

Rad One LTD

Claudia Armstead
32 Barnmead
Haywards, UNITED KINGDOM RH16 1UZ

ANALYTICAL REPORT

AR-23-JL-040093-01

Client Code: JL0000651
PO#: Collagen_PO 0232

Received On: 25Jul2023
Reported On: 08Aug2023

Eurofins Sample Code:	990-2023-07250190	Sample Registration Date:	25Jul2023
Client Sample Code:	EX051526AA/EX051526AB	Condition Upon Receipt:	acceptable, 22.8°C
Sample Description:	COLLAGEN PEPTIDES	Sample Reference:	

FS014 - Heavy Metals USP 233	Reference USP 233 Mod.	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Arsenic	37.8 ppb		
Cadmium	<5.00 ppb		
Lead	10.7 ppb		
Mercury	<5.00 ppb		

FS05M - Organoleptic Evaluation	Reference Internal Method based on USP 25th ed. pg 2363	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Appearance	Off-white, granular, free-flowing powder		
Characteristic Odor	No odor detected		
Package Appearance	See below		
Black plastic commercial container with a black plastic lid			

FS0F6 - Glutamic Acid	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Glutamic Acid	106 mg/g		

FS0F7 - Collagen	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Collagen	924 mg/g		

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Sample Description: COLLAGEN PEPTIDES		Sample Reference:		
FS0F9 - Alanine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Alanine	Result 94.0 mg/g	Result	Theoretical	
FS0FA - Aspartic acid	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Aspartic acid	Result 57.8 mg/g	Result	Theoretical	
FS0FC - Glycine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Glycine	Result 240 mg/g	Result	Theoretical	
FS0FD - Tyrosine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Tyrosine	Result 5.34 mg/g	Result	Theoretical	
FS0FF - Arginine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Arginine	Result 79.9 mg/g	Result	Theoretical	
FS0FG - Histidine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Histidine	Result 6.41 mg/g	Result	Theoretical	
FS0FH - Proline	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
Parameter Proline	Result 138 mg/g	Result	Theoretical	

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FS0FI - Isoleucine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Isoleucine	15.6 mg/g		

FS0FJ - Leucine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Leucine	30.0 mg/g		

FS0FK - Lysine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Lysine	39.5 mg/g		

FS0FL - Methionine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Methionine	6.67 mg/g		

FS0FM - Phenylalanine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Phenylalanine	20.1 mg/g		

FS0FN - Serine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Serine	35.9 mg/g		

FS0FP - Threonine	Reference Agilent Application Note 5990-4547, (2010)	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Threonine	19.8 mg/g		

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Sample Reference:

FS0FQ - Valine	Reference	Agilent Application Note 5990-4547, (2010)	Accreditation	Completed	Sub
				02Aug2023	1

Parameter	Result	Result	Theoretical
Valine	22.0 mg/g		

FS0FR - Hydroxyproline	Reference	Agilent Application Note 5990-4547, (2010)	Accreditation	Completed	Sub
				02Aug2023	1

Parameter	Result	Result	Theoretical
Hydroxyproline	115 mg/g		

FSA3Y - Residual Solvents – Class 1, 2a, 2b, and 3	Reference	USP <467>	Accreditation	Completed	Sub
				02Aug2023	1

Parameter	Result	Result	Theoretical
1,1,1-Trichloroethane	<10 ppm		
1,1-Dichloroethene	<8 ppm		
1,2-Dichloroethane	<5 ppm		
1,2-Dichloroethene	<1,870 ppm		
1,2-Dimethoxyethane	<100 ppm		
1,4-Dioxane	<380 ppm		
Acetonitrile	<410 ppm		
Benzene	<2 ppm		
Carbon Tetrachloride	<4 ppm		
Chlorobenzene	<360 ppm		
Chloroform	<60 ppm		
Cumene	<70.0 ppm		
Cyclohexane	<3,880 ppm		
Methanol	<3,000 ppm		
Methylbutylketone	<50 ppm		
Methylcyclohexane	<1,180 ppm		
Methylene Chloride	<600 ppm		
n-Hexane	<290 ppm		
Nitromethane	<50 ppm		
Pyridine	<200 ppm		
Tetrahydrofuran	<720 ppm		
Tetralin	<96.0 ppm		
Toluene	<890 ppm		

