



Accreditation Scope

**AI Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE**

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
1	Food	Detection and Enumeration of <i>Vibrio parahaemolyticus</i>	BAM chapter 09
2		Enumeration of Yeast and Moulds	CMMEF, Chapter 20.5
3		Aerobic Plate Count	USFDA BAM, Chapter 3, Jan. 2001
4		Anaerobic Plate Count	CCFRA 1 .1. 1:2007
5		Enumeration of coliforms	A) Colony Count Method, CCFRA 2.2. 1 : 2007 B)MPN Method, CMMEF:8.71
6		Enumeration of Fecal coliforms	MPN Method: CMMEF:8.81
7		Enumeration and Detection of <i>Escherichia coli</i>	MPN Method, CMMEF 8.91 and 8.92
8		Enumeration of Enterobacteriaceae	CCFRA: 2.3.1: 2007, Colony Count Method
9		Enumeration of <i>Staphylococcus aureus</i> (Coagulase positive)	Colony Count Method, BAM, Chapter 12
10		Detection & Confirmation of <i>Salmonella</i> sp.	Cultural Method, CCFRA: 3.1.2 & 5:2007
11		<i>E. coli</i> 0157 : H7	AOAC 2000.14 (20 Hours) (Reveal Test Kit – Neogen Corporation)
12		<i>Listeria</i> sp. – Detection	(Reveal Test Kit – Neogen Corporation)
13		Enumeration of <i>Bacillus cereus</i>	CMMEF:32.2
14		Enumeration of <i>Clostridium perfringens</i>	CCFRA 3.6.1:2007
15	Dairy and Dairy Products	Moisture	AOAC 927.05 (Dried Milk) AOAC 926.08 (Cheese) AOAC 920.116 (Butter)
16		Fat	AOAC 989.05
17		Protein	AOAC 991.20
18		Carbohydrates	AOAC By Calculation
19		Energy	AOAC By Calculation



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
20	Dairy and Dairy Products	Energy from Fat	AOAC By Calculation
21		pH	AOAC 981.12
22		Calcium	AOAC 991.25
23		Sodium	AOAC 990.23
24		Potassium	AOAC 990.23
25		Fatty Acid Profile	AOAC 969.33/969.22
26	Fishery and Poultry Products	Moisture	AOAC 950.46
27		Fat	AOAC 991.36
28		Protein	AOAC 981.10
29		Carbohydrates	AOAC By Calculation
30		Energy	AOAC By Calculation
31		Energy from Fat	AOAC By Calculation
32		Fatty Acid Profile	AOAC 969.33/969.22
33		Potassium	2011.14 (ICP-OES Method)
34		Sodium	2011.14 (ICP-OES Method)
35		Moisture	AOAC 984.25 (Potatoes) AOAC 934.06 (Dried fruits)
36	Fruits and Vegetables	Fat	AOAC 983.23
37		Protein	AOAC 920.152
38		Carbohydrates	AOAC By Calculation
39		Energy	AOAC By Calculation



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

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40	Fruits and Vegetables	Energy from Fat	AOAC By Calculation
41		pH	AOAC 981.12
42		Fatty Acid Profile	AOAC 969.33/969.22
43		Potassium	2011.14 (ICP-OES Method)
44		Sodium	2011.14 (ICP-OES Method)
45	Bakery, Confectionary	Moisture	AOAC 925.45
46		Fat	AOAC 935.39 (Baked Products) AOAC 920.177 (Confectionary)
47		Protein	AOAC 935.39
48		Ash	AOAC 935.39
49		pH	AOAC 935.39
50		Fatty Acid Profile	AOAC 969.33/969.22
51		Potassium	2011.14 (ICP-OES Method)
52		Sodium	2011.14 (ICP-OES Method)
53	Cereals, Millets, Pulses and processed complimentary foods	Moisture	AOAC 925.10
54		Fat	AOAC 920.85
55		Total Protein	AOAC 920.87
56		Carbohydrates	AOAC By Calculation
57		Energy	AOAC By Calculation
58		Energy from Fat	AOAC By Calculation
59		Potassium	2011.14 (ICP-OES Method)
60		Sodium	2011.14 (ICP-OES Method)
61		Fatty Acid Profile	AOAC 969.33/969.22



