



Certificate of Accreditation

The certificate number: JAS Test- 040

Aqaba International Laboratories - Ben Hayyan /

Aqaba Special Economic Zone Authority

Tel: 03-2090666, Fax: 03-2090688
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As this lab is competent under the terms of the "Instructions for Administration of Accreditation Procedures of Conformity Assessment Bodies No. (4) for the Year 2016" and the requirements of the International Standard ISO/IEC 17025:2017 to carry out:

Chemical and Microbiological Testing of Food and Water and Wastewater and Sampling of Drinking Water and Wastewater

according to Annex No. (1)

and Testing of Wheat Impurities according to Annex No. (2)

and Testing of Ambient air and Indoor & outdoor Noise

according to Annex No. (3)

Issued in Amman on: **08-07-2018** and is valid until: **07-07-2023**.

This certificate was updated on: **2021-07-13**.

Accreditation Unit Director


Eng. Lana Marashdeh

- The annex and the documents submitted in connection with the accreditation certificate are deemed to form an integral part of the certificate. Thereof any amendments made to the certificate are to be reflected also on them.
- The approved and most recent version of this document can be viewed on AU website at http://www.au.gov.jo/AU_directory.htm
- The accredited laboratory is obliged to issue test reports carrying the accreditation Symbol only in the scope of accreditation specified in Annex no. (1),(2) and (3), and according to the internal instructions "Conditions of using JAS Symbol and logo No.(6) for the year 2016 and its amendment No. (1) for the year 2017" prepared by the Accreditation Unit.
- The Accreditation Unit is authorized to withdraw this accreditation certificate if the requirements specified in the "Instructions for Administration of Accreditation Procedures of Conformity Assessment Bodies" No.(4) for the year 2016 and the ISO/IEC 17025:2017 are no longer met.



THE HASHEMITE KINGDOM OF JORDAN

Accreditation Unit



Annex (1)

To the Accreditation Certificate No. **JAS Test - 040** Dated **08/07/2018**

For **Aqaba International Laboratories - Ben Hayyan /**

Aqaba Special Economic Zone Authority

Scope of Accreditation

Chemical & Microbiological Testing of Food and Water and Wastewater and Sampling of Drinking Water and Wastewater

Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Chemical Analysis of Food	
Aflatoxins: B1, B2, G1 and G2	▪ SOP No. FL- OL- SOP-001 , Rev. No./ Date:01/01.03.17 Determination Of Aflatoxins: B1, B2, G1 And G2 In Cashew, Pistachio, Peanut, Wheat, Rice Almond. By Quechers/HPLC.
Nitrite	▪ BS 4401-8:1976 for determination of Nitrite In Cured Meat By Photometric Measurement
Titrateable Acidity	▪ Jordanian Standard JS 1359:2012 (ISO 6091:2010) for Determination Of Titrateable Acidity Of Dried Milk By Potentiometrically Titration ▪ BS 1741 – 10.1:1989 for Determination Of Titrateable Acidity Of Liquid Milk By Titrimetricdetermination
Acidity & Acid value	▪ AOAC,940.28, 2019 for the Determination Of Acidity And Acid Value Of Refined Oils & Crude Oils By Titrimetric Determination
Peroxide Value	▪ AOAC, 965.33, 2019 for the Determination Of Peroxide Value Of Fats And Oils By Titrimetric Determination
Sodium Benzoate and Potassium sorbate	▪ SOP No. FL-OL-SOP-005 , Rev. No./ Date:04/17.11.11 for Determination Of Sodium Benzoate And Potassium Sorbate For Jam , Pickles ,Milk Products.
Fe, Cu, Zn, Pb, Cd, As,Sn,Hg,Na, K,Ca and Mg	▪ SOP No.FL- IL- SOP- 005, Rev. No/ Date: 00/13.04.17 for Determination of Metals in Food Samples By Inductively Coupled Plasma /Mass Spectrometry (ICP/MS)
BHT and BHA for oil	▪ SOP No.FL-OL-SOP-011, Rev. No./ Date:03/1.12.15 for Determination of BHT and BHA content in Oils and Fats
Ethanol	▪ SOP No.FL-OL-SOP-008, Rev. No./ Date:03/17.11.11 for Determination of Ethanol in Juices
Fat	▪ AOAC 2007.04, 2019 for Determination Of Fat In Meat/ Meat Products by NIR
Moisture	▪ AOAC 2007.04, 2019 for Determination Of Moisture In Meat/ Meat Products by NIR
Protein	▪ AOAC 2007.04, 2019 for Determination Of Protein In Meat/ Meat Products by NIR
Histamine	▪ SOP NO. FL-PE-SOP-010, Rev No./ Date:01/22.03.18 for Determine of Histamine by ELISA technique



