



REPUBLIC OF TURKEY
HALAL ACCREDITATION AGENCY

HALAL ACCREDITATION CERTIFICATE

Laboratory Performing Halal Testing

FESC Food Environment Science Laboratories

Address : Merkez Mahallesi Tatlıpınar Sok. Mart Plaza No:13
Kat:2 Kağıthane/İSTANBUL

Accredited in accordance with the OIC/SMIIC 35:2020
Standard for the attached scope.

Halal Accreditation Number

2022-019

Halal Accreditation Scope

Shown in annex

Initial Halal Accreditation Date

22.07.2022

Revision Date

28.04.2023

Expiry Date

22.07.2027

This certificate is valid with the halal accreditation scope until the expiry date, as long as the laboratory fully complies with the OIC/SMIIC 35:2020 Standard, national legislation and Halal Accreditation Agency rules.

Zafer SOYLU
Chairman of the Board

ANNEX
HALAL ACCREDITATION SCOPE

Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Water	Sampling from Coastal Waters, Transition Waters	Date 21.02.2015 and 29274 Sampling from Underground Waters, Aboveground Waters, Sediment and Notification on Biological sampling
Water	Sampling from Underground Waters	TS ISO 5667-11 TS 9359
Water	Sampling for Water-Microbiological Analyzes	TS EN ISO 19458
Water	Sampling from Lake and Ponds	ISO 5667-4
Water	Sampling from Rivers and Streams	TS EN ISO 5667-6
Water	Determination of Color Spectrophotometric Method	SM 2120 C
Water	Determination of Color Spectrophotometric Method	TS EN ISO 7887 B
Water	Determination of Turbidity Nephelometric Method	SM 2130 B
Water	Determination of pH Electrometric Method	SM 4500 H ⁺ B
Water	Determination of Conductivity Laboratory Method	SM 2510 B
Water	Determination of Temperature Laboratory and Field Method	SM 2550 B
Water	Determination of Salinity Electrical Conductivity Method	SM 2520 B
Water	Determination of Total Solids Gravimetric Method	SM 2540 B
Water	Determination of Total Dissolved Solids (TDS) Gravimetric Method	SM 2540 C
Water	Determination of Total Suspended Solids Grayimetric Method	SM 2540 D



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Water	Determination of Settable Solids Volumetric and Gravimetric Method	SM 2540 F
Water	Determination of Sulfide Spectrophotometric Method	SM 4500 S ⁻² D
Water	Determination of Sulfide Titrimetric Method	SM 4500 S ⁻² F
Water	Determination of Sulfite Titrimetric Method	SM 4500 SO ₃ ⁻² B
Water	Determination of Sulfite Spectrophotometric Method	SM 4500 SO ₃ ⁻² C
Water	Determination of Sulfate Spectrophotometric Method	SM 4500 SO ₄ ⁻² E
Water	Determination of Ammonium / Ammonia Nitrogen Preliminary Process : Distillation Measurement : Titrimetric Method	SM 4500 NH ₃ B SM 4500 NH ₃ C
Water	Determination of Ammonium / Ammonia Nitrogen Preliminary Process : Distillation Measurement : Spectrophotometric Method	SM 4500 NH ₃ B SM 4500 NH ₃ F
Water	Determination of Total Kjeldahl Nitrogen Macro Kjeldahl Method	SM 4500 Norg B
Water	Determination of Nitrate / Nitrite Nitrogen Spectrophotometric Method	SM 4500 NO ₃ E
Water	Determination of Nitrate/ Nitrite Nitrogen Spectrophotometric Method	SM 4500 NO ₃ B
Water	Determination of Nitrite/ Nitrite Nitrogen Spectrophotometric Method	SM 4500 NO ₂ B
Water	Determination of Phosphate / Phosphate Phosphorous Spectrophotometric Method	SM 4500 P C
Water	Determination of Phosphate / Phosphate Phosphorous Spectrophotometric Method	SM 4500 P E
Water	Determination of Total Phosphorus Preliminary Process : Digestion Method Measurement : Spectrophotometric Method	SM 4500 P B SM 4500 P C
Water	Determination of Total Phosphorus Preliminary Process : Digestion Method Measurement : Spectrophotometric Method	SM 4500 P B SM 4500 P E



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Water	Determination of Chloride Titrimetric Method	SM 4500 Cl ⁻ C
Water	Free Chlorine Titrimetric Method	SM 4500-Cl F
Water	Combine Chlorine Titrimetric Method	SM 4500-Cl F
Water	Determination of Total Chlorine Titrimetric Method	SM 4500-Cl F
Water	Free Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1)
Water	Combine Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1 / Lovibond 511082 BT DPD 3)
Water	Determination of Total Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1 / Lovibond 511082 BT DPD 3)
Water	Determination of Total Cyanide Preliminary Process : Distillation Measurement : Titrimetric and Spectrophotometric Method	EPA 9010 C EPA 9014
Water	Determination of Free Cyanide Spectrophotometric Method	EPA 9014
Water	Determination of WAD Cyanide Preliminary Process : Distillation Measurement : Spectrophotometric Method	SM 4500-CN-:B,E,I
Water	Determination of Chlorophyll -a, b, c1+c2 Spectrophotometric Method	EPA 446.0
Water	Determination of Phenol Spectrophotometric Method	TS 6227 ISO 6439
Water	Determination of Oil and Grease Preliminary Process : Solvent Extraction Method Measurement : Gravimetric Method	SM 5520 B
Water	Determination of Hydrocarbons Preliminary Process : Solvent Extraction Method Measurement : Gravimetric Method	SM 5520 B and F



