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Accreditation Scope

 <p>Test TS EN ISO/IEC 17025 AB-0095-T</p>	<p>HALİÇ ÇEVRE TEKNOLOJİLERİ Mühendislik Müşavirlik Turizm Ve Sağlık Hizmetleri Ticaret Pazarlama Ltd. Şti.</p> <p>Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020</p>
As a Testing Laboratory	
Address: Yavuz Selim cad. No:50 Fatih İSTANBUL 34240 İSTANBUL/TÜRKİYE	Phone : 0 212 621 23 40 Fax : 0 212 621 23 59 E-Mail : info@haliccevre.com Website : www.haliccevre.com

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions - Manual determination of mass concentration of particulate matter (20-1000 mg/m ³)	TS ISO 9096
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions - Determination of low range mass concentration of dust - Part 1: Manual gravimetric method (<50 mg/m ³)	TS EN 13284-1
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Dust Emission Amount Considering Temperature and Pressure Changes	EPA Method 17
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Dust Emission Amount in Nominal Reference Temperature Conditions	EPA Method 5
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Sulfuric Acid (H ₂ SO ₄) , Sulfur Trioxide(SO ₃) And Sulfur Dioxide (SO ₂) Emissions From Stationary Sources Titrimetric Method	EPA Method 8
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions- Sampling for the automated determination of gas concentrations (CO, CO ₂ , O ₂ , SO ₂ , NOx (NO, NO ₂))	TS ISO 10396
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions- Determination of the mass concentration of sulfur dioxide(SO ₂)	TS ISO 7935*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of oxygen and carbon monoxide Measurement: Electrochemical Cell Method Carbon dioxide (CO ₂) Determination Calculation Method	TS ISO 12039*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Nitric Oxide(NO), Nitrogen Dioxide(NO ₂) And Nitric Oxides NO _x Emissions From Stationary Combustion Sources By Electrochemical Analyzer Electrochemical Cell Method	EPA CTM 022*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	From burning distillate fuels - Determination of smoke density Bacharach Method	TS 9503*



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 TÜRKAK <small>Test</small> TS EN ISO IEC 17025 AB-0095-1	HALİÇ ÇEVRE TEKNOLOJİLERİ Mühendislik Müşavirlik Turizm Ve Sağlık Hizmetleri Ticaret Pazarlama Ltd. Şti. Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions- Measurement of velocity and volume flowrate of gas streams in ducts Determination of Flow and Flow Rate of Gas Flows by L and S Type Pitot Tube	TS ISO 10780*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Velocity Traverses for Stationary Sources by S Type Pitot Tube in Small Size or Field Stack Gases	EPA Method 1 A
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Moisture Content In Stack Gases	EPA Method 4
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Moisture Determination with wet-dry thermometer method (≤ 100 °C for stack temperature)	In-House Method (TA.35 Rev.03)*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Moisture by Moisture Probe (≤ 180 °C for stack temperature)	In-House Method (TA.34 Rev.07)*



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	<p>Stationary source emissions - Determination of the mass concentration of individual gaseous organic compounds</p> <p>Sampling Tube (Active Carbon) and Solvent Desorption Method</p> <p>Ethanol (Ethyl Alcohol), n-Pentane, Acetonitrile (Ethanenitrile) (Methyl cyanide), 2-Propanol (IPA) (Isopropylalcohol) (Isopropanol) (Sek-Propanol), Diethylether (Ethoxyethane) (Ethyl Ether) (Ethyl Oxide), Acetone (Dimethyl Ketone) (Dimethyl Carbonyl) (Propanone) (Dimethyl Formaldehyde), Acetic Acid, Dichloromethane (Methylene Chloride), 1-Propanol, n-Hexane, 2-Butanone (Ethyl Methyl Ketone) (MEK) (2 -Butanone), Ethylacetate (Ethylethanoate) (Ethyl Ester) (Acetic Ester), Chloroform (Trichloromethane), 2-Methoxyethanol (Ethylenglycolmonomethylether), Methanol, Tetrahydrofuran (THF) (1,4-Epoxybutane) (Butyleneoxide) (Hydrophurane) (Furanidine) , Dichloroethane (1,2-Dichloroethane) (Ethylene Dichloride), Cyclohexane (Hexahydrobenzene) (Hexamethylene), Isopropylacetate (2 -Propylacetate), Butanol (1-Butanol) (n-Butyl alcohol) (Butylhydrate) (Butyric Alcohol) (Propylcarbinol), Benzene, Trichlorethylene, 1,4 -Dioxane (Diethyleneether), n-Heptane, Methylcyclohexane (Hexahydrotoluene) (Cyclohexylmethane) 4-Methyl-2-pentanone (Isobutylmethylketone) (Hekzon) (MIK) (MIBK), Pridine (Azabenzol) (Azine), Toluene, 1,1,2 -Trichloroethane, n-Butylacetate, Monochlorobenzene (Chlorobenzene), Ethylbenzene, Xylene (mp-xylene) (Dimethyl Benzene) (Xylo), Styrene (Vinyl Benzene) (Phenylethylene), Cyclohexanone, o-Xylene, 5 -Methyl-3-heptanone, Propylbenzene, 1,2,4 -Trimethylbenzene</p> <p>GC FID Method</p>	TSE CEN/TS 13649
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Total Fluoride Emissions From Stationary Source Spands Method	EPA Method 13 A