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
62	Nut & Nut Products	Moisture	AOAC 925.40
63		Total Ash	AOAC 950.49
64		Total Fat	AOAC 948.22
65		Protein	AOAC 950.48
66		Carbohydrates	AOAC By Calculation
67		Energy	AOAC By Calculation
68		Sodium	AOAC 956.01
69		Potassium	AOAC 956.01
70		Fatty Acid Profile	AOAC 969.33/969.22
71		Moisture	AOAC 934.01(at 95–100°C), AOAC 930.15 (at 135°C)
72	Animal Feeds	Total Ash	AOAC 942.05
73		Acid insoluble ash	AOAC 975.12
74		Fat	AOAC 920.39
75		Protein	AOAC 984.13
76		Minerals (Ca, Fe, Na, Mg, Zn, K, Cu, Mn)	985.35 (ICP-OES Method)
77		Fatty Acid Profile	AOAC 969.33/969.22
78		Enumeration of Fecal coliforms	APHA 9221 E. 1 – 22 nd Edition
79	Water	Enumeration and Detection of E.coli	APHA 9222B & APHA 9221 F – 22 nd Edition
80		Enumeration of Pseudomonas aeruginosa	BS EN 16266:2008
81		Enumeration of Fecal streptococcus	APHA 9230 C – 22 nd Edition
82		Detection and Enumeration of Legionella sp; Membrane Filtration	ISO 11731-2:2004



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
83	Water	Aerobic Plate Count at 37°C	CCFRA 1. 1. 4:2003
84		Enumeration of coliforms	APHA 9222 B & APHA 9221B – 22 nd Edition
85		Sampling for Legionella bacteria on water system	BS7592:2008
86		Identification and enumeration of Legionella	PALL Gene System
87		Total Coliforms Fecal coliforms E. coli	IDEXX-colilert-18 / APHA 9223 B – 22 nd Edition
88		Pseudomonas aeruginosa	IDEXX-Pseudalert
89		Enterococci	IDEXX-Enterolert
90	Domestic, potable water, recreational water & non potable water	Heterotrophic Plate Count	APHA 9215B – 22 nd Edition
91	Bottled Water	Heterotrophic Plate Count	CMMEF 60.42
92	Domestic, potable water, recreational water, industrial & natural waters, sediments, deposits & slime	Enumeration and detection of Legionella sp	ISO 11731-1998
93	Water	Iron (Fe)	APHA 3120B
94	Water	Copper (Cu)	APHA 3120B
95	Water	Manganese (Mn)	APHA 3120B
96	Water	Cadmium (Cd)	APHA 3120 B



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
97	Water	Zinc (Zn)	APHA 3120B
98	Water	Lead (Pb)	APHA 3120B
99	Water	Chromium (Cr)	APHA 3120B
100	Water	Arsenic (As)	APHA 3120B
101	Water	Mercury (Hg)	APHA 3120B
102	Water	Selenium (Se)	APHA 3120B
103	Water	Benzo(a)Pyrene	EPA 525.2 / APHA6440 B
104	Water	Formaldehyde	APHA 6252B
105	Water	Total petroleum hydrocarbons	EPA 8015-B
106	Water	Volatile Organic Compunds	EPA 5030-B
107	Water	pH 25°C	APHA 4500-H+ B
108	Water	Conductivity at 25°C Total	APHA 2510
109	Water	Suspended Solids (TSS)	APHA 2540-D
110	Water	Total Dissolved Solids at 180°C TDS	APHA 2540-C
111	Water	Chloride (Cl)	HACH 8113
112	Water	Chloride (Cl)	APHA 4500-Cl -B
113	Water	Sulphate (SO4)	HACH 8051
114	Water	Sulphate (SO4)	APHA 4500-SO4- C
115	Water	Bicarbonate (HCO3)	APHA 2320-B
116	Water	Calcium (Ca)	APHA 3120-B