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Water	Determination of Surfactants (MBAS) Preliminary Process : Subling with Sublation Apparatus Measurement : Spectrophotometric Method	SM 5540 B and C
Water	Determination of Silica Spectrophotometric Method	SM 4500 SiO ₂ C
Water	Determination of Fluoride Preliminary Process : Distillation Measurement : SPADNS Method	SM 4500-F B SM 4500-F D
Water	Determination of Oxygen (Dissolved) Electrochemical Probe Method	TS EN ISO 5814
Water	Determination of Biochemical Oxygen Demand (BOD) BOD Demand After N Days	TS 4957-1 EN 1899-1 TS EN ISO 5815-1
Water	Determination of Chemical Oxygen Demand (COD) Open Reflux- Titrimetric Method	SM 5220 B
Water	Determination of Total Organic Carbon (TOC) / Dissolved Organic Carbon (DOC) Oxidation Method	TS 8195 EN 1484
Water	Determination of Chromium (IV) Spectrophotometric Method	SM 3500 Cr B
Water	Determination of Light Transmission Secchi Disc Method	TS EN ISO 7027-2
Water	Flow Measurement Area- Velocity Flowmeter Method	In-House Method (DMS 46730)
Water	Determination of Total Hardness EDTA Titrimetric Method	SM 2340 C
Water	Determination of Permanganate Index Titrimetric Method	TS 6288 EN ISO 8467
Water	Determination of Acidity Titrimetric Method	SM 2310 B
Water	Determination of Alkalinity Titrimetric Method	SM 2320 B
Water	Determination of Carbon Dioxide Titrimetric Method	SM 4500-CO ₂ C SM 4500-CO ₂ D

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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Water	Determination of Total Sulphur ICP-MS Method	In-House Method- "DMS 52371 Rev 03" (Agilent Technologies App. 5989-5318 EN February 8, 2007)
Water	Determination of Phenols Phenol, 2-chlorophenol, 2-nitrophenol, 2,4-dimethylphenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, 2,4-dinitrophenol, 2-methyl-4,6-dinitrophenol, pentachlorophenol, 4-Nitrofenol Preliminary Process : Liquid Liquid Extraction Measurement : GC-MS Method	SM 6410 B
Water	Determination of Phenols 2,6-dichlorophenol, 2,3,4,6-tetrachlorophenol, 2-Metil fenol (o-cresol), 3-Metil fenol (m-cresol), 4-Metil fenol (p-cresol) Preliminary Process : Liquid Liquid Extraction Measurement : GC-MS Method	In-House Method-“DMS 19095. Rev6” (SM 6410 B)
Water	Determination of Phenols Phenol, 2-chlorophenol, 2-nitrophenol, 2,4-dimethylphenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, 2,4-dinitrophenol, 2-methyl-4,6-dinitrophenol, pentachlorophenol, 4-Nitrofenol, 2,6-dichlorophenol, 2,3,4,6-tetrachlorophenol, 2-Metil fenol (o-cresol), 3-Metil fenol (m-cresol), 4 -Metil fenol (p-cresol) Preliminary Process : Liquid Liquid Extraction Measurement: GC-MS Method	EPA 3510 C EPA 8270 E





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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Water	Determination of Organochlorine Pesticides Trifluralin, hexachlorobenzene, beta-BHC, chlordan-trans(gamma), chlordan-cis(alpha), profenofos, beta-endosulfan, 4,4-DDD (p,p-DDD), 4,4-DDT (p,p-DDT), dicofol, alpha-BHC, gama-BHC(lindane), delta BHC, heptachlor, aldrin, 2,4-DDE (o,p-DDE), alpha-endosulfan, dieldrin, endrin, chlorobenzilate, 2,4-DDT (o,p-DDT), methoxychlor, heptachlor-endo-epoxide(trans), heptachlor-exo-epoxide(cis), Isodrin Preliminary Process : Liquid Liquid Extraction Measurement: GC-ECD Method	EPA 3510 C EPA 8081 B
Water	Determination of PCB (Polychlorinated biphenyls) (28, 52, 101, 138, 153, 180, 194) Preliminary Process : Liquid Liquid Extraction Measurement: GC-ECD Method	TS 2627 EN ISO 6468
Water	Determination of PCB (Polychlorinated biphenyls) (18, 31, 44, 118, 149, 170, 209) Preliminary Process : Liquid Liquid Extraction Measurement: GC-ECD Method	In-house method-“DMS 19089. Rev4” (TS 2627 EN ISO 6468)
Water	Determination of PCB (Polychlorinated biphenyls) (18, 28, 31, 44, 52, 101, 118, 138, 149, 153, 170, 180, 209) Preliminary Process : Liquid Liquid Extraction Measurement: GC-ECD Method	EPA 3510 C EPA 8082 A