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary source emissions - Determination of mass concentration of gaseous chlorides expressed as HCl Analysis: Mercuric Thiocyanate Spectrometry	TS EN 1911
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Ammonia(NH ₃) Emissions From Stationary Sources Measurement: Ion Selective Electrode Method	EPA Method 207.1
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Measurement Of Formaldehyde Emissions From Natural Gas-Fired Stationary Sources Measurement: Spectrometric Method	EPA Method 323....
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Formaldehyde Emissions From Stationary Sources In The Mineral Wool And Wool Fiberglass Industries Measurement: Pararosaniline Method	EPA Method 316
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Heavy Metals Emissions From Stationary Sources Antimony (Sb), Arsenic (As), Barium (Ba), Beryllium (Be), Cadmium (Cd), Chrome (Cr), Cobalt (Co), Copper (Cu), Lead (Pb), Manganese (Mn), Mercury (Hg), Nickel (Ni), Phosphorus (P), Selenium (Se), Silver (Ag), Thallium (Tl), Zinc (Zn) Measurement: AAS Method	EPA Method 29
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Hydrogen Cyanide (HCN) Sampling and Determination Measurement: Spectrometric Method	CARB 426
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Hydrogen Sulfide(H ₂ S) Content Of Fuel Gas Streams In Petroleum Refineries Measurement: Titrimetric Method	EPA Method 11
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Nitrogen Oxide (NO _x) Emissions Pre-treatment: Alkaline Potassium Permanganate Solubility Measurement: Colorimetric Method	EPA Method 7C
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Stationary Source Emissions - Determination Of The Mass Concentration Of Total Gaseous Organic Carbon Measurement: Flame Ionisation Detector	TS EN 12619* EPA Method 25 A*
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination Of Heavy Metals Emissions From Stationary Sources Vanadium (V) Measurement: AAS Method	TS EN 14385
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Phosphoric Acid (H ₃ PO ₄) Sampling and Determination Measurement: Spectrometric Method	NMX-AA-90-1986



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Hexavalent Chromium (Cr ₆₊) Sampling and Determination Measurement: Spectrometric Method	CARB 425
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Determination of Methane Gas (CH ₄) Emissions From Stationary Sources Measurement: Electrochemical Cell Method	In-House Method-"TA.307.Rev.00" (EPA 25 A*)
Stack Gases (TSE CEN/TS 15675 and TS EN 15259 requirements)	Silica Sampling and Determination (SiO ₂) Sampling: Sampling on filter by the pump Analysis: Spectrophotometric	In-House Method- "Ta.339 Rev.01" (Niosh 7602)
Immission (Ambient Air)	Determination of mass concentration of Coarse Particulate Matter as PM10-2.5 in the Atmosphere Gravimetric Method	EPA 40 CFR 50 AppJ
Immission (Ambient Air)	Determination of Heavy Metals in PM 10 (As, Cd, Ni, Pb) Measurement-1: Graphite Furnace AAS Method	TS EN 14902 TS EN 14902/AC
Immission (Ambient Air)	Determination of mass concentration of Coarse Particulate Matter as PM10-2.5 in the Atmosphere Gravimetric Method	TS EN 12341
Immission (Ambient Air)	Determination of Heavy Metals in PM 10 (Al, As, Ba, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Se, Sn, Tl, V, Zn) GF-AAS Method	VDI 2267 Part 1
Immission (Ambient Air)	Determination of Heavy Metals in Precipitated Dust Al, As, Ba, Cd, Co, Cr, Cu, Mn, Ni, Pb, Se, Sn, V, Sb, Tl ve Zn GF- AAS Metodu	VDI 2267 Part 1
Immission (Ambient Air)	Determination of Cd, Co, Cr, Cu, Ni, Pb, Sb, V and Zn in precipitated dust Atomic Absorption Method	VDI 2267 Part 16
Immission (Ambient Air)	Determination of Heavy Metals in Precipitated Dust (Thallium and Inorganic Compounds) AAS Method	VDI 2267 Part 7
Immission (Ambient Air)	Determination of Precipitated Dust Gravimetric Method	TS 2341



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Immission (Active Sampling) Volatile Organic Compounds	Determination of volatile organic compounds Sampling on active carbon by the pump Ethanol (Ethyl Alcohol), n-Pentane, 2-Propanol (Isopropyl alcohol) (Isopropanol) (IPA) (sec-Propanol), Acetone (Dimethyl Ketone) (Dimethyl Carbonyl) (Propanone) (Dimethyl Formaldehyde), Dichloro methane (Methylene chloride) , Methanol (Methyl Alcohol), Vinyl acetate (Acetic Acid Vinyl Ester), n-Hexane, Butanone (Ethyl methyl ketone) (2 -Butanone, Chloroform (Trichloromethane), Dichloro ethane (1,2-Dichloro ethane) (Ethylene Dicloride), Butanol (1 -Butanol) (N-Butyl alcohol) (Butyric Alcohol) (Propylcarbinol), Benzene, Trichlorethylene, n-Heptane, Pridine (Azabenzol) (Azine), Toluene, n-Octane, n-Butyl acetate, Monochloro benzene (Chloro benzene), Ethyl benzene, m-Xylene, p-Xylene (Dimethyl Benzene) (Xylo), o-Xylene, Styrene (Vinylbenzene) (Phenylethylene), Phenol (Carbolic acid), Aniline (Phenylamine) (Aminobenzene) (Benzamine), Butyl glycol (Ethylenediolmonobutylether) (EGBE), Isopropylacetate (2-Propylacetate), Acetonitrile (Ethannitrile) (Methyl Cyanide), Diethyl ether (Ethoxy ethane) (Ethyl ether) (Ethyl oxide), Acetic acid, Diethylamine, 1-Propanol, Tertiarybutylmethylketone (tert-Butyl Methyl Ether) (MTBE), Ethylacetate (Ethylethanoate) (Ethyl Ester) (Acetic Ester), 2-Methoxyethanol (Ethyleneglycolmonomethylether), Tetrahydrofuran (THF) (1,4-Epoxybutane) (Butylene oxide) (Hydrofuran) (Furanidine), Cyclohexane (Hexahydrobenzene) (Hexamethylene), 1-Methoxy-2-propanol (Methylproxitol), Triethylamine, 1,4-Dioxane (Diethylene ether), Methylcyclohexane (Hexahydrotoluene) (Cyclohexylmethane), 4-Methylpentan-2-one (Isobutyl) MIK (2-Pantanone) (Hexone), Acetylacetone, 1,1,2-Trichloroethane, 1,2,4-Trichlorobenzene, Heptan-2-On (2-Heptanone), Cyclohexanone, 5-Methyl heptan-3-one, Propylbenzene, 1,2,4-Trimethylbenzene). Analysis: Gas Chromatography (GC / FID)	ASTM D 3686 ASTM D 3687



