID: 1705149 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 92.9  
 Amount Analyzed: 50.01 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:03 Analysis Stop Date: May 13, 2017 12:36  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Fecal Coliforms MPN/mL sample analyzed  
 Secondary Value:  $\leq 0.2$  Fecal coliforms/dry gram  
 Analysis Notes: Undetected: Analyte was not detected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units

Client: Talun Eco-Products Inc.  
 Analysis: *Heterotrophic Plate Count*  
 Project Name: HPC, Fecal, and Salmonella  
 Client Sample ID: H191703023 Sample Date/Time: N/A  
 BCS Sample ID: 1705149 Sample Description: Seaweed Extract Powder  
 Date Received: May 11, 2017 14:40 Amount Submitted: 250 g % Solids: 92.9  
 Amount Analyzed: 50.01 g Receipt Temperature: 25.7 deg C Preserved: No  
 Analysis Start: May 12, 2017 11:03 Analysis Stop Date: May 17, 2017 16:00  
 Analyst: Nick Sekora, Ph.D. Qualifier: U  
 Primary Value:  $\leq 0.18$  Microorganisms CFU/mL  
 Secondary Value:  $\leq 0.2$  Microorganisms CFU/dry gram  
 Analysis Notes: Bacteria undetected in the sample analyzed; Value represents the method's detection limit for the amount of sample analyzed as per the method's standard reporting units. Phylogenetic taxonomic identification was not initiated due to absence of bacteria.

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Client: Talun Eco-Products Inc.

Project: HPC, Fecal, and Salmonella

Method Detection Limit: 1 microorganism/ unit weight or volume analyzed

Practical Quantitation Limit: 1 microorganism/ unit weight or volume analyzed

Report Notes:

Sample(s) were received well preserved and in excellent condition. Sample(s) were analyzed following receipt as per the described analytical methodology. End of report notes.

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I certify that I have examined I am familiar with the information submitted herein. The results pertain only to analyzed sample(s) associated identifier #(s). Based on my inquiry of the individuals responsible for the analysis, I believe the data to be true, accurate, complete. Sampling field data was obtained from submitted documents. The analysis was authorized commissioned by the client. The resulting data are representative of the analysis conducted on the material/samples/articles provided by the client (or client's representative) it's/their condition at the time of analysis. The sample(s) were analyzed in accordance with the appropriate method , however due to the inherent limitations of the methods, microorganisms may avoid detection. BCS Laboratories offers no express or implied warranties concerning the quality, safety, and/or purity of any sample, batch, source, or the process they are derived from. Quality assurance controls were performed as outlined in the method and as per Good Laboratory Practices. The analysis results presented in this report meet the requirements of the standards of The NELAP Institute (TNI), ISO 17025, and the FL DOH Environmental Laboratory Certification Program, as applicable unless otherwise noted.



Signature of Laboratory Director/Authorized Rep. \_\_\_\_\_

Date: May 30, 2017

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DATA QUALIFIER CODES	
SYMBOL	MEANING
B	Results based on counts outside the acceptable range.
X	Sample received without prior notification or delayed delivery. Analysis performed outside of associated method required QC data set (1 QC data set per 20 samples per 168 hours).
I	Value is between the laboratory method detection limit & laboratory practical quantitation limit.
J1	The sample matrix interfered with the ability to make any accurate determination.
J2	No Quality Control criteria exist for the component.
J3	The data are questionable because of improper laboratory or field protocols.
L	Off scale high. Actual value is known to be greater than value given.
N	Presumptive evidence for the presence of material. There is an indication that the analyte is present, but the confirmation requirement was not met.
O	Sampled, but analysis not performed.
Q	Sample held beyond the accepted holding time.
U	Indicates that the compound was analyzed for but not detected. The specified component was not detected. The reported value is the method detection limit.
V	Analyte was detected in both sample and associated method blank. Data may not be accurate.
Y	The laboratory analysis was from an improperly preserved sample. The data may not be accurate.
Z	Too many colonies present (TNTC); the numeric value given represents the upper end of the value that can be determined based on the volume.
?	Data are rejected and should not be used. QC data for analyte did not meet acceptance criteria. Presence or absence of analyte could not be confirmed.
**	Not reported due to interference.
^	BCS is not currently accredited for this analyte.
#	BCS Lab specific qualifier. See laboratory analysis notes.

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