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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Water	Determination of Boron (B), Sodium (Na), Magnesium (Mg), Aluminium (Al), Phosphorus (P), Potassium (K), Calcium (Ca), Vanadium (V), Chromium (Cr), Iron (Fe), Dissolved Iron, Manganese (Mn), Cobalt (Co), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Molybdenum (Mo), Silver (Ag), Cadmium (Cd), Antimony (Sb), Barium (Ba), Mercury (Hg), Lead (Pb), Tin (Sn), Beryllium (Be), Lithium (Li), Thallium (Tl), Strontium (Sr), Uranium (U), Bizmut (Bi), Toryum (Th) Preliminary Process : Filtration Preliminary Process : Extraction with microwave Measurement: ICP-MS Method	SM 3030 K TS EN ISO 17294-1-2
Water	Determination of Hydrocarbon Oil Index Preliminary Process : Solvent Extraction Measurement: GC-FID Method	TS EN ISO 9377-2
Water	Determination of PAH (Polyaromatic Hydrocarbons) (Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)antracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenzo(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd) pyrene, Naphthalene, Phenanthrene, Pyrene) Preliminary Process : Liquid-Liquid Extraction Measurement: HPLC Method	ISO 17993
Water	Colony count (22°C)	TS EN ISO 6222
Water	Colony count (37°C)	TS EN ISO 6222
Water	Enumeration of Coliform Bacteria Membrane Filter Technique	SM 9222 B



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Water	Enumeration of Coliform Bacteria EMS Technique	SM 9221 B
Water	Enumeration of Fecal Coliform Membrane Filter Technique	SM 9222 D
Water	Enumeration of Fecal Coliform EMS Technique	SM 9221 E
Water	<i>Enumeration of Escherichia coli</i> Membrane Filter Technique	TS EN ISO 9308-1
Water	<i>Enumeration of Coliform Bacteria</i> Membrane Filter Technique	TS EN ISO 9308-1
Water	<i>Enumeration of Escherichia coli</i> Membrane Filter Technique	SM 9222 H
Water	<i>Enumeration of Escherichia coli</i> EMS Technique	SM 9221 F
Water	Enumeration of Fecal Enterococcus Membrane Filter Technique	SM 9230 C
Water	Enumeration of Fecal Enterococcus EMS Technique	SM 9230 B
Water	Enumeration of Fecal Enterococcus Membrane Filter Technique	ISO 7899-2
Water	<i>Detection of Salmonella spp.</i>	TS EN ISO 19250
Water	<i>Enumeration of Pseudomonas aeruginosa</i> Membrane Filter Technique	TS EN ISO 16266
Water	<i>Enumeration of Pseudomonas aeruginosa</i> Membrane Filter Technique	In-house method-(DMS 144750)
Water	<i>Enumeration of Legionella</i> Membrane Filter Technique	TS EN ISO 11731
Water	Count of Sulphite-Reducing Anaerobic Bacteria (Clostridia) Membrane Filter Technique	Enviroment Agency Part 6
Water	Enumeration of <i>Clostridium Perfringens</i> (Including spore-forming) Membrane Filter Technique	Enviroment Agency Part 6
Water	Determination of Chromium (III) and Chromium (VI) Preliminary Process : Chromatographic separation Method Measurement: ICP-MS Method	In House method-"DMS 49295.04" (Agilent Application Note, 5989-2481 EN)



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Testing Fields- Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Water	Determination of Fluoride, Chloride, Nitrite / Nitrite Nitrogen, Nitrate / Nitrate Nitrogen, Phosphate / Phosphate Phosphorus, Bromide and Sulfate IC Method	SM 4110 B
Water	Determination of Bromate, Chlorate, Chlorite IC Method	SM 4110 D
Water	Determination of volatile organic compounds (VOC _S) 1,2-Dichloroethane, Trichloroethene (Trichloroethylene), Vinyl Chloride, tetrachloroethene (tetrachloroethylene), chloroform (trichloromethane), bromoform, dibromochloromethane, bromodichloromethane, 1,1-dichloroethane, dichloromethane (methylene chloride), benzene, 1,2-trimethylbenzene, 1,3-dichlorobenzene , 1,3,5-Trimethylbenzene, 1,4-Dichlorobenzene, Carbontetrachloride (Tetrachloromethane), m+p-Xylene, o-Xylene, Styrene, Naphthalene, Hexachlorobutadiene (Hexachloro-1,3-butadiene), trichlorobenzene (1,3-trichlorobenzene, 1,2,3-trichlorobenzene), 1,2,4-Trichlorobenzene, 1,2,3-Trichloropropene, acetone (2-propanone), 1,2-dichlorobenzene, 1,1-dichloroethylene (1,1-Dichloroethene), 1,1,1-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2-Trichloroethane, 1,1,2,2-tetrachloroethane, 1,2-Dichloropropane, 1,3-Dichloropropene (Cis), 1,3-dichloropropene (trans), carbondisulphide, chlorobenzene, chloromethane, cis-1,2-dichloroethene, ethylbenzene, methyl tert butyl ether (MTBE), Toluene, trans-1,2-Dichloroethene (1,2-trans-dichloroethylene) , Vinyl Acetate, Bromomethane, Isopropylbenzen (cumene), n-Propylebenzene (PropylBenzene) Preliminary Process : Purge & Trap (P&T) Measurement : GC-MS Method	EPA 5030 C EPA 8260 D
Water	Determination of volatile organic compounds (VOCS) Epichloridin, Hekzaklorobenzen, Pentachlorobenzen, 1,2,4,5-Tetrachlorobenzene, 2,3,4,5,6-Pentachlorotoluen (Pentachlorotoluene), Butanol (Butyl Alcohol), 1,3,5-Trichlorobenzene Preliminary Process : Purge & Trap (P&T) Measurement : GC-MS Method	EPA 5030 In-house method-“IWB 257037. Rev2” (EPA 8260 D)
Water	Total nitrogen Calculation by nitrite, nitrate and kjeldahl nitrogen	SM 4500 NO ₃ ⁻ E SM 4500 NO ₂ ⁻ B SM 4500 N _{org} B