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
117	Water	Calcium (Ca)	APHA 3500-Ca B
118	Water	Magnesium (Mg)	APHA 3120-B
119	Water	Magnesium (Mg)	APHA 3500-Mg B
120	Water	Total Hardness as (CaCO ₃)	APHA 2340-C
121	Water	Total Alkalinity to pH 4.4	APHA 2320-B
122	Water	Sodium (Na)	APHA 3120 B
123	Water	Potassium (K)	APHA 3120 B
124	Water	Chloride, mg/L Sulphate, mg/L Bromide, mg/L Nitrate, mg/L Nitrite, mg/L Fluoride, mg/L Phosphate, mg/L	Ion Chromatography APHA 4110 B
125	Water	Bromate, mg/L	Ion Chromatography APHA 4110 D / EPA 300.0 B
126	Water	Total Organic Carbon, mg/L	APHA 5310 B
127		Boron ,mg/L	APHA 3120 B
128	Waste water	pH at 25oC	APHA 4500 – H+B
129	Waste water	Total Suspended Solids (TSS)	APHA 2540 – D
130	Waste water	Total Dissolved Solids (TDS)	APHA 2540 – C
131	Waste water	Oil & Grease	APHA 5520 – B
132	Waste water	Chemical Oxygen Demand (COD)	APHA 5220 – B
133	Waste water	Biochemical Oxygen Demand (BOD) (5 days @ 20oC)	APHA 5210 – B
134	Waste water	Copper (Cu)	APHA 3120 B



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
135	Waste water	Nickel (Ni)	APHA 3120 B
136	Waste water	Zinc (Zn)	APHA 3120 B
137	Waste water	Chromium (Cr)	APHA 3120 B
138	Waste water	Lead (Pb)	APHA 3120 B
139	Waste water	Manganese (Mn)	APHA 3120 B
140	Waste water	Cadmium (Cd)	APHA 3120 B
141	Waste water	Total petroleum hydrocarbons	EPA 8015-B
142	Waste water	Volatile Organic Compounds	USEPA Method 8260 B
143	Steel	Chemical analysis of steel rebars	BS 4449:2005
144	Steel	Analysis of steel , % by weight: Carbon Silicon Manganese Phosphorous Sulfur Nickel Chromium Vanadium Molybdenum Nitrogen	Optical Emission Spectrometry ASTM E 415 - 08
145	Steel	Analysis of stainless steel, % by weight Carbon Silicon Manganese Phosphorous Sulfur Nickel Chromium Molybdenum Nitrogen	Optical Emission Spectrometry ASTM E 1086 – 08
146	Aggregate	Potential Alkali Silica reactivity of Aggregate	ASTM C 289-07
147	Reinforced Resins	Ignition Loss	ASTM D 2584-11



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
148	Soil	Dry density - moisture content relationship of soil with medium sized gravel.	BS 1377: 90: Pt. 4:3.5
149	Soil	Dry density- moisture content relationship of soil with coarse sized gravel.	BS 1377: 90:Pt. 4:3.6
150	Soil	- Particle Size Distribution (Soils for civil engineering purposes Determination of Particle size distribution-Wet sieve method).	BS 1377 :part 2 : 1990, clause 9.2: AMD 1996
151	Soil	- Method for Liquid limit & Plastic Limit	BS 1377 :part 2, clause 4.5 & 5.3 :1990
152	Soil	California Bearing Ratio	BS 1377:Part4 :1990,clause 7
153	Concrete	Compressive strength of concrete cubes.	BS 1881: 83: Pt. 116
154	Concrete	Compressive strength of concrete cube	BS EN 12390-3:2009
155	Concrete	Water Absorption of hardened concrete	BS 1881 :Part 122 : 2011
156	Concrete	Water permeability	DIN 1048 :Part 5 :1991, clause 6.4
157	Concrete	Electrical Indication of Concrete ability to resist Chloride ion Penetration	ASTM C 1202 : 2012
158	Steel	Tensile strength, rebend of steel rebars	BS 4449:2005
159	Aggregate	Flakiness index-	BS 812: 89: Pt. 105: 105.1
160	Aggregate	Elongation index	BS 812: 90: Pt. 105: 105.2
161	Aggregate	Ten percent fines value	BS 812:90: Pt. 111
162	Aggregate	Sieve analysis of fines and coarse aggregate	ASTM C 136/C136 M:2014
163	Aggregate	Particle density and absorption of coarse and fine aggregate	BS 812:95 (AMD 9195-1996): Pt. 2:5.3/5.4/5.
164	Aggregate	Determination of Aggregate Crushing Value	BS 812: Pt. 110: 1990



