





ACCREDITATION CERTIFICATE

LB-TEST-019

Emirates International **A**ccreditation **C**entre

has accredited

LONESTAR TECHNICAL SERVICES LLC.

Building DY34 | Inside Dubai Ship Docking | Yard | Al Jadaf

Dubai | United Arab Emirates

In accordance with the requirements of

ISO/IEC 17025:2017

General requirements for the competence of testing and calibration laboratories

to undertake the tests in the attached accreditation scope

This Accreditation is invalid without the attached accreditation scope and shall remain in force within the validity period printed below, subject to continuing compliance with the requirements of the accreditation criteria.

Validity: 10-06-2024 to 09-09-2024

Initial Accreditation Date: 10-06-2003





Accreditation Scope LB-TEST-019

Lonestar Technical Services LLC.

Building DY34 | Inside Dubai Ship Docking | Yard | Al Jadaf Dubai | United Arab Emirates

Date: 10-06-2024

Environmental Testing

	Accreditation History				
Issue no.	Details	Date			
14	Certificate valedity was extended for 3 months from 10- 06-2024 up to 09-09-2024	10-06-2024			
13	Re-issued due to extension in scope (Add Microbiology tests and Sampling test)	28-11-2023			
12	Renewal accreditation	07-07-2021			
11	Certificate valedity (10-06-2018 to 09-06-2021) was extended for 6 months	10-06-2021			
10	Extension in scope and first issuance under the name of EIAC (which was formerly known as DAC)	12/11/2019			

Metallaurgical Testing

08	Certificate valedity was extended for 3 months from 10- 06-2024 up to 09-09-2024	10-06-2024
07	Re-issued fue to a voluntary reduction in scope	28-11-2023
06	Renewal accreditation	07-07-2021
05	Certificate valedity (10-06-2018 to 09-06-2021) was extended for 6 months	10-06-2021
04	First issuance under the name of EIAC (which was formerly known as DAC)	12/11/2019



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Date: 10-06-2024

Air Quality Monitoring Testing

Accreditation History				
Issue no.	Issue no. Details			
	Certificate valedity was extended for 3 months from 10- 06-2024 up to 09-09-2024	10-06-2024		
06	Re-issued due to extension in scope	28-11-2023		
05	Renewal accreditation	07-07-2021		
	Certificate valedity (10-06-2018 to 09-06-2021) was extended for 6 months	10-06-2021		
	First issuance under the name of EIAC (which was formerly known as DAC)	12/11/2019		

Food Testing

	Certificate valedity was extended for 3 months from 10- 06-2024 up to 09-09-2024	10-06-2024
01	Granted accreditation from EIAC	11/02/2022



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Sampling	APHA 1060
			DM TGNO.35
		Temperature	US EPA 170.1
		Color	APHA 2120 B & C
			US EPA 110.1
		Chlorine (Residual)	APHA 4500 CI G
			US EPA 330.3
		pН	APHA 4500 H ⁺ B & US
			EPA 150.1
		Conductivity	APHA 2510 B & US EPA
			120.1
		TDS	APHA 2540 C & US EPA
			160.1
		Salinity	APHA 2520 B
		Turbidity	APHA 2130 B & US EPA
			180.1
		Total hardness as CaCO ₃	APHA 2340 C & US EPA
			130.2
		Total alkalinity as CaCO ₃	APHA 2320 B & US EPA
			310.1
		Oil & grease	APHA 5520 A,B & US
			EPA 1664A



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Sodium (Na)	APHA 3120 B
		Calcium (Ca)	APHA 3120 B
		Magnesium (Mg)	APHA 3120 B
		Potassium (k)	APHA 3120 B
		Boron (B)	APHA 3120 B
		Silica (SiO ₂)	APHA 3120B & US EPA
			200.7
		Aluminum (Al)	APHA 3120B & US EPA
			200.7
		Antimony (Sb)	APHA 3120B & US EPA
			200.7
		Arsenic (As)	APHA 3120B & US EPA
			200.7
		Barium (Ba)	APHA 3120B & US EPA
			200.7
		Beryllium (Be)	APHA 3120B & US EPA
			200.7
		Boron (B)	APHA 3120B & US EPA
	Our Control Office 2 Lo	-12 Cuita N 202 202 200	200.7



