

Eurofins Sample Code: 473-2016-11280019
Sample Description: Composite Sample Jar (Eggshell Membrane Powder)
Client Sample Code: V6313 Composite
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/07/2016

Biova
 Attn: Tai Misra
 2325 North Loop Dr.
 Suite 6400
 Ames, IA 50010

Sample Reference: Protein Nx6.41

CERTIFICATE OF ANALYSIS
 AR-16-JD-044747-01

Test	Result	Theoretical Level
QD252 - Protein - Combustion		Completed: 12/05/2016
AOAC 990.03; AOAC 992.15		
* Protein	91.70 %	
<i>Protein = N x 6.41</i>		
QD250 - Ash		Completed: 12/05/2016
AOAC 942.05		
* Ash	5.03 %	
QD148 - Moisture by Vacuum Oven		Completed: 12/05/2016
AOAC 925.09		
* Moisture and Volatiles - Vacuum Oven	5.7 %	
QA00U - Bulk Density		Completed: 12/07/2016
USP 616		
Bulk Density (Loose)	0.280 g/ml	
Bulk Density (Tapped)	0.380 g/ml	
QD251 - Calcium by ICP		Completed: 12/05/2016
AOAC 965.17 / 985.01 mod.		
* Calcium	0.136 %	
QA133 - Arsenic (ICP-MS)		Completed: 12/07/2016
AOAC 2013.06		
Arsenic (As)	<0.02 mg/kg	
QA417 - Lead (ICP-MS)		Completed: 12/07/2016
AOAC 2013.06		
Lead (Pb)	<0.02 mg/kg	
QD610 - Mercury (ICP-MS)		Completed: 12/07/2016
AOAC 2013.06		
Mercury (Hg)	<0.010 mg/kg	
QD06E - Elastin by ELISA		Completed: 12/05/2016
Commercial Test Kit		
Elastin by ELISA	22 %	
QD172 - pH		Completed: 12/05/2016
AOAC 981.12		
pH	6.91	

Eurofins Sample Code: 473-2016-11280019
 Client Sample Code: V6313 Composite

Test	Result	Theoretical Level
QD06C - Collagen Commercial Test Kit Collagen	25.4 %	Completed: 12/05/2016
QQ167 - Water Activity AOAC 978.18 * Water Activity at 25°C	0.123	Completed: 12/05/2016
K0032 - Total Glycosaminoglycans as Chondroitin Sulfate sodium by CPC Titration USP Chondroitin Sulfate Sodium	26.9 % (w/w)	Completed: 12/07/2016
QA205 - Cadmium (ICP-MS) AOAC 2013.06 Cadmium (Cd)	<0.01 mg/kg	Completed: 12/07/2016
QA259 - Fluorine (Ion Specific Electrode) AOAC 975.08 Fluorine (F)	<5.00 mg/kg	Completed: 12/07/2016
K0144 - Solubility USP USP Solubility	Freely Soluble in Water	Completed: 12/07/2016

**The test result is covered by our current A2LA accreditation.*

Respectfully Submitted,
 Eurofins Scientific Inc.



Stephan McDanel

Microbiologist

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Biological Testing
 Cert:3329:01



Chemical Testing
 Cert:2927:01

Eurofins Sample Code: 473-2016-11280020
Sample Description: Whirl-Pak bag 1 (Eggshell Membrane Powder)
Client Sample Code: V6313 WP1
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/03/2016

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CERTIFICATE OF ANALYSIS

AR-16-JD-044229-01

Test	Result	Theoretical Level
UMABD - Enterobacteriaceae - AOAC 2003.01		Completed: 11/29/2016
AOAC 2003.01		
* Enterobacteriaceae	< 10 cfu/g (est)	
UMA EK - Salmonella spp. - AOAC 2003.09		Completed: 11/29/2016
AOAC 2003.09		
* Salmonella spp.	Not Detected per 25 g	
UMHBM - Staphylococcus aureus - BAM Chapter 12		Completed: 11/30/2016
BAM Chapter 12		
* Staphylococcus aureus	< 10 cfu/g (est)	
UMJP9 - Aerobic Plate Count - CMMEF Chapter 7-Pour Plate		Completed: 11/30/2016
CMMEF Chapter 7		
* Aerobic Plate Count	20 cfu/g (est)	
UMKP7 - Total Coliforms - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* Total Coliforms	< 3 MPN/g	
UMVUE - E. coli - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* E. coli	< 3 MPN/g	
UMZT1 - Aerobic Spore-forming Mesophilic Count - AACC 42-40-M		Completed: 11/30/2016
AACC 42-40 mod.		
Aerobic Spore-forming Mesophilic Count	10 cfu/g (est)	
UMNK5 - Aerobic Spore-forming Thermophilic Count - AACC 42-40		Completed: 12/01/2016
AACC Method 42-40		
Aerobic Spore-forming Thermophilic Count	< 1 cfu/g (est)	
UMW78 - Mold - AACC 42-50		Completed: 12/03/2016
AACC Method 42-50		
* Mold	< 10 cfu/g (est)	
* Yeast	< 10 cfu/g (est)	

**The test result is covered by our current A2LA accreditation.*

Estimated counts are denoted by (est)

Eurofins Sample Code: 473-2016-11280020
Client Sample Code: V6313 WP1

Respectfully Submitted,
Eurofins Scientific Inc.