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Immission(Ambient Air)	Determination of NO ₂ Concentration Sampling:Selection of Diffusion Devices, Transport and Uncertainty Components Selection of Device and Sampling Points Analysis: Spectrometric Method	In-House Method- "TA.338 Rev.02" (TS EN 13528 1,2,3)
Immission(Ambient Air)	Sampling and Determination of BTEX Concentration((Benzene, Toluene, Ethylbenzene, Xylene (m, p, o)) Sampling:Selection of Diffusion Devices, Transport and Uncertainty Components Selection of Device and Sampling Points Analysis: Gas Chromatography (GC / FID)	In-House Method- "TA.344.Rev.00" (TS EN 13528 1,2,3)



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Immission(Ambient Air)	<p>Sampling And Determination Of Volatile Organic Compounds Concentration</p> <p>(Ethanol (Ethyl Alcohol), n-Pentane, Acetonitrile (Ethannitrile) (Methyl cyanide), 2-Propanol (IPA) (Isopropylalcohol) (Isopropanol) (Sec-Propanol), Diethylether (Ethoxyethane) (Ethyl Ether) (Ethyl Oxide), Acetone (Dimethyl Ketone) (Dimethyl Carbonyl) (Propanone) (Dimethyl Formaldehyde), Acetic Acid, Dichloromethane (Methylenechloride), 1-Propanol, n-Hexane, 2-Butanone (Ethyl Methyl Ketone) (MEK) (2-Butanone), Ethylacetate (Ethylethanoate) (Ethyl Ester) (Acetic Ester), Chloroform (Trichloromethane), 2-Methoxyethanol (Ethyleneglycolmonomethylether), Methanol, Tetrahydrofuran (THF) (1,4-Epoxybutane) (Butyleneoxide) (Hydrofuran) (Furanidine), Dichloroethane (1,2-Dichloroethane) (Ethylene Dichloride), Cyclohexane (Hexahydrobenzene) (Hexamethylene), Isopropylacetate (2-Propylacetate), Butanol (1-Butanol) (n-Butylalcohol) (Butylhydrate) (Butyric Alcohol) (Propylcarbinol), Benzene, Trichlorethylene, 1,4-Dioxane (Diethylenylene), n-Heptane, Methylcyclohexane (Hexahydrotoluene) (Cyclohexylmethane), 4-Methyl-2-pantanone (Isobutylmethylketone) (Hexone) (MIK) (MIBK), Pyridine (Azabenzol) (Azine), Toluene, 1,1,2-Trichloroethane, n-Butylacetate, Monochlorobenzene (Chlorobenzene), Ethylbenzene, Xylene (mp-Xylene) (Dimethyl Benzene) (Xylene), Styrene (Vinyl Benzene) (Phenylethylene) , Cyclohexanone, o-Xylene, 5-Methyl-3-heptanone, Propylbenzene, 1,2,4-Trimethylbenzene, n-Octane, 1-Methoxy-2-Propanol, Tertiarybutylmethylketone (tert-Butyl Methyl Ether) (MTBE))</p> <p>Sampling:Selection of Diffusion Devices, Transport and Uncertainty Components Selection of Device and Sampling Points Analysis: Gas Chromatography (GC / FID)</p>	In-House Method- "TA.344.Rev.00" (TS EN 13528 1,2,3)



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Immission(Ambient Air)	Sampling and Determination of H ₂ S Concentration Sampling:Selection of Diffusion Devices, Transport and Uncertainty Components Selection of Device and Sampling Points Analysis: Spectrometric Method	In-House Method- "TA.342 Rev.00" (TS EN 13528 1,2,3)
Immission(Ambient Air)	Sampling and Determination of Mercaptan Concentration Sampling:Active Sampling Analysis: Spectrometric Method	TS 9628