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Calcium (Ca)	APHA 3120B & US EPA
			200.7
		Chromium (Cr)	APHA 3120B & US EPA
			200.7
		Copper (Cu)	APHA 3120B & US EPA
			200.7
		Iron (Fe)	APHA 3120B & US EPA
			200.7
		Lead (Pb)	APHA 3120B & US EPA
			200.7
		Magnesium (Mg)	APHA 3120B & US EPA
			200.7
		Manganese (Mn)	APHA 3120B & US EPA
			200.7
		Molybdenum (Mo)	APHA 3120B & US EPA
			200.7
		Nickel (Ni)	APHA 3120B & US EPA
			200.7
		Potassium (K)	APHA 3120B & US EPA
			200.7
		Selenium (Se)	APHA 3120B & US EPA
			200.7



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Metals / ICP	
		Silver (Ag)	APHA 3120B & US EPA
		Sodium (Na)	APHA 3120B & US EPA
		Thallium (TL)	APHA 3120B & US EPA 200.7
		Titanium (Ti)	APHA 3120B & US EPA 200.7
		Vanadium (V)	APHA 3120B & US EPA 200.7
		Zinc (Zn)	APHA 3120B & US EPA 200.7
		Anions / Ion Chroma	
		Fluoride (f)	APHA 4110 B & US EPA 300.1
		Nitrates (NO ₃)	APHA 4110 B & US EPA 300.1
		Nitrites (NO ₂)	APHA 4110 B & US EPA
		Sulphates (SO ₄)	300.1 APHA 4110 B & US EPA 300.1



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	Anions / Ion Chromatog	graphy
		Chlorides (CI)	APHA 4110 B & US EPA
			300.1
		Phosphate (PO ₄)	APHA 4110 B & US EPA
			300.1
		Bromate	APHA 4110 B & US EPA
			300.1
		Chlorite	APHA 4110 B & US EPA
			300.1
		Orthophosphate (PO ₄)	APHA 4110 B
		Total Cyanide	US EPA 335.3
		Perchlorate	US EPA 314
		Ammonia	APHA 4500-NH ₃ B &
			USEPA350.1
		Total Sulfides	APHA 4500 S ²⁻ F & US
			EPA 376.1



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Drinking Water	N-Hexane Extractable	US EPA Method 1664A
		Material (HEM, Oil and	
		Grease) and Silica Gel	
		reacted N-Hexane	
		Extractable Material (SGT-	
		HEM:Non-Polar Material) by	
		Extraction and Gravimetry)	
		Total Nitrites and	US EPA 300.1
		Nitrates	
	Wastewater	Sampling	APHA 1060 & DM
			TGNO.35
		Temperature	US EPA 170.1
		рН	APHA 4500 H ⁺ B
		TDS	APHA 2540 C
		TSS	APHA 2540 D
		Oil & grease	АРНА 5520 В
		BOD (5 days)	APHA 5210 B
		COD	APHA 5220 B



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Wastewater	Metals / ICP	1
		Nitrogen nitrates	APHA 4500 NO ₃ B
		Nitrogen Nitrites	APHA 4500 NO ₂ B
		Total nitrogen	APHA 4500 NC
		Total Sulfides	APHA 4500 S ²⁻ F
		Cadmium (Cd)	APHA 3120 B
		Chromium (Cr)	
		Cobalt (Co)	
		Copper (Cu)	
		Iron (Fe)	
		Lead (Pb)	
		Manganese (Mn)	
		Nickel (Ni)	
		Silver (Ag)	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Wastewater	Metals / ICP	
		Zinc (Zn)	APHA 3120 B
	Sludge	Sampling	DMS11, DM TGNO.35
			APHA 1060
	Soil & sediments	N-Hexane Extractable	US EPA Method 9071B
		Material (HEM) for	
		sludge, Sediment and	
		Solid Samples	
	Soils, Solids, Sludge, non	рН	US EPA 9045D
	aqueous liquids		
	Soils, Solids, Sludge,	% Solids (Fixed, Volatile	US EPA 1684
		& Total)	
		Oil content	US EPA 9071B
			APHA 5520E
	Soils for civil engineering	Moisture Content (%)	US EPA CE 81/1
	purposes	Chlorides	BS 1377-3
	Hazardous waste	Total Metals:	US EPA SW 846/ 6010 B
		Arsenic (As)	