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Testing Fields-Tested Materials/Products	Name of Test	Testing Method (national, international standards, in-house methods)
Sea Water	Sampling from Sea Water	TS ISO 5667-9
Sea Water	Determination of Color Spectrophotometric Method	SM 2120 C
Sea Water	Determination of Turbidity Nephelometric Method	SM 2130 B
Sea Water	Determination of pH Electrometric Method	SM 4500 H ⁺ B
Sea Water	Determination of Conductivity Laboratory Method	SM 2510 B
Sea Water	Determination of Temperature Laboratory and Field Method	SM 2550 B
Sea Water	Determination of Salinity Electrical Conductivity Method	SM 2520 B
Sea Water	Determination of Suspended Solids (SS) Gravimetric Method	SM 2540 D
Sea Water	Determination of Ammonium / Ammonia Nitrogen Preliminary Process : Distillation Measurement :Spectrophotometric Method	SM 4500 NH ₃ B SM 4500 NH ₃ F
Sea Water	Determination of Total Kjeldahl Nitrogen Macro Kjeldahl Method	SM 4500 Norg B
Sea Water	Determination of Phosphate / Phosphate Phosphorous Spectrophotometric Method	SM 4500-P C SM 4500-P E
Sea Water	Determination of Total Phosphorus Preliminary Process : Digestion Method Measurement :Spectrophotometric Method	SM 4500-P B SM 4500-P C
Sea Water	Determination of Total Phosphorus Preliminary Process : Digestion Method Measurement :Spectrophotometric Method	SM 4500-P B SM 4500-P E
Sea Water	Determination of Chlorophyll -a Spectrophotometric Method	EPA 446.0
Sea Water	Determination of Phenol Spectrophotometric Method	TS 6227 ISO 6439
Sea Water	Determination of Total Cyanide Preliminary Process : Distillation Measurement : Titrimetric and Spectrophotometric Method	EPA 9010 C EPA 9014



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Sea Water	Determination of Surfactants (MBAS) Preliminary Process : Subling with Sublation Apparatus Measurement : Spectrophotometric Method	SM 5540 B and C
Sea Water	Determination of Oxygen (Dissolved) Electrochemical Probe Method	TS EN ISO 5814
Sea Water	Determination of Biochemical Oxygen Demand (BOD) BOD Demand After N Days	TS 4957-1 EN 1899-1 TS EN ISO 5815-1
Sea Water	Determination of Chemical Oxygen Demand (COD) Open Reflux- Titrimetric Method	TS 2789
Sea Water	Determination of Total Organic Carbon (TOC) / Dissolved Organic Carbon (DOC) Oxidation Method	TS 8195 EN 1484
Sea Water	Determination of Light Transmission Secchi Disc Method	TS EN ISO 7027-2
Sea Water	Determination of Nitrate/ Nitrate Nitrogen Spectrophotometric Method	SM 4500 NO ₃ E SM 4500 NO ₂ B
Sea Water	Determination of Nitrite/ Nitrite Nitrogen Spectrophotometric Method	SM 4500-NO ₂ B
Sea Water	Chromium (VI) Tayini Spectrophotometric Method	SM 3500-Cr B
Sea Water	Determination of Oil and Grease Preliminary Process : Solvent Extraction Method Measurement : Gravimetric Method	EPA 1664B
Sea Water	Determination of Total Chlorine Titrimetric Method	SM 4500 Cl F
Sea Water	Determination of Phenols Phenol, 2-chlorophenol, 2-nitrophenol, 2,4-dimethylphenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, 2,4-dinitrophenol, 2-methyl-4,6-dinitrophenol, pentachlorophenol, 4-Nitrofenol Preliminary Process : Liquid Liquid Extraction Measurement : GC-MS Method	SM 6410 B



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Sea Water	Determination of Phenols 2,6-dichlorophenol, 2,3,4,6-tetrachlorophenol, 2-Metil fenol (o-cresol), 3-Metil fenol (m-cresol), 4 - Metil fenol (p-cresol) Preliminary Process : Liquid Liquid Extraction Measurement : GC-MS Method	In-house method-“DMS 19095. Rev6” (SM 6410 B)
Sea Water	Determination of Phenols Phenol, 2-chlorophenol, 2-nitrophenol, 2,4-dimethylphenol, 2,4-dichlorophenol, 4-chloro-3-methylphenol, 2,4,6-trichlorophenol, 2,4-dinitrophenol, 2-methyl-4,6-dinitrophenol, pentachlorophenol, 4-Nitrofenol, 2,6-dichlorophenol, 2,3,4,6-tetrachlorophenol, 2-Metil fenol (o-cresol), 3-Metil fenol (m-cresol), 4 -Metil fenol (p-cresol) Preliminary Process : Liquid Liquid Extraction Measurement: GC-MS Method	EPA 3510 C EPA 8270 E
Sea Water	Determination of Hydrocarbon Oil Index Preliminary Process : Solvent Extraction Measurement: GC-FID Method	TS EN ISO 9377-2
Sea Water	Determination of Chromium (Cr), Nickel (Ni), Copper (Cu), Arsenic (As), Cadmium (Cd), Mercury (Hg), Lead (Pb), Zinc (Zn) Preliminary Process : Filtration Preliminary Process : Extraction with microwave Measurement: ICP-MS Method	SM 3030 K TS EN ISO 17294-1-2
Sea Water	Enumeration of Coliform Bacteria Membrane Filter Technique	SM 9222 B
Sea Water	Enumeration of Coliform Bacteria EMS Technique	SM 9221 B
Sea Water	Enumeration of Fecal Coliform Membrane Filter Technique	SM 9222 D
Sea Water	Enumeration of Fecal Coliform EMS Technique	SM 9221 E