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 TÜRKAK <small>Test</small> <small>TS EN ISO IEC 17025</small> <small>AB-0095-T</small>	HALİÇ ÇEVRE TEKNOLOJİLERİ Mühendislik Müşavirlik Turizm Ve Sağlık Hizmetleri Ticaret Pazarlama Ltd. Şti. Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Instant Gas Measurement with Detector Tube	Determination of Concentration of Toxic Gases or Vapors Ethylbenzene (C_8H_{10}), Ethylene (C_2H_4), Acetone (C_3H_6O), Methyl ethyl ketone (C_4H_8O), Ethylacetate ($C_4H_8O_2$), Butylacetate ($C_6H_{12}O_2$), Ethylene oxide (C_2H_4O), Propylene glycol ($C_3H_8O_2$), Propylene oxide (C_3H_6O), Kerosin, Heptane (C_7H_{16}), Methylmercaptan (CH_4S), Methylalcohol (CH_4O), 1-Butanol $C_4H_{10}O$), Methyl isobutyl ketone ($C_6H_{12}O$), 2-Ethoxyethanol ($C_4H_{10}O_2$), Tetrahydrofuran (C_4H_8O), 1,1,1-Trichloroethane ($C_2H_3Cl_3$), Arsine (AsH_3), Isopropylalcohol (C_3H_8O), Phenol (C_6H_6O), Cresol (C_7H_8O), Aniline ($C_6H_5NH_2$), Ethylamine (C_2H_5N), Inorganic gas determinant, Amins, Nitrogen dioxide (NO_2), Phosphine (PH_3), Nitric acid (HNO_3), Hydrogen Bromide (HBr), Nitrogen oxides (NO_x), Butane (C_4H_{10}), Hydrogen (H_2), Vinyl chloride (CH_2CHCl), Ethylene glycol ($C_2H_6O_2$), Petyl acetate ($C_7H_{14}O_2$), Styrene (C_8H_8), Divinyl benzene (C_6H_4), α -Pinene ($C_{10}H_{16}$), Hydrogen cyanide (HCN), Phosgene ($COCl_2$), Acetylene (C_2H_2), Hydrogen peroxide (H_2O_2), Oxygen (O_2), Chlorine(Cl_2), Tetrachloroethylene (C_2Cl_4), Acetaldehyde (C_2H_4O), Methylmethacrylate ($C_5H_8O_2$), Butyl amine ($C_4H_{11}N$), Cyclohexyl amine ($C_6H_{13}N$), Dibutylamine ($C_8H_{19}N$), Oil Mist), Sulfur dioxide (SO_2), Ammonia (NH_3), Carbon monoxide (CO), Hydrogen sulfide (H_2S), Propane (C_3H_8), Carbon dioxide (CO_2), Hydrogen fluoride (HF), Formaldehyde (CH_2O), Hydrogen chloride (HCl), Ozone (O_3), Sulfuric acid (H_2SO_4), Aetic acid (CH_3COOH), Formic acid ($HCOOH$), Aetic anhydride ($C_4H_6O_3$), Acrylic acid ($C_3H_4O_2$), Butyric acid ($C_4H_8O_2$), Isobutyric acid ($C_4H_8O_2$), Isovaleric acid ($C_5H_{10}O_2$), Maleic anhydride ($C_4H_2O_3$), Methacrylic acid ($C_4H_6O_2$), Allyl alcohol (C_3H_6O) Sampling and measurement: Instant measurement with detector tubes	ASTM D 4490-96



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	Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Instant Gas Measurement with Detector Tube	Determination of Concentration of Toxic Gases or Vapors Diisopropylamine ($C_6H_{15}N$), N,N- Dimethylaniline ($C_9H_{11}N$), Dipropylamine ($C_6H_{15}N$), n- Methylaniline ($C_9H_{11}N$), Morpholine (C_4H_9NO), Pentylamine ($C_5H_{11}N$), Propylamine (C_3H_9N), Pridine (C_5H_5N), o-Toluidine (C_7H_9N), p-Toluidine (C_7H_9N), Isopropylacetate ($C_5H_{10}O_2$), tert-Butanol ($C_4H_{10}O$), Butyl ether ($C_8H_{18}O$), Butyl methacrylate ($C_8H_{14}O_2$), tert-Butyl methyl ether ($C_5H_{12}O$), Cumene (C_9H_{12}), Cyclohexane (C_6H_{12}), Decahydronaphthalene ($C_{10}H_{18}$), n-Decan ($C_{10}H_{22}$), Diethylbenzene ($C_{10}H_{14}$), Ethylmethacrylate ($C_6H_{10}O_2$), Isopropyl ether ($C_6H_{14}O$), n-Nonane (C_9H_{20}), 1,2,4 - Trimethylbenzene (C_9H_{12}),p- Dichlorobenzene ($C_6H_4Cl_2$), Undecane ($C_{11}H_{24}$), Acrylonitrile (C_3H_3N), Acetaldehyde (C_2H_4O), Tetrachlorethylene (C_2Cl_4), Carbondisulfide (CS_2), Mercury vapor (Hg), Naphthalene ($C_{10}H_8$) Bromochloromethane (CH_2BrCl), Bromoform ($CHBr_3$), 1-Bromopropane (C_3H_7Br), 2-Bromopropane (C_3H_5Br), Dibromomethane (CH_2Br_2), 1,2- Dichloropropane ($C_3H_6Cl_2$), Ethyl bromide (C_2H_5Br), General hydrocarbons, Methyl isothiocyanate (C_2H_3NS), Propionic acid ($C_3H_6O_2$), n-Valeric acid ($C_5H_{10}O_2$), Organic gas determiner, Pentane (C_5H_{12}), Hexane(C_6H_{14}), Trichlorethylene (C_2HCl_3), Tetrachlorethylene (C_2Cl_4), Butadiene (C_4H_6), Gasoline, Benzene (C_6H_6), Toluene (C_7H_8), Xylene (C_8H_{10}), Carbon tetra chloride (CCl_4), Dimethylformamide (C_3H_7NO), Methyl acrylate ($C_4H_8O_2$), Butyl acrylate ($C_7H_{12}O_2$), Ethyl acrylate ($C_5H_8O_2$) Sampling and measurement: Instant measurement with detector tubes	ASTM D 4490-96
Occupational Hygiene Instant Gas Measurement	Determination of Oxygen (O_2), Carbonmonoxide (CO), Hydrogen sulfide (H_2S), Methane (CH_4 , %LEL), Carbon dioxide (CO_2), Sulfur dioxide (SO_2), Nitrogen dioxide (NO_2) Sampling and Measurement: Electrochemical Cell Method	In-House Method- "TA.266.Rev.09"(NIOSH-NMAM 6604:2016, NIOSH-NMAM 6601:1994)
Occupational Hygiene Instant Gas Measurement	Determination of Carbon Monoxide (CO) Sampling and Measurement: Electrochemical Cell Method	NIOSH-NMAM 6604