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Chemical	Hazardous waste	Total Metals:	US EPA SW 846/ 6010 B
		Cadmium (Cd)	
		Chromium (Cr)	
		Cobalt (Co)	
		Copper (Cu)	
		Lead (Pb)	
		Nickel (Ni)	
		Selenium (Se)	
		Tin (Sn)	
		Zinc (Zn)	
		Mercury (Hg)	US EPA SW 846/ 7471
			А
		Leachable Metals:	US EPA SW 846/ 1311/
		Mercury (Hg)	6010B
		Arsenic (As)	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Hazardous waste	Leachable Metals:	US EPA SW 846/ 1311/
		Mercury (Hg)	6010B
		Cadmium (Cd)	
		Chromium (Cr)	
		Cobalt (Co)	
		Copper (Cu)	
		Lead (Pb)	
		Nickel (Ni)	
		Selenium (Se)	
		Tin (Sn)	
		Zinc (Zn)	
		Mercury (Hg)	US EPA SW 846/ 1311/
			7471 A
	Plain Carbon & Low	C, Si, Mn, P, S, Cr, Mo, Ni,	In-House Reference
	Alloy Steels	Al, Cu, N, V, Nb, & Ti	Method CHM-SOP-117
	Stainless & High Alloy	C, Si, Mn, P, S, Cr, Mo, Ni,	In-House Reference
	Steels	Cu, N & V	Method CHM-SOP-138



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Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Water / Waste Water	Heterotrophic Plate	APHA 9215B, 23 rd
		Count (TAB) : Pour Plate	Edition
		Membrane Filtration	APHA 9215D, 23 rd
		Total Coliforms (TC) by	APHA 9222B, 23 rd
		Membrane Filtration	Edition
		Escherichia coli by	APHA 9222D and
		Membrane Filtration	9225D, 23 rd Ed.
		Faecal Coliforms by	ADLIA 0222D 22 rd E.I
		Membrane Filtration	APHA 9222D, 23 rd Ed.
		Faecal Streptococci and	APHA 9230C, 23 rd Ed.
		Enterococci by	
		Membrane Filtration	
	Potable Water, Process	Water quality	ISO 11731
	Water & Recreational	Enumeration of	Matrix A : procedures 5,
	Water.	Legionella	7, 8, 9 & 10.
			Matrix B : procedures 7,
			8, 9 & 10



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Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Purified Water, Water for Dialysis, Ultra Pure Dialysis Fluid.	Endotoxin Enumeration	In House Method CHM- SOP-323-00 based on the Genscript Toxin Sensor Chromogenic Limulus Amoebocyte Lysate Assay Test
	Swab enumeration	Aerobic Plate Count	Method BAM Chapter 3
	Swab enumeration	E. coli	CMMEF 9.91 5th Edition
	Swab enumeration	Enterobacteriaceae	ISO 21528-2:2017
	Swab enumeration	Staphylococcus aureus	CMMEF Chapter 39 5th Edition
	Potable Water, Processed Water, Recreational Water and Ice	Pseudomonas aeuroginosa	ISO 16266:2006



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Type of Activity	Test Materials/Products	Test Name	Test Method
Sampling	Food contact surface	Swab Sampling	CMMEF Chapter 2 and 3
	swab, Utensils and Hand	Procedure	5th Edition
	Swabs		CHM-SOP-406-00



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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Carbon Steel for the reinforcement of	Bend & Re-bend	BS 4449: 2005 + AMD 2
	concrete		BS EN ISO 15630 Part 1
		Tensile Test (Ambient Temperature)	BS 4449: 2005 + AMD 2
			BS EN ISO 15630 Part 1
Mechanical	Metals, Alloys and Metal	Chary Impact (-196°C & -	ASTM A370
	roddets	40 C to / indicate)	ASTM E23
			BS EN ISO 148-1
		Brinell Hardness (HBW 1/10, 1/30, & 2.5 /62.5)	ASTM E10
		2, 20, 2, 30, 6, 2.5 , 62.5 ,	BS EN ISO 6506-1
		Rockwell Hardness (HRBW & HRC)	ASTM E18
		,	BS EN ISO 6508-1



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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Metals, Alloys and Metal	Vickers Hardness (HV5,	ASTM E92
	Products	HV10 & HV30)	
			BS EN ISO 6507-1
		Tensile Test (20 to 900	ASTM A370
		(Ambient Temperature)	
			ASTM E8/E8M
			BS EN ISO 6892-1
	Weldments	Bend Test	ASME SEC IX (Fillet)
			ASTM E190
			AWS B4.0M (Nick break)
			AWS D1.1 / D1.1M
			(Fillet)
			API 1104, 22 nd Edition
			(nick break)