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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Sea Water	Enumeration of <i>Fecal Enterococcus</i> Membrane Filter Technique	SM 9230 C
Sea Water	Enumeration of <i>Fecal Enterococcus</i> Membrane Filter Technique	ISO 7899-2
Sea Water	<i>Detection of Salmonella spp.</i>	TS EN ISO 19250
Sea Water	<i>Detection of Beggiatoa</i>	SM 9240 C, D
Sea Water	Enumeration of <i>Escherichia coli</i> Membrane Filter Technique	SM 9222 H
Sea Water	Enumeration of <i>Escherichia coli</i> EMS Technique	SM 9221 F
Sea Water	Enumeration of <i>Escherichia coli</i> Membrane Filter Technique	TS EN ISO 9308-1
Sea Water	Enumeration of <i>Coliform Bacteria</i> Membrane Filter Technique	TS EN ISO 9308-1
Sea Water	Enumeration of <i>Heterotrof bacterium</i> Pouring plaque technique	SM 9215 B
Sea Water	Enumeration of <i>Heterotrof bacterium</i> Membrane Filter Technique	SM 9215 D
Sea Water	<i>Vibrio cholerae</i> EMS Technique	EPA/600/R-10/139
Sea Water	Total nitrogen Calculation by nitrite, nitrate and kjeldahl nitrogen	SM 4500 NO ₃ ⁻ E SM 4500 NO ₂ ⁻ B SM 4500 N _{org} B
Sea Water	TRIX Index Calculation by Dissolved oxygen, chlorophyll-a, total inorganic nitrogen (NO ₃ ⁻ + NO ₂ ⁻ + NH ₄ ⁺), total phosphorus	TS EN ISO 5814 EPA 446.0 SM 4500 NO ₃ ⁻ E SM 4500 NO ₂ ⁻ B SM 4500-NH ₃ B SM 4500-NH ₃ F SM 4500-P B SM 4500-P E
Swimming Pool Water	Sampling from Swimming Pools	Regulation on the Health Principles of Swimming Pools



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Swimming Pool Water	Determination of Ammonium Preliminary Process : Distillation Measurement :Spectrophotometric Method	SM 4500 NH ₃ B SM 4500 NH ₃ F
Swimming Pool Water	Determination of pH Electrometric Method	SM 4500 H ⁺ B
Swimming Pool Water	Determination of Nitrite Spectrophotometric Method	SM 4500 NO ₂ B
Swimming Pool Water	Determination of Nitrate Spectrophotometric Method	SM 4500 NO ₃ B
Swimming Pool Water	Determination of Alkalinity Titrimetric Method	SM 2320 B
Swimming Pool Water	Determination of Free Chlorine (DPD) Titrimetric Metot	TS 5489 EN ISO 7393-1
Swimming Pool Water	Determination of Free Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1)
Swimming Pool Water	Determination of Combined Chlorine Titrimetric Method	TS 5489 EN ISO 7393-1
Swimming Pool Water	Determination of Combined Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1 / Lovibond 511082 BT DPD 3)
Swimming Pool Water	Determination of Total Chlorine Titrimetric Method	TS 5489 EN ISO 7393-1
Swimming Pool Water	Determination of Total Chlorine Photometric Method	Kit Method (Lovibond 511052 BT DPD 1 / Lovibond 511082 BT DPD 3)
Swimming Pool Water	Determination of Color Spectrophotometric Method	SM 2120 C
Swimming Pool Water	Determination of Turbidity Nephelometric Method	SM 2130 B
Swimming Pool Water	Determination of Temperature Laboratory and Field Method	SM 2550 B
Swimming Pool Water	Determination of Aluminium (Al), Copper (Cu) Preliminary Process : Filtration Preliminary Process : Extraction with microwave Measurement: ICP-MS Method	SM 3030 K TS EN ISO 17294-1-2
Swimming Pool Water	Determination of Nitrate, Nitrite IC Method	SM 4110 B



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Swimming Pool Water	Determination of Siyanüric Acid Spectrophotometric Method	In-House Method - "DMS 82489.Rev1" (C. J. Downes et al. 'Determination of Cyanuric Acid Levels in Swimming Pool Waters', Water Research, V 18 No. 3 (1984): 277-280.)
Swimming Pool Water	Total Colony count (22°C)	TS EN ISO 6222
Swimming Pool Water	Total Colony count (37°C)	TS EN ISO 6222
Swimming Pool Water	Enumeration of <i>Escherichia coli</i> Membrane Filter Technique	TS EN ISO 9308-1
Swimming Pool Water	Enumeration of Coliform Bacteria Membrane Filter Technique	TS EN ISO 9308-1
Swimming Pool Water	<i>Enumeration of Pseudomonas aeruginosa</i> Membrane Filter Technique	TS EN ISO 16266
Waste	Sampling from Solid Waste	TS 12090
Soil	Sampling from Surface Soil, Moving and Storage of Samples	TS 9923
Soil	Determination of pH Electrometric Method	TS ISO 10390
Soil	Determination of Electrical Conductivity Method Electrometric Method	TS ISO 11265
Soil	Determination of Organic Matter Gravimetric Method	ASTM-D 2974
Soil	Determination of Organic Matter Walkley -Blacks Method	BS 1377-3
Soil	Determination of Moisture (%), Dry Matter (%) Gravimetric Method	TS 9546 EN 12880
Soil	Determination of Loss on Ignition (550 ± 25)°C Gravimetric Method	TS EN 15169