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
165	Aggregate	Determination of Sand Equivalent	ASTM D 2419:2014
166	Aggregate	Determination of Clay Lumps & Friable Particles in aggregates	ASTM C142/C142M-10
167	Aggregate	Micro devol Coefficient	BS EN 1097 part 1
168	Rock	Micro devol Coefficient	BS EN 13450-2002 Annex – E
169	Cement	Specific Surface of Cement 1- Method for testing cement, determination of fineness, Air permeability method 2- Fineness of Hydraulic Cement by Air- Permeability	BS EN 196: part 6: 1992 Clause 4 ASTM C 204:2011
170	Cement	Determination of setting times: 1- Methods for testing Cement Determination of setting times soundness, setting time test. 2- Time of setting of hydraulic Cement by Vicat Needle	BS EN 196: part 3: 2005, Clause 6 ASTM C 191: 2013
171	Cement	Methods for testing Cement, Determination of strength, Compressive strength	BS EN 196: part 1 :2005
172	Asphalt /Bitumen	Bitumen Extraction – Bitumen and Grading 1- Quantitative Extraction of Bitumen from Bituminous Paving mixture. 2- Quantitative Extraction of Bitumen from Bituminous Paving mixture	ASTM D 2172 /D 2172M-2011 AASHTO T 164 : 2014
173	Asphalt /Bitumen	Softening point of Bitumen (Ring and ball apparatus)	ASTM D 36 /D 36 M :2014
174	Asphalt /Bitumen	Penetration of Bituminous material	ASTM D5 : 2013
175	Special Testing	Geosynthetics-Geotextile wide width tensile test	BS EN ISO 10319:2008
176	Special Testing	Geosynthetics- static puncture test (CBR)	BS EN ISO 12236 : 2006



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
177	Special Testing	Tensile strength & Elongation of Waterproofing membrane	UEATC : 1984, Paragraph C (Special Directive for the assessment of reinforced Homogeneous waterproof coverings of Styrene-Butadiene-Styrene (SBS) Elastomer Bitumen Ultimate strength and Elongation at break)
178	Special Testing	Tear Resistance of Waterproofing membrane	ASTM D 5147/ D5147 M-2014 (Sampling and testing modified Bituminous sheet Material -Tear Strength-)
179	Special Testing	Puncture Resistance (Water vapor retarders used in contact with Earth Under Concrete slabs, on walls, or as ground cover)	ASTM E 154:2013 a, clause 10
180	Aggregate	Soundness of aggregate	ASTM C 88: 2013
181	Aggregate	Los Angeles	ASTM C 131: 06
182	Aggregate	Sieve Analysis	BS EN 933-1: 2012
183	Aggregate	Drying Shinkage	BS 812 Part 120: 1995 BS EN 1367-4: 2008
184	HDPE Pipe	Tensile strength of weld joint	ISO 13953: 2001
185	Glaze tiles	Modulus of rupture	BS EN 10545-4: 2012
		Water absorption	BS EN 10545-3: 1997
186	Geotextile Water Proofing	Opening size	BS EN ISO 12956: 2010
		Tensile strength / Elongation	DIN EN 12311-1: 1999
187	A-Cutback asphalt (MC 70) B-Bitumen SS1H	Distillation at different temperature	ASTM D 402: 2014 ASTM D 6997: 2014