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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Weldments	Bend Test	BS EN ISO 5173
		Chary Impact (-196°C & -	ASME SEC IX (Fillet)
		,	AWS B4.0M (Nick break)
			AWS D1.1 / D1.1M (Fillet)
			API 1104, 22 nd Edition
			(nick break) BS EN ISO 9016
		Fracture Test (Fillet & Nick Break)	ASME SEC IX (Fillet)
			AWS B4.0M (Nick break)
			AWS D1.1 / D1.1M
			(Fillet)
			API 1104, 22 nd Edition
			(nick break)
			BS EN ISO 9017 (Fillet)



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Test Type of Activity Materials/Products	Test Name	Test Method
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Mechanical	Weldments	Vickers Hardness (HV5,	ASME SEC IX (Fillet)
		HV10 & HV30)	
			AWS B4.0M (Nick
			break)
			AWS D1.1 / D1.1M
			(Fillet)
			BS EN ISO 9015-1
		Macro Examination	ASME SEC IX (Fillet)
			AWS D1.1 / D1.1M
			(Fillet)
			BS EN ISO 17639
		Micro Examination	ASME SEC IX (Fillet)
			AWS D1.1 / D1.1M
			(Fillet)
			BS EN ISO 17639



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Type of Activity	Test Materials/Products	Test Name	Test Method
Mechanical	Weldments	Tensile Test (Ambient	ASME SEC IX (Fillet)
		Temperature)	
			AWS B4.0M (Nick break)
			AWS D1.1 / D1.1M
			(Fillet)
			API 1104, 22 nd Edition
			(nick break)
			BS EN ISO 4136
Metallurgy	Nickel base and	Critical Pitting	ASTM G48
	chromium bearing alloys	Temperature	Method C
	Metals, Alloys &	Corrosion Test: Sulfide	NACE TM0177
	Weldments	Stress Cracking	ASTM G39
		Cracking & Sulfide	
		Stress Cracking	
	Pipe Line & Pressure	Hydrogen Induced	NACE TM0284
	Vessel Steels	Cracking (HIC)	
	Austenitic Stainless	Inter-granular Corrosion	ASTM A262 A, B , C,
	Steels		and E



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Type of Activity	Test Materials/Products	Test Name	Test Method
Metallurgy	Wrought Nickel and	Inter-granular Corrosion	ASTM G28
	Chromium Bearing Alloys		Method A
	Stainless Steels, Nickel	Pitting Resistance	ASTM G48
	Base and Chromium		Method A
	Bearing Alloys		
	Stainless Steels	Critical Pitting	ASTM G48
		Temperature	Method E



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Qulity	Methods for sampling	ASNZS 3580
		and analysis of ambient	Method 12.1
		air	
		Method 12.1:	
		Determination of light	
		scattering - Integrating	
		Respirable Suspended	
		Particulate Matter	
		(RSPM - PM 2.5)	
		* Respirable Suspended	
		Particulate Matter	
		(RSPM - PM 10)	
		Total Suspended	
		Particulate Matter	
		(TSPM)	
	II	II	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Qulity	Method for sampling and	ASNZS 3580 Part 15
		analysis of ambient air	
		Part 15: Determination	
		of gaseous pollutants in	
		ambient air using	
		differential optical	
		absorption spectrometry	
		(DOAS)-Direct-reading	
		instrumental method:	
		Carbon Monoxide (CO)	
		Method for sampling and	
		analysis of ambient air	
		Part 15: Determination	
		of gaseous pollutants in	
		ambient air using	
		differential optical	
		absorption spectrometry	
		(DOAS)-Direct-reading	
		instrumental method:	



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Type of Activity	Test	Toot Name	Test Method
	Materials/Products	Test Name	rest Method
Chemical	Indoor Air Qulity	Carbon Dioxide (CO ₂)	ASNZS 3580 Part 15
		Oxygen (O ₂)	
		Formaldehyde (CH ₂ O)	
		Ozone (O ₃)	
		Sulphur Dioxide (SO ₂)	
		Nitrogen Dioxide (NO ₂)	
		Total Volatile Organic Compounds (TVOC)	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Qulity	Methods for sampling	ASNZS 3580 Part 14
		and analysis of ambient	
		air	
		Part 14: Meteorological	
		monitoring for ambient	
		air quality monitoring	
		applications:	
		- Temperature, °C	
		- Relative humidity, %	
	Indoor Air Quality/	Particulate Matter(PM	MASA 501
	Ambient Atmosphere	10)	
	·	Total Suspended	MASA 501
		Particulates (TSP)	
		Sulfur Dioxide (SO ₂)	MASA 704-A
		Oxide of Nitrogen (NOX)	MASA 408
		Ozone (O ₃)	MASA 411
		Carbon Monoxide (CO)	Multi-ray Gas
			Analyzer(Electrochemical
			Sensor)