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Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Chemical Analysis of Drinking Water and Domestic Waste Water	
pH	▪ SM 4500-H+ B. Electrometric method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Total Dissolved Solids (TDS)	▪ SM 2540 C Total Dissolved Solids dried at 180 0C, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Total Hardness	▪ SM 2340 C Titrimetric Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Turbidity	▪ SM 2130 B Nephelometric method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Electrical Conductivity	▪ SM-2510 B Laboratory Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Chlorine	▪ SM-4500- Cl G. DPD Colorimetric Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Total suspended solids	▪ SM-2540 D Total suspended solids dried at 103 – 105 0C, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Chemical Oxygen Demand (COD)	▪ SM-5220C , Closed Reflux Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Alkalinity	▪ SM-2320 B, SM 2310 B Potentiometric titration, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
(Cl, F, PO ₄ , NO ₂ , NO ₃ , SO ₄)	▪ SM 4110 B Ion Chromatography with Chemical Suppression of Eluent Conductivity Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
(Fe, Cu, Zn, Mn, Na, K, Ca, Mg, Cd, Pb, Ni, Cr, Co, Be, Li, Al, Mo, Ba, V, Ag, Sb, As, Se, Hg, Sn, Sr, B and Si)	▪ SOP No.EL-IL-SOP-015 -Determination of Metals in water By Inductively Coupled Plasma /Mass Spectrometry (ICP/MS),Rev. No/ Date: 00/13.04.17
Chemical Analysis of Drinking Water and Domestic Waste Water	
Cyanide (CN)	▪ SM 4500- CN F Ion Selective Electrode Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.



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Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Chemical Analysis of Drinking Water and Domestic Waste Water	
Total Nitrogen, Kjeldahl	▪ SM 4500-Norg B, Macro- KJELDAHL Method, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Color	▪ SM 2120 B, Visual Comparison, Standard Methods for the Examination of Water and Wastewater, 23 rd edition, 2017.
Chemical Analysis of Drinking Water	
THMs (Chloroform, Dichlorobromomethane, Dibromochloromethane, Bromoform)	• SOP NO. EL-OL-SOP-001 - determination of volatile organic compounds (vocs & thms) in water by headspace capillary-column gas chromatography/mass spectrometric method - Rev. No/ Date: 03/17.11.11
VOCs (Benzene, Tetrachloroethylene, Trichloroethylene, Ethyl benzene, Total Xylene, Toluene)	• SOP NO. EL-OL-SOP-001 - determination of volatile organic compounds (vocs & thms) in water by headspace capillary-column gas chromatography/mass spectrometric method - Rev. No/ Date: 03/17.11.11
Organochlorine. Pesticides (Endrin, Lindane, Heptachlor, Heptachlor Epoxide, Aldrin, Dieldrin & p,p DDT)	• SOP NO. EL-OL-SOP-002 -determination of organochlorine pesticides residue in drinking and ground water, by capillary-column gas chromatography - Rev. No/ Date: 03/17.11.11
Sampling of Drinking Water and wastewater	
Sampling of drinking water and domestic wastewater for microbiology analysis	• SOP No. EL-WQ-SOP-001 -Collection, transport and storage of water samples for microbiological tests -Rev.No./ Date: 01/25. 02.18
Sampling of drinking water and domestic wastewater for chemical analysis	• SOP No. EL-WQ-SOP-002 -collection, transport and storage of water samples for chemical tests - Rev.No./ Date: 01/25. 02.18
Microbiological Analysis of Water	



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Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Total coliform	<ul style="list-style-type: none"> • SM 9221 B, Multiple-tubes fermentation technique 23rd edition, 2017
E.coli (MPN)	<ul style="list-style-type: none"> • SM 9221 F & SM 9221 B Multiple-tubes fermentation technique 23rd edition, 2017
Pseudomonas aeruginosa	<ul style="list-style-type: none"> • ISO 16266:2008 Membrane filtration technique
Enumeration of Enterococcus in water by membrane filtration technique.	<ul style="list-style-type: none"> • BS EN ISO 7899-2:2000 Membrane filtration technique
Enumeration of Coliform bacteria	<ul style="list-style-type: none"> • ISO 9308-1:2014 Standard test Membrane filtration technique
Enumeration of Escherichia coli	<ul style="list-style-type: none"> • ISO 9308-1:2014 Standard test Membrane filtration technique
Legionella	<ul style="list-style-type: none"> • ISO 11731-:2017 Membrane filtration technique
Heterotrophic Plate count (HPC) By Pour Plate Method	<ul style="list-style-type: none"> • SM 9215 B ,23rd edition, 2017
Microbiological Analysis of Food	
Enumeration of microorganisms by colony count Technique at 30°C	<ul style="list-style-type: none"> • BS EN ISO 4833-2:2013
Enumeration Of Enterobacteriaceae By Colony Counting	<ul style="list-style-type: none"> • ISO 21528-2:2017
Enumeration of Coagulase-positive Staphylococci (Staphylococcus aureus)	<ul style="list-style-type: none"> • ISO 6888-1:1999
Enumeration Clostridium perfringens colony count technique	<ul style="list-style-type: none"> • BS EN ISO 7937:2004