United Arab Emirates



Accreditation Scope

Al Hoty Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
188	GRP	Tensile strength	ASTM D 638 : 2010
189	Cement	Compressive strength	ASTM C 109 : 2013
190	Cement	Potential alkali	ASTM C 227: 2010
191	Indoor Air Quality	Total Suspended Particulate Matter (TSPM) Respirable Suspended Particulate Matter (RSPM-PM10,2.5&1)	BS EN 481:1993
192	Indoor Air Quality	Nitrogen Dioxide (NO ₂)	BS EN 60079-29-2:2015
193	Indoor Air Quality	Sulphur Dioxide (SO ₂)	BS EN 60079-29-2:2015
194	Indoor Air Quality	Volatile Organic Compound(VOC)	BS EN 60079-29-2:2015
195	Indoor Air Quality	Formaldehyde (HCOH)	BS EN 60079-29-2:2015
196	Indoor Air Quality	Methane (CH ₄ -LEL)	BS EN 60079-29-2:2015
197	Indoor Air Quality	Carbon monoxide (CO)	BS EN 60079-29-2:2015
198	Indoor Air Quality	Carbon Dioxide (CO ₂)	BS EN 60079-29-2:2015
199	Indoor Air Quality	Hydrogen Sulphide (H ₂ S)	BS EN 60079-29-2:2015
200	Indoor Air Quality	Personal dust exposure	MDHS 14/3, NIOSH 0600 & 0500
201	Indoor Air Quality	Oxygen(O ₂)	BS EN 60079-29-2:2015
202	Indoor Air Quality	Temperature	BS EN 60079-29-2:2015
203	Indoor Air Quality	Relative Humidity	BS EN 60079-29-2:2015
204	Indoor Air Quality	Total Bacterial Count (TBC)	CCFRA 2.2.1.:2003, Guide# 45.
205	Indoor Air Quality	Yeast and Mould Count (YMC)	CCFRA 2.2.1.:2003, Guide# 45.



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
206	Outdoor Air Quality	Total Suspended Particulate Matter (TSPM) Respirable Suspended Particulate Matter (RSPM PM10)	USEPA – eCFR.; Title 40: Part 50 and 53
207	Outdoor Air Quality	Sulphur Dioxide ,SO ₂	BS EN 60079-29-2:2015
208	Outdoor Air Quality	Nitrogen Dioxide ,NO ₂	BS EN 60079-29-2:2015
209	Outdoor Air Quality	Volatile organic compound (VOC)	BS EN 60079-29-2:2015
210	Outdoor Air Quality	Ozone (O ₃)	BS EN 60079-29-2:2015
211	Outdoor Air Quality	Ammonia (NH ₃)	BS EN 60079-29-2:2015
212	Outdoor Air Quality	Carbon monoxide (CO)	BS EN 60079-29-2:2015
213	Outdoor Air Quality	Carbon Dioxide ,CO ₂	BS EN 60079-29-2:2015
214	Noise	Ambient/ Occupational Noise levels	ISO 1996
215	Noise	Personal noise exposure	ISO 9612
216	Flue Gas	Carbon monoxide (CO)	US EPA CTM 030
217	Flue Gas	Oxides of Nitrogen (NOX)	US EPA CTM 030 & US EPA EMC 7E
218	Flue Gas	Oxygen(O ₂)	US EPA CTM 030
219	Flue Gas	Carbon dioxide (CO ₂)	US EPA CTM 034
220	Flue Gas	Sulphur dioxide (SO ₂)	US EPA EMC 6C
221	Stack Emission	Total Suspended Particles (TSP)	US – EPA EMC Method 17
222	Stack Emission	Carbon dioxide (CO ₂)	US EPA CTM 034



United Arab Emirates



Accreditation Scope

Al Hoky Stanger Laboratories, Abu Dhabi, NAL 013
Testing Lab, Mussafah, Abu Dhabi, UAE

#	Test Material /Matrix	Description of the Test	Tested Method/Standard
223	Stack Emission	Carbon monoxide (CO)	US EPA CTM 030
224	Stack Emission	Oxides of Nitrogen (NOX)	US EPA EMC Method 7E
225	Stack Emission	Oxygen (O2)	US EPA CTM 030
226	Stack Emission	Sulphur dioxide (SO2)	US EPA EMC Method 6C
227	Stack Emission	Moisture content	US EPA EMC Method 4
228	Stack Emission	Hydrogen chloride	US EPA EMC Method 26
229	Stack Emission	Hydrogen fluoride	US EPA EMC Method 26
230	Heat Stress	Wet Bulb Temperature (WBT)	BS EN 27243:1994
231	Heat Stress	Dry Bulb Temperature (DBT)	BS EN 27243:1994
232	Heat Stress	Global Temperature (GT)	BS EN 27243:1994
233	Heat Stress	Thermal Work Limit (TWL)	BS EN 27243:1994
234	Illuminance	Lux	ISO 12464-1:2011
END			

Program Manager's Signature