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Soil	Determination of Total Cyanide Preliminary Process : Extraction from Solid + Distillation Measurement : Titrimetric and Spectrophotometric Method	EPA 9013 A EPA 9010C EPA 9014
Soil	Determination of Free Cyanide Preliminary Process : Extraction from Solid Measurement : Spectrophotometric Method	EPA 9013 A EPA 9014
Soil	Determination of Nitrogen Improve Kjeldahl Method	TS 8337 ISO 11261
Soil	Determination of Water Soluble Sulfate Preliminary Process : Water Extraction Method Measurement : Gravimetric Method	TS ISO 11048
Soil	Determination of Water Soluble Sulfate Preliminary Process : Water Extraction Method Measurement : Turbidimetric Method	ASTM C1580
Soil	Determination of Total Organic Carbon (TOC) High-Temperature Combustion Method	TS EN 15936
Soil	Total Phosphorus Preliminary Process : Digestion Method Measurement : Spectrophotometric Method	EN 14672 SM 4500-P C
Soil	Determination of Ammonia, Nitrate, Nitrite Preliminary Process : Extraction Method Measurement : Spectrophotometric Method	ISO/TS 14256-1
Soil	Determination of Chloride Preliminary Process : Extraction Method Measurement : Titrimetric Method	BS 1377-3
Soil	Determination of Sodium (Na), Chromium (Cr), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Cadmium (Cd), Barium (Ba), Mercury (Hg), Lead (Pb), Cobalt (Co), Magnesium (Mg), Silver (Ag), Beryllium (Be), Iron (Fe), Manganese (Mn), Antimony (Sb), Thallium (Tl), Vanadium (V) Preliminary Process : Acidic Extraction with Microwave Measurament: ICP-MS Method	EPA 3051A EPA 6020B

ANNEX **HALAL ACCREDITATION SCOPE**

Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Soil	Determination of Molybdenum (Mo), Titanium (Ti), Tin (Sn), Boron (B) Preliminary Process : Acidic Extraction with Microwave Measurament: ICP-MS Method	EPA 3051 A In-house method-“DMS 19084. Rev11” (EPA 6020 B)
Soil	Determination of Sodium (Na), Chromium (Cr), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Molybdenum (Mo), Cadmium (Cd), Tin (Sn), Barium (Ba), Boron (B), Mercury (Hg), Lead (Pb), Cobalt (Co), Magnesium (Mg), Silver (Ag), Beryllium (Be), Iron (Fe), Manganese (Mn), Antimony (Sb), Thallium (Tl), Titanium (Ti), Vanadium (V), Uranium (U) Preliminary Process : Acidic Extraction (HNO3:HCl) Preliminary Process : Acidic Extraction (HNO3) Measurament: ICP-MS Method	ISO 16729 ISO 16965
Soil	Determination of BTEX (Benzene, Toluene, Ethyl Benzene, Xylene) Preliminary Process: Headspace Measurement : GC-FID Method	ISO 22155 EPA 5021A EPA 8015D
Soil	Determination of Organochlorine Pesticides Lindane, Aldrin, 2,4-DDE, 4,4-DDE, 2,4- DDT, Hexachlorobenzene, Heptachlor-exo-epoxide, Heptachlor-endo-epoxide, Alpha Endosulfan, Endrin, 4,4-DDD, Heptachlor, Dieldrin, 4,4 DDT GC-ECD Method	ISO 10382
Soil	Determination of PCB (Polychlorinated biphenyls) (28, 52, 101, 118, 138, 153, 180) GC-ECD Method	ISO 10382
Soil	Determination of PCB (Polychlorinated biphenyls) (18, 31, 44, 149, 170, 194, 209) GC-ECD Method	In-house method-“DMS 19088. Rev1” (ISO 10382)



ANNEX **HALAL ACCREDITATION SCOPE**

Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Soil	Determination of Hydrocarbons in C ₁₀ -C ₄₀ Range Preliminary Process : Sample preparation Preliminary Process : Extraction Preliminary Process : Fluorosil Cleaning Measurement : GC-FID Method	TS EN 14039 TS ISO 14507
Soil	Determination of polyaromatic hydrocarbons (PAH) (Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)antracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd) pyrene, Naphthalene, Phenanthrene, Pyrene) Preliminary Process : Liquid Liquid/Solid Phase Extraction Preliminary Process : Alumina Celaning Measurement : HPLC Method	EN 17503
Soil	Determination of volatile organic compounds (VOCS) 1,2-dichloroethane, Trichloroethene (Trichloroethylene), Vinyl Chloride, Tetrachloroethene (Tetrachloroethylene), Chloroform (Trichloromethane), Bromoform, Dibromochloromethane, Bromodichloromethane, 1,1-dichloroethane, Dichloromethane (Methylene Chloride), Benzene, 1,2,4-trimethylbenzene, 1,3-dichlorobenzene, 1,3,5-trimethylbenzene, 1,4-dichlorobenzene, Carbontetrachloride (Tetrachloromethane), m+p-xylene, o-xylene, Styrene, Naphthalene, Hexachlorobutadiene (Hexachloro-1,3-butadiene), Triklorobenzen (1,3-Triklorobenzen, 1,2,3-Triklorobenzen), 1,2,4-trichlorobenzene, 1,2,3-trichloropropane, Acetone (2-propanone), 1,2-dichlorobenzene, 1,1-dichloroethylene (1,1-dichloroethene), 1,1,1-trichloroethane, 1,1,2-trichloroethane, 1,1,2,2-tetrachloroethane, 1,2-dichloropropane, 1,3-dichloropropene(cis), 1,3-dichloropropene(trans), Carbondisulphide, Chlorobenzene, Chloromethane, cis-1,2-dichloroethene, Ethylbenzene, Methyl tert butyl ether (MTBE), Toluene, trans-1,2-dichloroethene (1,2-trans-Dichloroethylene), Vinyl Acetate, Bromomethane, Isoproylbenzene (Cumen), n-propylebenzen (propylbenzene) Preliminary Process : Purge&Trap (P&T) Measurement : GC-MS Method	EPA 5035 A EPA 8260 D