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Indoor Air Quality/	Noise	ISO 1996-2
	Ambient Atmosphere		Acoustic Part 2
	Stack Emission	Particulate Matter (PM)	US EPA # 17, US EPA # 5
		Carbon Monoxide (CO)	US EPA CTM 030/
			CTM034
		Oxide of Nitrogen (NOX)	US EPA CTM 030/
			CTM034
		Sulfur Dioxide (SO ₂)	US EPA # 6 C
		Nitrogen Dioxide (NO ₂)	US EPA CTM 030/
			CTM034
		Sampling and analysis of	Ih-house validated
		total volatile organic	method CHM-SOP-408-
		carbon by digital data	00- TVOC
		logging instrument	
		Determination of oxygen	USEPA CTM 030
		(O2) using portable	
		analyzers	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Stack Emission	Determination of carbon dioxide (CO2) using portable analyzers	USEPA METHOD 3A
	Ambient Air	Sampling and analysis of particulate matters (PM 2.5, PM 10) by light scattering - Integrating nephelometer method	AS/NZS 3580.12.1-2015
		Sampling and analysis of total suspended particulate matters (TSP) by light scattering - Integrating nephelometer method	AS/NZS 3580.12.1-2015
		Determination of oxides of nitrogen (Nox) by direct-reading instrumental method	AS 3580.5.1:2011



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Type of Activity	Test Materials/Products	Test Name	Test Method
Chemical	Ambient Air	Determination of sulfur dioxide (SO2) by direct reading instrumental method	AS 3580.4.1: 2018
		Determination of carbon monoxide (CO) by direct-reading instrumental method	
		Determination of Ozone (O3) by direct-Reading Instrumental Method	AS 3580.6.1:2016
		Determination of Hydrogen sulfide (H2S)	Ih-house validated method CHM-SOP-407
		Determination of ammonia (NH3)	Ih-house validated method CHM-SOP-407



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Type of Activity	Test Materials/Products	Test Name	Test Method
Physical	Noise (Indoor &	Acoustics — Description,	ISO 1996 Part 2
	Workplace)	measurement and	
		assessment of	
		environmental noise	
		Part 2: Determination of	
		sound pressure levels	
	Luminosity (Indoor &	Interior and workplace	ASNZS 1680 Part 3
	Workplace)	lighting	
		Part 3: Measurement,	
		calculation and	
		presentation of	
		photometric data	
	Ambient Air	Determination of Wind	AS/NZS 3580.14-2014
		Direction	
		Determination of Wind	AS/NZS 3580.14-2014
		Speed	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Physical		Determination of Relative Humidity	AS/NZS 3580.14-2014
		Determination of temperature	AS/NZS 3580.14-2014



Food Testing

LB-TEST-019

Lonestar Technical Services LLC.

Building DY34 | Inside Dubai Ship Docking | Yard | Al Jadaf

Dubai | United Arab Emirates

Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Food	Yeast & Mold	USFDA BAM : Chapter
	(Raw and Cooked Meats,		18
	Ready to Eat Meals,	Total Coliforms	USFDA BAM : Chapter 4
	Dairy Products,	- 10.00	
	Confectionary, Bakery,	Faecal Coliforms	USFDA BAM : Chapter 4
	Salad Products, Spices,	Escherichia coli	USFDA BAM : Chapter 4
	Condiments and Sea	Listricina con	OSI DI CHAPTEI 4
	Foods)	Clostridium perfringens	USFDA BAM : Chapter
			16
		Staphylococcus aureus	USFDA BAM : Chapter
			12
		Salmonella spp	ISO 6579:1-2017 : AMD
			1:2020
		Enterobacteriaceae	ISO 21528:2-2017
		Listeria monocytogens	USFDA BAM : Chapter 10
		Total Bacterial Count	USFDA BAM : Chapter 3
	Listeria spp	Neogen Reveal Listeria 2.0	



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Type of Activity	Test Materials/Products	Test Name	Test Method
Microbiology	Sea Food	Vibrio parahemolyticus	USFDA BAM : Chapter 9
	Raw Meat (ground or diced), Salad products, Sprouted Seeds, Raw Vegetables and Cooked Meats Food (Ready to Eat Meals / Rice, Dairy Products,	Escherichia coli O157 Bacillus cereus	AOAC 2000.14 Neogen Reveal Ecoli O157 USFDA BAM : Chapter 14
Sampling	Salad / Vegetables and Spices) Food	Food Sampling	USFDA BAM : Chapter 1 CHM-SOP-350-00