A handwritten signature in black ink, appearing to read "Christopher Ekuban", written over a horizontal line.

Christopher Ekuban

QC Specialist

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Biological Testing
Cert:3329:01



Chemical Testing
Cert:2927:01

Eurofins Sample Code: 473-2016-11280021
Sample Description: Whirl-Pak bag 2 (Eggshell Membrane Powder)
Client Sample Code: V6313 WP2
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/03/2016

Biova
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CERTIFICATE OF ANALYSIS

AR-16-JD-044230-01

Test	Result	Theoretical Level
UMABD - Enterobacteriaceae - AOAC 2003.01		Completed: 11/29/2016
AOAC 2003.01		
* Enterobacteriaceae	< 10 cfu/g (est)	
UMA EK - Salmonella spp. - AOAC 2003.09		Completed: 11/29/2016
AOAC 2003.09		
* Salmonella spp.	Not Detected per 25 g	
UMHBM - Staphylococcus aureus - BAM Chapter 12		Completed: 11/30/2016
BAM Chapter 12		
* Staphylococcus aureus	< 10 cfu/g (est)	
UMJP9 - Aerobic Plate Count - CMMEF Chapter 7-Pour Plate		Completed: 11/30/2016
CMMEF Chapter 7		
* Aerobic Plate Count	60 cfu/g (est)	
UMKP7 - Total Coliforms - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* Total Coliforms	< 3 MPN/g	
UMVUE - E. coli - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* E. coli	< 3 MPN/g	
UMZT1 - Aerobic Spore-forming Mesophilic Count - AACC 42-40-M		Completed: 11/30/2016
AACC 42-40 mod.		
Aerobic Spore-forming Mesophilic Count	< 10 cfu/g (est)	
UMNK5 - Aerobic Spore-forming Thermophilic Count - AACC 42-40		Completed: 12/01/2016
AACC Method 42-40		
Aerobic Spore-forming Thermophilic Count	< 1 cfu/g (est)	
UMW78 - Mold - AACC 42-50		Completed: 12/03/2016
AACC Method 42-50		
* Mold	< 10 cfu/g (est)	
* Yeast	< 10 cfu/g (est)	

*The test result is covered by our current A2LA accreditation.

Estimated counts are denoted by (est)

Eurofins Sample Code: 473-2016-11280021**Client Sample Code:** V6313 WP2Respectfully Submitted,
Eurofins Scientific Inc.

Christopher Ekuban

QC Specialist

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Biological Testing
Cert:3329:01Chemical Testing
Cert:2927:01

Eurofins Sample Code: 473-2016-11280022
Sample Description: Whirl-Pak bag 3 (Eggshell Membrane Powder)
Client Sample Code: V6313 WP3
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/03/2016

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CERTIFICATE OF ANALYSIS

AR-16-JD-044231-01

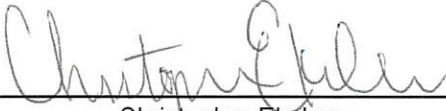
Test	Result	Theoretical Level
UMABD - Enterobacteriaceae - AOAC 2003.01		Completed: 11/29/2016
AOAC 2003.01		
* Enterobacteriaceae	< 10 cfu/g (est)	
UMA EK - Salmonella spp. - AOAC 2003.09		Completed: 11/29/2016
AOAC 2003.09		
* Salmonella spp.	Not Detected per 25 g	
UMHBM - Staphylococcus aureus - BAM Chapter 12		Completed: 11/30/2016
BAM Chapter 12		
* Staphylococcus aureus	< 10 cfu/g (est)	
UMJP9 - Aerobic Plate Count - CMMEF Chapter 7-Pour Plate		Completed: 11/30/2016
CMMEF Chapter 7		
* Aerobic Plate Count	10 cfu/g (est)	
UMKP7 - Total Coliforms - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* Total Coliforms	< 3 MPN/g	
UMVUE - E. coli - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* E. coli	< 3 MPN/g	
UMZT1 - Aerobic Spore-forming Mesophilic Count - AACC 42-40-M		Completed: 11/30/2016
AACC 42-40 mod.		
Aerobic Spore-forming Mesophilic Count	< 10 cfu/g (est)	
UMNK5 - Aerobic Spore-forming Thermophilic Count - AACC 42-40		Completed: 12/01/2016
AACC Method 42-40		
Aerobic Spore-forming Thermophilic Count	< 1 cfu/g (est)	
UMW78 - Mold - AACC 42-50		Completed: 12/03/2016
AACC Method 42-50		
* Mold	< 10 cfu/g (est)	
* Yeast	< 10 cfu/g (est)	

*The test result is covered by our current A2LA accreditation.

Estimated counts are denoted by (est)

Eurofins Sample Code: 473-2016-11280022
Client Sample Code: V6313 WP3

Respectfully Submitted,
Eurofins Scientific Inc.