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Hizmetleri Ticaret Pazarlama Ltd. Şti.

Accreditation Nr: AB-0095-T

Revision Nr: 019 Date: 26.02.2020

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Instant Gas Measurement	Determination of Oxygen (O ₂) Sampling and Measurement: Electrochemical Cell Method	NIOSH-NMAM 6601



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 TÜRKAK Test TS EN ISO IEC 17025 AB-0095-T	HALİÇ ÇEVRE TEKNOLOJİLERİ Mühendislik Müşavirlik Turizm Ve Sağlık Hizmetleri Ticaret Pazarlama Ltd. Şti.
	Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Volatile Organic Compounds	<p>Determination of Volatile Organic Compounds</p> <p>(Methanol (Methyl alcohol), Ethanol (Ethyl alcohol), n-Pentane, Acetonitrile (Ethanenitrile) (Methyl Cyanide), 2-Propanol (Isopropyl alcohol) (IPA) (Isopropanol) (Se-Propanol), Diethyl ether (Ethoxy ethane) (Ethyl ether) (Ethyl oxide), Acetone (Dimethyl Ketone) (Dimethyl Carbonyl) (Propanone) (Dimethyl Formaldehyde), Acetic acid, Diethylamine, Dichloromethane (Methylene chloride), 1-Propanol, Tertiarybutylmethylketone (tert-Butyl Methyl Ether) (MTBE) Vinylacetate (Acetic Acid Vinyl Ester), n-Hexane, Butanone (Ethyl methyl ketone) (2-Butanone), Ethylacetate (Etyletanoate) (Ethyl Ester) (Acetic Ester), Chloroform (Trichloromethane), 2-Methoxyethanol (Ethylenglycolmonomethylether) Tetrahydrofuran (THF) (1,4-Epoxybutane) (Butylene oxide) (Hydrophurane) (Furanidine), Dichloroethane (1,2-Dichloroethane), Cyclohexane (Hexahydrobenzene) (Hexamethylene), Isopropylacetate (2-Propyl acetate), Butanol (1 -Butanol) (n-Butyl alcohol) (Butylhydride Butyric alcohol) (Propylcarbinol), Benzene, 1-Methoxy-2-propanol (Methyl proxitol), Triethylamine, Trichlorethylene, 1,4-Dioxane (Diethylene ether), n-Heptane, Methylcyclohexane (Hexahydrotoluene) (Cyclohexylmethane), 4 -Methylpentan-2-one (Isobutylmethylketone) (MIK) (MIBK) (2-Pantanone) (Hexone), Pridine (Azabenzol) (Aazine), Toluene, Acetylacetone, n-Octane, 1,1,2-Trichloroethane,n-Butylacetate, 1,2,4-Trichlorobenzene, Monochlorobenzene (Chlorobenzene), Ethylbenzene, m-Xylene, p-Xylene,o-Xylene, Heptan-2-On (2-Heptanone), Styrene (Vinylbenzene) (Phenylethylene), 2 -Butoxyethanol (Butylglycol) (Ethylengenediolmonobutylether) (EGBE), Cyclohexanone, 5-Methyl heptane-3-one, Phenol (Karbolic acid) (Hydroxybenzene), Propylbenzene, Aniline (Phenylamine) (Aminobenzene) (Benzamine), 1,2,4-Trimethylbenzene)</p> <p>Sampling: Sampling on sorbent tube by the pump Analysis: Gas Chromatography (GC / FID) After Solvent Desorption Method</p>	TS ISO 16200-1



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	Accreditation Nr: AB-0095-T Revision Nr: 019 Date: 26.02.2020

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of heavy metals and compounds (Gold (Au), Silver (Ag), Aluminum (Al), Barium (Ba), Beryllium (Be), Calcium (Ca), Chromium (Cr), Cobalt (Co), Copper (Cu), Iron (Fe), Magnesium (Mg), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Tin (Sn), Thallium (Tl), Zinc (Zn), Cadmium (Cd), Sodium (Na), Titanium(Ti)) Sampling: Sampling on filter by the pump Analysis: Flame Atomic Absorption Spectroscopy (AAS)	In-House Method- "TA.268.Rev.05" (ASTM D 4185)
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Mercury (Hg) Sampling: Sampling on sorbent tube by the pump Analysis: Cold Vapor Atomic Absorption Spectroscopy (AAS)	NIOSH-NMAM 6009
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Heavy Metal and Compounds Vanadium (V) Sampling: Sampling on filter by the pump Analysis: Graphite Furnace Atomic Absorption Spectroscopy (AAS)	In-House Method- "TA.242.Rev.04" (ASTM D 4185:2017- ASTM D 3373:2017)
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Arsenic trioxide (As ₂ O ₃) Sampling: Sampling on filter by the pump Analiz: Graphite Furnace Atomic Absorption Spectroscopy (AAS)	NIOSH-NMAM 7901
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Heavy Metal Lead (Pb) Sampling: Sampling on filter by the pump Analysis: Flame Atomic Absorption Spectroscopy (AAS)	NIOSH-NMAM 7082
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Hexavalent Chromium (Cr+6) Sampling: Solution Absorption Analysis: Spectrophotometric Method	NIOSH-NMAM 7600
Occupational Hygiene Heavy Metal Analysis in Workplace	Determination of Heavy Metal and Compounds ((Tin (Sn), Antimony (Sb)) Sampling: Sampling on filter by the pump Analysis: Flame Atomic Absorption Spectroscopy (AAS)	OSHA ID 121
Occupational Hygiene Magnesium Oxide, Calcium Oxide, Titanium Dioxide in Workplace	Determination of Magnesium Oxide (MgO), Calcium Oxide(CaO), Titanium Dioxide(TiO ₂) Sampling: Sampling on filter by the pump Analysis: Atomic Absorption Spectroscopy (AAS)	In-House Method- "TA.304.Rev.04" (ASTM D 4185)