ANNEX **HALAL ACCREDITATION SCOPE**

Testing Fields-Tested Materials/Products	Name of Test	Testing Method (national, international standards, in-house methods)
Soil	Determination of volatile organic compounds (VOCS) Epichloridin, Hekzachlorobenzen, Pentachlorobenzen, 1,2,4,5-Tetrachlorobenzene, 2,3,4,5,6-Pentachlorotoluene (Pentachlorotoluene), Butanol (Butyl Alcohol), 1,3,5-Trichlorobenzene Preliminary Process : Purge&Trap (P&T) Measurement : GC-MS Method	EPA 5035 A In-House Method - "IWB 105957.02" (EPA 8260D)
Soil	Enumeration of <i>Escherichia coli</i> (<i>E.coli</i>)	In-House Method (DMS 80158.07)
Soil	C/N (Carbon / Nitrogen) Determination Calculation Method	TS EN 15936 TS 8337 ISO 11261
Sediment	Sampling from Base Sediments	TS 9547 ISO 5667-12
Sediment	Sampling from Sea Sediments	TS EN ISO 5667-19
Sediment	Determination of pH Electrometric Method	TS ISO 10390
Sediment	Determination of Total Organic Carbon (TOC) High-Temperature Combustion Method	TS EN 15936
Sediment	Determination of Sodium (Na), Chromium (Cr), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Cadmium (Cd), Barium (Ba), Mercury (Hg), Lead (Pb), Cobalt (Co), Magnesium (Mg), Silver (Ag), Beryllium (Be), Iron (Fe), Manganese (Mn), Antimony (Sb), Thallium (Tl), Vanadium (V), Aluminium (Al) Preliminary Process : Acidic Extraction with Microwave Measurament: ICP-MS Method	EPA 3051A EPA 6020B
Sediment	Determination of Molybdenum (Mo), Titanium (Ti), Tin (Sn), Boron (B) Preliminary Process : Acidic Extraction Method with Microwave Measurament: ICP-MS Method	EPA 3051 A In-house method-“DMS 19084. Rev11” (EPA 6020 B)
Sediment	Determination of Sodium (Na), Chromium (Cr), Nickel (Ni), Copper (Cu), Zinc (Zn), Arsenic (As), Selenium (Se), Molybdenum (Mo), Cadmium (Cd), Tin (Sn), Barium (Ba), Boron (B), Mercury (Hg), Lead (Pb), Cobalt (Co), Magnesium (Mg), Silver (Ag), Beryllium (Be), Iron (Fe), Manganese (Mn), Antimony (Sb), Thallium (Tl), Titanium (Ti), Vanadium (V), Aluminium (Al) Preliminary Process : Acidic Extraction (HNO3:HCl) Preliminary Process : Acidic Extraction (HNO3) Measurament: ICP-MS Method	ISO 16729 ISO 16965

ANNEX **HALAL ACCREDITATION SCOPE**

Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Sediment	Determination of BTEX (Benzene, Toluene, Ethyl Benzene, Xylene) Preliminary Process: Headspace Measurement : GC-FID Method	ISO 22155
Sediment	Determination of Organochlorine Pesticides Lindane, Aldrin, 2,4-DDE, 4,4-DDE, 2,4- DDT, Hexachlorobenzene, Heptachlor-exo-epoxide, Heptachlor-endo-epoxide, Alpha Endosulfan, Endrin, 4,4-DDD, Heptachlor, Dieldrin, 4,4 DDT GC-ECD Method	ISO 10382
Sediment	Determination of PCB (Polychlorinated biphenyls) (28, 52, 101, 118, 138, 153, 180) GC-ECD Method	ISO 10382
Sediment	Determination of PCB (Polychlorinated biphenyls) (18, 31, 44, 149, 170, 194, 209) GC-ECD Method	In-house methode-“DMS 19088. Rev1” (ISO 10382)
Sediment	Determination of Hydrocarbons in C ₁₀ -C ₄₀ Range Preliminary Process : Sample preparation Preliminary Process : Extraction Preliminary Process : Fluorosil Cleaning Measurement : GC-FID Method	TS EN 14039 TS ISO 14507
Sediment	Determination of polycyclic aromatic hydrocarbons (PAH) (Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, Dibenz(a,h)anthracene, Fluoranthene, Fluorene, Indeno(1,2,3-cd) pyrene, Naphthalene, Phenanthrene, Pyrene) Preliminary Process : Liquid-Liquid/Solid Phase Extraction Preliminary Process : Alumina Celaning Measurement : HPLC Method	EN 17503
Sediment	Detection of <i>Beggiaea</i>	SM 9240 C, D