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FSA3Y - Residual Solvents – Class 1, 2a, 2b, and 3	Reference USP <467>	Accreditation	Completed 02Aug2023	Sub 1
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Parameter	Result	Result	Theoretical
Trichloroethylene	<80 ppm		
Xylenes(O,M,P + EB)	<2,170 ppm		
1-Butanol	<200 ppm		
1-Propanol	<200 ppm		
2-Butanol	<200 ppm		
2-Methyl-1-propanol	<200 ppm		
2-Propanol	<200 ppm		
3-Methyl-1-butanol	<200 ppm		
Acetone	<200 ppm		
Anisole	<200 ppm		
Diethyl Ether	<200 ppm		
Ethanol	<200 ppm		
Ethyl Acetate	<200 ppm		
Ethyl Formate	<500 ppm		
Isobutyl Acetate	<200 ppm		
Isopropyl Acetate	<200 ppm		
Methyl Acetate	<200 ppm		
Methylisobutylketone	<200 ppm		
Methylethylketone	<200 ppm		
tert-Butylmethyl Ether	<200 ppm		
Acetic Acid Butyl Ester	<200 ppm		
n-Heptane	<200 ppm		
n-Pentane	<200 ppm		
1-Pentanol	<200 ppm		
Propyl Acetate	<200 ppm		
Total Class 3 Residual Solvents	<5,000 ppm		

JLPT1 - Total Microbial Count Suitability	Reference USP Chapter 2021	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Total Aerobic Microbial Count	PASS		

JLPT4 - Bile Tolerant Gram Negative Suitability USP Ch 2021	Reference USP <2021>	Completed 28Jul2023
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JLPT4 - Bile Tolerant Gram Negative Suitability USP Ch 2021	Reference USP <2021>	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Bile Tolerant Gram Negative Bacteria	PASS		

JLPT8 - Total Combined Mould-Yeast Suitability USP Ch 2021	Reference USP <2021>	Completed 08Aug2023
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Parameter	Result	Result	Theoretical
Total Combined Yeast-Molds Count	FAIL		
Neutralization of the product is not applicable due to the microbicidal activity of the product, it is not likely to contain specified microorganism.			

ZMCKU - E. coli - USP <2022>	Reference USP <2022>	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Escherichia Coli	Not Detected per 10 g	Not Detected per 10 g	

ZMCLR - Escherichia coli Suitability - USP Chapter <2022>	Reference U.S. Pharmacopeia Chapter 2022	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Escherichia coli Suitability	PASS per sample	PASS per sample	

ZMCLT - Pseudomonas aeruginosa Suitability - USP Chapter <62>	Reference U.S. Pharmacopeia Chapter 62	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Pseudomonas aeruginosa Suitability	PASS per sample	PASS per sample	

ZMCLY - Salmonella spp. Suitability - USP Chapter <2022>	Reference U.S. Pharmacopeia Chapter 2022	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Salmonella spp. Suitability	PASS per sample	PASS per sample	

ZMCM4 - Staphylococcus aureus Suitability - USP Chapter <2022>	Reference U.S. Pharmacopeia Chapter 2022	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Staphylococcus aureus Suitability	PASS per sample	PASS per sample	

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Sample Description:	COLLAGEN PEPTIDES	Sample Reference:	

ZMDFJ - Total Combined Yeasts/Moulds Count - USP Chapter <2021>	Reference U.S. Pharmacopeia Chapter 2021	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 08Aug2023
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Parameter	Result	Result	Theoretical
Total Combined Yeasts/Moulds Count	< 100 cfu/g	< 100 cfu/g	

ZMDFK - Total Aerobic Microbial Count - USP Chapter <2021>	Reference U.S. Pharmacopeia Chapter 2021	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Total Aerobic Microbial Count	< 100 cfu/g	< 100 cfu/g	

ZMDGE - Staphylococcus aureus - USP Chapter <2022>	Reference U.S. Pharmacopeia Chapter 2022	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Staphylococcus aureus	Not Detected per g	Not Detected per g	

ZMDHV - Pseudomonas aeruginosa - USP Chapter <62>	Reference U.S. Pharmacopeia Chapter 62	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 27Jul2023
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Parameter	Result	Result	Theoretical
Pseudomonas aeruginosa	Not Detected per g	Not Detected per g	

ZME88 - Bile-Tolerant Gram Negative Bacteria (Semiquanti) - USP Chapter <2021>	Reference U.S. Pharmacopeia Chapter 2021	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Bile-Tolerant Gram Negative Bacteria (Semiquanti)	<10 MPN per g	<10 MPN per g	

ZMEV2 - Salmonella spp. - USP Chapter <2022>	Reference U.S. Pharmacopeia Chapter 2022	Accreditation ISO/IEC 17025:2017 A2LA 2918.05	Completed 28Jul2023
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Parameter	Result	Result	Theoretical
Salmonella	Not Detected per 10 g	Not Detected per 10 g	

Subcontracting partners:
1 - Eurofins Food Chemistry Testing US Madison, WI

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Respectfully Submitted,



Michael Kaiser
Associate Technical Leader

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