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Dust Measurement	Determination of Respirable and Inhalable Dust Sampling: Sampling on filter by the pump Analysis: Gravimetric	HSE-MDHS 14/3
Occupational Hygiene Dust Measurement	Determination of Respirable Dust Sampling: Sampling on filter by the pump Analysis: Gravimetric	ASTM D 4532
Occupational Hygiene Dust Measurement	Determination of Inhalable Dust Sampling: Sampling on filter by the pump Analysis: Gravimetric	NIOSH 0500
Occupational Hygiene Dust Measurement	Determination of Respirable Dust Sampling: Sampling on filter by the pump Analysis: Gravimetric	NIOSH 0600
Occupational Hygiene Dust Measurement	Determination of Dust and Aerosol in Metalworking Fluids Sampling: Sampling on filter by the pump Analysis: Gravimetric	NIOSH -NMAM 5524
Occupational Hygiene Oil Mists	Determination of Mineral Oil Mists Sampling: Sampling on filter by the pump Analysis: Gravimetric	MDHS 84/2
Occupational Hygiene Dust Measurement	Determination of Aerosols in Workplace Analysis: Direct Fotometric Reading	CEN/TR 16013-3
Occupational Hygiene Rubber Fume and Dust	Determination of rubber process dust and rubber fume Sampling: Sampling on filter by the pump Analysis: Gravimetric Method ve Soxhlet Extraction Method	MDHS 47/3
Occupational Hygiene Thermal Comfort	Hot environments; estimation of the heat stress on working man, based on the WBGT-index (wet bulb globe temperature) and Determination of Thermal Comfort Conditions according to PMV-PPD indices	TS EN 27243 TS EN ISO 7730
Occupational Hygiene Thermal Comfort	Ergonomics of the thermal environment - Assessment of heat stress using the WBGT (wet bulb globe temperature) index	TS EN 7243 TS EN ISO 7730
Occupational Hygiene Thermal Comfort	Determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria	TS EN ISO 7730
Occupational Hygiene Analysis of Formaldehyde	Determination of Formaldehyde Sampling: Sampling on filter+impinger by the pump Analysis: Visible Spectrophotometer	NIOSH-NMAM 3500
Occupational Hygiene Ammonia	Determination of Ammonia(NH ₃) Sampling: Sampling on sorbent tube by the pump Analysis :Visible Absorption Spectrophotometer	NIOSH-NMAM 6015



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Alkaline Dust	Determination of Alkaline Dust (Sodium Hydroxide (NaOH), Potassium Hydroxide (KOH), Lithium Hydroxide (LiOH)) Sampling: Sampling on filter by the pump Analysis: Titration	NIOSH-NMAM 7401
Occupational Hygiene Silica-Silica Crystals	Determination of Crystal Silica (SiO ₂) Sampling: Sampling on filter by the pump Analysis :Visible Absorption Spectrophotometer	NIOSH-NMAM 7601
Occupational Hygiene Silica-Silica Crystals	Determination of Crystal Silica (SiO ₂) Sampling: Sampling on filter by the pump Analysis: Fourier Transform Infrared Spectroscopy (FTIR)	NIOSH-NMAM 7602
Occupational Hygiene Silica-Silica Crystals	Determination of Crystal Silica (SiO ₂) Sampling: Sampling on filter by the pump Analysis: Fourier Transform Infrared Spectroscopy (FTIR)	HSE -MDHS 101/2
Occupational Hygiene Hydrazine Analysis in Workplace	Determination of Hydrazine Sampling: Sampling on filter by the pump Analysis: Spektrphotometric	NIOSH -NMAM 3503
Occupational Hygiene Hydrogen Cyanide	Determination of Hydrogen Cyanide (HCN) Sampling: Sampling on sorbent tube by the pump Analysis: Visible Spectrophotometer	NIOSH-NMAM 6010
Occupational Hygiene Carbon Black	Determination of Carbon Black Sampling: Sampling on filter by the pump Analysis: Gravimetric	OSHA ID 196
Occupational Hygiene Magnetic Field	Basic standard on measurement and calculation procedures for human exposure to electric, magnetic and electromagnetic fields (0 Hz - 1 MHz)	TS EN 50413
Occupational Hygiene Lighting	Measurement of Lighting Levels in the Work Place	COHSR-928-1-IPG-039
Occupational Hygiene Noise	Determination of emission sound pressure levels which is emitted by machinery and equipment at a work station / LAeq	TS 2673 TS EN ISO 11200
Occupational Hygiene Noise	Determination of occupational noise exposure in workplace	TS EN ISO 9612
Occupational Hygiene Noise	Determination of emission sound pressure levels at a work station and at other specified positions in an essentially free field over a reflecting plane with negligible environmental corrections	TS EN ISO 11201
Occupational Hygiene Noise	Determination of emission sound pressure levels at a work station and at other specified positions applying approximate environmental corrections	TS EN ISO 11202
Occupational Hygiene Noise	Determination of emission sound pressure levels at a work station and at other specified positions applying accurate environmental corrections	TS EN ISO 11204