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Chemical & Microbiological Testing of Food and Water and Wastewater and Sampling of Drinking Water and Wastewater

Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Enumeration of - Glucuronidase- positive Escherichia coli	<ul style="list-style-type: none">• BS ISO 16649-2:2001
Microbiological Analysis of Food	
Coliforms colony count technique	<ul style="list-style-type: none">• BS ISO 4832:2006
Enumeration Of Listeria monocytogenes	<ul style="list-style-type: none">• ISO 11290-1-2:2017
Detection Of Listeria monocytogenes	<ul style="list-style-type: none">• ISO 11290-1-2:2017
Enumeration of yeast & mold in products with water activity less than or equal to 0.95	<ul style="list-style-type: none">• BS ISO 21527-1-2:2008
Enumeration of yeast & mold in products with water activity greater than 0,95	<ul style="list-style-type: none">• BS ISO 21527-1-2:2008
Salmonella	<ul style="list-style-type: none">• ISO 6579-1: 2017 (E)
Bacillus cereus	<ul style="list-style-type: none">• BS EN ISO 7932:2004
Detection OF Vibrio parahaemolyticus	<ul style="list-style-type: none">• ISO 21872-1:2017(E)
Detection Of Salmonella By Rapid Culture Method	<ul style="list-style-type: none">• SOP NO.FL-ML-SOP-004• -detection of salmonella by rapid culture method• -Rev.No./ Date:00/01.05.17

List of employees in the laboratory who are technically responsible for issuing the test reports in the scope of accreditation:

- 1- **Laboratories Division Head: Qussay Yanes**
- 2- **Water quality Measurements Division Head : Dr. Abdalmajeed Alajlouni.**
- 3- **Quality Assurance Manager : Wael Abu Tuaimh.**



Accreditation Unit

Annex (2)

Issued on: 11-07-2019

To the Accreditation Certificate No. **JAS Test - 040** Dated **08-07-2018**

For **Aqaba International Laboratories - Ben Hayyan /**

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Scope of Accreditation

Testing of Wheat Impurities

Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Physical Examination for Wheat Impurities	The International Standard, Wheat (<i>Triticum aestivum</i> L.) — Specification ISO 7970:2011, The Jordanian Standard – Technical Regulation JS 1200:2015

List of employees in the laboratory who are technically responsible for issuing the test reports in the scope of accreditation:

1. Lab Division Head (LDH): Mr. Qussay Yanis
2. Quality Assurance Manager: Mr. Wael Abu Tuaimah



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Annex (3)
Issued on : 13/7/2021

To the Accreditation Certificate No. **JAS Test - 040** Dated 08-07-2018

For **Aqaba International Laboratories - Ben Hayyan /**

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Scope of Accreditation

Testing of Ambient air and Indoor & outdoor Noise

Tested Parameter/ Type of Test/ Measured Quantity	Test Methods/ Standards
Testing of Air quality (City AQMS (CS) Southern AQMS (SS), Port AQMS (PS) Mobile AQMS (MS))	
Sulfur dioxide (SO ₂)	• UV-Fluorescence-JS 1140/2006
Nitrogen oxides (NO, NO ₂ , NO _x)	• Chemiluminescence-JS 1140/2006
Carbon monoxide (CO)	• Infrared absorption-JS 1140/2006
Ozone (O ₃)	• UV-Photometry-JS 1140/2006
Particulates Matter (PM ₁₀ , PM _{2.5})	• Beta Attenuation Method (BAM)-JS 1140/2006
Ammonia (NH ₃)	• Chemiluminescence-JS 1140/2006
Hydrogen Sulfide (H ₂ S)	• UV-Fluorescence-JS 1140/2006
Noise (sound level) (Indoor & outdoor)	
Noise (sound level)	• Sound Pressure Level-ISO 1996-2:2017(E)

List of employees in the laboratory who are technically responsible for issuing the test reports in the scope of accreditation:

- 1- Air quality Division Head : Eng. Hasan Al-Marayeh.
- 2- Quality Assurance Manager : Wael Abu Tuameh.