Christopher Ekuban

QC Specialist

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Chemical Testing
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Eurofins Sample Code: 473-2016-11280023
Sample Description: Whirl-Pak bag 4 (Eggshell Membrane Powder)
Client Sample Code: V6313 WP4
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/03/2016

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CERTIFICATE OF ANALYSIS

AR-16-JD-044232-01

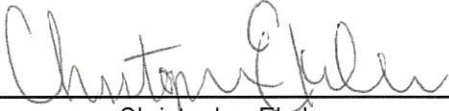
Test	Result	Theoretical Level
UMABD - Enterobacteriaceae - AOAC 2003.01		Completed: 11/29/2016
AOAC 2003.01		
* Enterobacteriaceae	< 10 cfu/g (est)	
UMA EK - Salmonella spp. - AOAC 2003.09		Completed: 11/29/2016
AOAC 2003.09		
* Salmonella spp.	Not Detected per 25 g	
UMHBM - Staphylococcus aureus - BAM Chapter 12		Completed: 11/30/2016
BAM Chapter 12		
* Staphylococcus aureus	< 10 cfu/g (est)	
UMJP9 - Aerobic Plate Count - CMMEF Chapter 7-Pour Plate		Completed: 11/30/2016
CMMEF Chapter 7		
* Aerobic Plate Count	< 10 cfu/g (est)	
UMKP7 - Total Coliforms - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* Total Coliforms	< 3 MPN/g	
UMVUE - E. coli - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* E. coli	< 3 MPN/g	
UMZT1 - Aerobic Spore-forming Mesophilic Count - AACC 42-40-M		Completed: 11/30/2016
AACC 42-40 mod.		
Aerobic Spore-forming Mesophilic Count	< 10 cfu/g (est)	
UMNK5 - Aerobic Spore-forming Thermophilic Count - AACC 42-40		Completed: 12/01/2016
AACC Method 42-40		
Aerobic Spore-forming Thermophilic Count	< 1 cfu/g (est)	
UMW78 - Mold - AACC 42-50		Completed: 12/03/2016
AACC Method 42-50		
* Mold	< 10 cfu/g (est)	
* Yeast	< 10 cfu/g (est)	

*The test result is covered by our current A2LA accreditation.

Estimated counts are denoted by (est)

Eurofins Sample Code: 473-2016-11280023
Client Sample Code: V6313 WP4

Respectfully Submitted,
Eurofins Scientific Inc.



Christopher Ekuban

QC Specialist

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Biological Testing
Cert:3329:01



Chemical Testing
Cert:2927:01

Eurofins Sample Code: 473-2016-11280024
Sample Description: Whirl-Pak bag 5 (Eggshell Membrane Powder)
Client Sample Code: V6313 WP5
PO Number: 161125-10-5050-JHB-01
Client Code: JD0000028

Entry Date: 11/28/2016
Reporting Date: 12/03/2016

Biova
 Attn: Tai Misra
 2325 North Loop Dr.
 Suite 6400
 Ames, IA 50010

CERTIFICATE OF ANALYSIS

AR-16-JD-044233-01

Test	Result	Theoretical Level
UMABD - Enterobacteriaceae - AOAC 2003.01		Completed: 11/29/2016
AOAC 2003.01		
* Enterobacteriaceae	< 10 cfu/g (est)	
UMA EK - Salmonella spp. - AOAC 2003.09		Completed: 11/29/2016
AOAC 2003.09		
* Salmonella spp.	Not Detected per 25 g	
UMAGV - Confirmation Staphylococcus aureus - BAM Chapter 12		Completed: 12/01/2016
BAM Chapter 12		
* Staphylococcus aureus	< 10 cfu/g	
UMJP9 - Aerobic Plate Count - CMMEF Chapter 7-Pour Plate		Completed: 11/30/2016
CMMEF Chapter 7		
* Aerobic Plate Count	< 10 cfu/g (est)	
UMKP7 - Total Coliforms - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* Total Coliforms	< 3 MPN/g	
UMVUE - E. coli - BAM Chapter 4		Completed: 11/30/2016
FDA BAM Chapter 4		
* E. coli	< 3 MPN/g	
UMZT1 - Aerobic Spore-forming Mesophilic Count - AACC 42-40-M		Completed: 11/30/2016
AACC 42-40 mod.		
Aerobic Spore-forming Mesophilic Count	< 10 cfu/g (est)	
UMNK5 - Aerobic Spore-forming Thermophilic Count - AACC 42-40		Completed: 12/01/2016
AACC Method 42-40		
Aerobic Spore-forming Thermophilic Count	< 1 cfu/g (est)	
UMW78 - Mold - AACC 42-50		Completed: 12/03/2016
AACC Method 42-50		
* Mold	< 10 cfu/g (est)	
* Yeast	< 10 cfu/g (est)	

*The test result is covered by our current A2LA accreditation.

Estimated counts are denoted by (est)

Eurofins Sample Code: 473-2016-11280024
Client Sample Code: V6313 WP5

Respectfully Submitted,
Eurofins Scientific Inc.



Christopher Ekuban

QC Specialist

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Biological Testing
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Chemical Testing
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