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Occupational Hygiene Noise	Determination of noise at workplace	In-House Method-"TA.275.Rev.06" (TS ISO 1996-2:2009-TS ISO 1996-2/T1:2009)
Occupational Hygiene Noise	Determination of occupational noise exposure and estimation of noise-induced hearing impairment	TS 2607 ISO 1999
Occupational Hygiene Noise	Determination of sound immission from sound sources placed close to the ear - Part 1: Technique using a microphone in a real ear (In-Ear Noise Measurement)	ISO 11904-1
Acoustics Noise	Determination of environmental noise level (Laeq, LaeqT, LregT, Lday, Lden, Levening, LAFNT, LE, Lafmax, Lcenmax, Lrdn, Lrdn)	TS 9315 ISO 1996-1 and TS 9315 ISO 1996-1/T1
Acoustics Noise	Determination of Environmental Noise Level (Laeq, LaeqT, LregT, Lday, Lden, Levening, LAFNT, LE, Lafmax, Lcenmax, Lrdn, Lrdn)	TS ISO 1996-2 and TS ISO 1996-2/T1
Acoustics Noise	Determination of industrial trucks noise emission level (LPA, LWA)	TS EN 12053+A1
Acoustics Noise	Determination of sound power levels of multisource industrial plants for evaluation of sound pressure levels in the environment (Δ Ls, Δ LF, Δ LM, Δ La, L_pA , Lw)	TS ISO 8297
Acoustics Noise	Determination of sound power levels and sound energy levels of noise sources using sound pressure by using engineering methods	TS EN ISO 3744
Acoustics Noise	Determination of sound power levels of noise sources using sound pressure by using survey method (Lpeq,T, Δ Ls, K ₁ , K ₂ , Lpf, LW)	TS EN ISO 3746
Acoustics Noise	Attenuation of sound during propagation outdoors - Part 2: General method of calculation	TS ISO 9613-2
Acoustics Noise	Framework for calculating a distribution of sound exposure levels	ISO 13474
Acoustics Noise	Field measurements of airborne and impact sound insulation and of equipment sound	TS EN ISO 10052
Acoustics Noise	Field measurements of airborne and impact sound insulation and of service equipment sound - Survey method	TS EN ISO 10052/A1
Acoustics Noise	Measurement of sound pressure level from service equipment in buildings	TS EN ISO 16032
Acoustics Noise	Field measurement of sound insulation in buildings and of building elements - Part 1: Airborne sound insulation	TS EN ISO 16283-1
Acoustics Noise	Field measurement of sound insulation in buildings and of building elements - Part 2: Impact sound insulation	TS EN ISO 16283-2



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Acoustics Noise	Field measurement of sound insulation in buildings and of building elements - Part 3: Façade sound insulation	TS EN ISO 16283-3
Occupational Hygiene Vibration	Measurement and Evaluation of human exposure to whole- body vibration	TS ISO 2631-1 (with TS EN 1032+A1) TS ISO 2631-2
Occupational Hygiene Vibration	Measurement and evaluation of human exposure to hand-transmitted vibration	TS EN ISO 5349-1 TS EN ISO 5349-2
Occupational Hygiene Vibration	Testing of mobile machinery in order to determine the vibration emission value	TS EN 1032+A1
Vibration	Air Blast and Ground Vibration Measuring in Mining (a,v)	TS 10354
Vibration	Mechanical vibration-Measurement and evaluation of machine vibration in machine sets in hydraulic power generating and pump-storage plants	ISO 20816-5
Vibration	Measurement of vibration of buildings and evaluation of their effects on buildings (tr, a,V)	TS ISO 4866
Water	Sampling of rivers and streams	TS ISO 5667-6
Water	Sampling From Lakes, Natural and Man-Made	TS 6291
Water	Sampling of groundwaters	TS ISO 5667-11
Water	Determination of pH Electrometric Method	SM 4500 H ⁺ B
Water	Determination of Temperature Laboratory and Field Method	SM 2550 B
Water	Determination of Conductivity Laboratory Method	SM 2510 B
Water	Determination of Turbidity Nephelometric Method	SM 2130 B
Water	Determination of Salinity Electrical Conductivity Method	SM 2520 B
Water	Determination of Dissolved Oxygen Membrane Electrode Method	SM 4500-O G
Water	Determination of Flowrate Flowrate Method	TS 5699
Water	Determination of Mercury(Hg) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Cold Vapor Atomic Absorption	SM 3030 K SM 3112 B
Water	Determination of Dissolved Oxygen Luminance Method	ASTM D888



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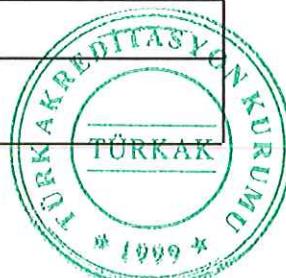


HALİÇ ÇEVRE TEKNOLOJİLERİ Mühendislik Müşavirlik Turizm Ve Sağlık Hizmetleri Ticaret Pazarlama Ltd. Şti.