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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Swaps	<i>Enumeration of Legionella</i>	ISO 18593 TS EN ISO 11731
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	<i>Enumeration of Pseudomonas aeruginosa</i>	European Pharmacopoeia 9.0 (2.6.13)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Enumeration of <i>Staphylococcus aureus</i>	European Pharmacopoeia 9.0 (2.6.13)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Enumeration of <i>E.coli</i>	European Pharmacopoeia 9.0 (2.6.13)

ANNEX **HALAL ACCREDITATION SCOPE**

Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Enumeration of Candida albicans	European Pharmacopoeia 9.0 (2.6.13)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Effectiveness Test of Antimicrobial Protection (Challenge Test)	European Pharmacopoeia 9.0 (5.1.3)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Total Microorganism Analysis (Determination of Total Aerobic Microorganism)	European Pharmacopoeia 9.0 (2.6.12)
Pharmaceutical Raw Materials, Pharmaceuticals, Cosmetic Products	Total Microorganism Analysis (Mold and Yeast Count)	European Pharmacopoeia 9.0 (2.6.12)
Cosmetics	<i>Enumeration of Pseudomonas aeruginosa</i>	TS EN ISO 22717
Cosmetics	Enumeration of Staphylococcus aureus	TS EN ISO 22718
Cosmetic Products	Enumeration of E.coli	TS EN ISO 21150
Cosmetics	Enumeration of Candida albicans	TS EN ISO 18416
Cosmetic Products	Effectiveness Test of Antimicrobial Protection (Challenge Test)	TS EN ISO 11930
Cosmetics	Detection and Counting of Aerobic Mesophilic Bacteria (Bulk Plate Technique)	TS EN ISO 21149
Cosmetics	Yeast and Mold Count (Colony Counting Technique)	TS EN ISO 16212
Cosmetic Products	Heavy Metal Detection (Lead (Pb), Cadmium (Cd), Mercury (Hg), Arsenic (As), Antimony (Sb), Tin (Sn), Nickel (Ni)) ICP MS Method	In-House Method "DMS 898063 Rev1" (Modified from AOCS G7-56)
Cosmetic Products (Liquid Cosmetics and Lipstick)	pH Determination (PH meter)	AOCS G7-56
Cosmetic Products (Liquid and Viscous Cosmetic Products)	Density Determination Pycnometer Method	In-House Method " "DMS 898147 Rev1" (Modified from AOCS Cc 10b-25)
Cosmetic Products	Viscosity Determination Rotary Viscometer (Brookfield) Method	In-House Method - "DMS 898123 Rev2" (Modified from AOCS Ja 10-87)
Cosmetic Products	Hydrogen peroxide Titrimetric	TS 10340
Skin powders	Moisture and Volatile Matter Determination Gravimetric	TS 5270
Skin powders	PH determination of Aqueous Suspension (pH meter)	TS 5270



REPUBLIC OF TURKEY
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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in- house methods)
Skin creams	Determination of Fatty Amount Gravimetric	TS 4811
Skin cream	pH Determination	TS 4811
Skin cream	Determination of Water Amount	TS 4811
Biocidal Products	pH	TS 7343
Biocidal Products	Insoluble Matter	TS 6774
Biocidal Products	Net Amount / Volume	In-House Method (DMS 73654 Rev.02)
Biocidal Products	Active Chlorine	TS 3464
Biocidal Products	Appearance	In-House Method (DMS 97459 Rev.02, Modified from EC 1223- 2009)
Biocidal Products	Alcohol Grade	In-House Method (DMS 72859 Rev.02)
Biocidal Products	Colour	In-House Method (DMS 97459 Rev.02)
Biocidal Products	Viscosity	In-House Method (IWB 100097 Rev.02, Modified from Brookfield DV- II+ProRVV Viscometer)
Biocidal Products	Density	TS 781 ISO 758
Biocidal Products	Hydrogen peroxide	In-House Method -(IWB 449448 Rev02, Modified from TS 10340)
Biocidal Products	Acidity and Alkalinity	TS 4398
Biocidal Products	Ethyl Alcohol, Isopropyl Alcohol, Methyl Alcohol GC FID Method	In-House Method (IWB 438205 Rev.01 Modified from AOAC 984.14-1988)
Chemical Disinfectants and Antiseptics	Evaluation of Bacteria Killing Efficacy Quantitative Suspension Test	TS EN 1276
Chemical Disinfectants and Antiseptics	Evaluation of Bacteria Killing Efficiency in the Medical Field Quantitative Suspension Test	TS EN 13727+A2
Chemical Disinfectants and Antiseptics	Evaluation of Fungicidal Activity Quantitative Suspension Test	TS EN 1275

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Testing Fields-Tested Materials/ Products	Name of Test	Testing Method (national, international standards, in-house methods)
Chemical Disinfectants and Antiseptics	Evaluation of Fungal Killing Efficacy Quantitative Suspension Test	TS EN 1650+A1
Chemical Disinfectants and Antiseptics	Evaluation of Fungal Killing Efficiency in Medical Field Quantitative Suspension Test	TS EN 13624
Chemical Disinfectants and Antiseptics	Evaluation of Spore Activity Quantitative Suspension test	TS 6776 EN 13704