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water	Determination of Silver (Ag), Gold (Au), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Magnesium (Mg), Manganese (Mn), Nickel (Ni), Lead (Pb), Antimony (Sb), Tin (Sn), Thallium (Tl), Zinc (Zn), Sodium (Na) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Direct Air-Acetylene Flame Method	SM 3030 K SM 3111 B
Water	Determination of Silver (Ag), Aluminum (Al), Arsenic (As), Barium (Ba), Beryllium (Be), Cadmium (Cd), Cobalt (Co), Chromium (Cr), Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Antimony (Sb), Tin (Sn) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Spectrometer	SM 3030 K SM 3113 B
Water	Determination of Aluminum (Al), Barium (Ba), Beryllium (Be), Calcium (Ca), Molybdenum (Mo) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Direct Nitrous Oxide-Acetylene Flame Method	SM 3030 K SM 3111 D
Water	Determination of Suspended Solids (SS) Gravimetric Method	SM 2540 D
Water	Determination of Total Solid Gravimetric Method	SM 2540 B
Water	Determination of Settleable Solids Volumetric-Gravimetric Method	SM 2540 F
Water	Determination of Total Fixed and Volatile Solids Gravimetric Method	SM 2540 E
Water	Determination of Total Dissolved Solids Gravimetric Method	SM 2540 C
Water	Determination of Chemical Oxygen Demand (COD) Reflux-Titrimetric Method	SM 5220 B
Water	Determination of Biological Oxygen Demand (BOD) 5-Day BOD Test	SM 5210 B
Water	Determination of Total Kjeldahl Nitrogen Macro Kjeldahl Method	SM 4500-Norg B
Water	Determination of Ammonia/Ammonium Nitrogen Pre Treatment: Distillation Measurement: Spectrometric Method	SM 4500-NH ₃ B SM 4500-NH ₃ F



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water	Determination of Ammonia/Ammonium Nitrogen Pre Treatment: Distillation Measurement: Titrimetric Method	SM 4500-NH ₃ B SM 4500-NH ₃ C
Water	Determination of Alkalinity Titrimetric Method	SM 2320 B
Water	Determination of Fluoride Pre Treatment: Distillation Measurement: SPANDS Method	SM 4500-F B SM 4500-F D
Water	Determination of Chlorine Titrimetric Method	SM 4500-Cl ⁻ B
Water	Determination of Chlorine Titrimetric Method	SM 4500-Cl ⁻ C
Water	Determination of Sulfate Gravimetric Method	SM 4500-SO ₄ ²⁻ C
Water	Determination of Sulfate Gravimetric Method	SM 4500 SO ₄ ²⁻ D
Water	Determination of Sulfate Spectrometric Method	SM 4500 SO ₄ ²⁻ E
Water	Determination of Color Spectrometric Method	SM 2120 C
Water	Determination of Color Spectrometric Method	TS EN ISO 7887 B
Water	Determination of Nitrate Spectrometric Method	SM 4500-NO ₃ ⁻ B
Water	Determination of Nitrate/Nitrate Nitrogen Spectrometric Method	SM 4500-NO ₃ ⁻ E
Water	Determination of Total Cyanide Pre Treatment: Distillation Measurement: Spectrometric Method	SM 4500-CN C SM 4500-CN E
Water	Determination of Free Cyanide Spectrometric Method	SM 4500-CN E
Water	Determination of Hexavalent Chromium(VI) Spectrometric Method	SM 3500-Cr B
Water	Determination of Nitrite/Nitrite Nitrogen Spectrometric Method	SM 4500-NO ₂ ⁻ B



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water	Determination of Sulfite Titrimetric Method	SM 4500 SO ₃ ⁻² B
Water	Determination of Oil And Grease Soklets Ekstration Method	SM 5520 D
Water	Determination of Free Chlorine/Total Chlorine/Residual Chlorine Spectrometric Method	SM 4500-Cl G
Water	Determination of Phenol Pre Treatment: Distillation Measurement: Spectrometric Method	SM 5530 B SM 5530 D
Water	Determination of Sulfide Spectrometric Method	SM 4500-S ²⁻ D
Water	Determination of Sulfide Titrimetric Method	SM 4500-S ²⁻ F
Water	Determination of Total Phosphorus Pre Treatment: Extraction Method Measurement: Spectrometric Method	SM 4500-P B SM 4500-P D
Water	Phosphate/ Phosphate Phosphorus Spectrometric Method	SM 4500-P D
Water	Determination of Hydrazine Spectrometric Method	ASTM D1385
Water	Determination of Hydrocarbons Soxhlet Ekstration Method	SM 5520 D ve F
Water	Determination of Vanadium (V) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Spectrometer	SM 3030 K ASTM D3373
Water	Determination of Hardness EDTA Titrimetric Method	SM 2340 C
Water	Methylene Blue Active Substances(MBAS) Spectrometric Method	SM 5540 B SM 5540 C
Water	Determination of Boron(B) Spectrometric Method	TS 3661
Water	Determination of Floating Matter Visual Method	In-House Method- "TA.345.Rev.00"
Wastewater	Sampling From Wastewater	TS ISO 5667-10



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Determination of Temperature Laboratory and Field Method	SM 2550 B
Wastewater	Determination of pH Electrometric Method	SM 4500 H ⁺ B
Wastewater	Determination of Conductivity Laboratory Method	SM 2510 B
Wastewater	Determination of Salinity Electrical Conductivity Method	SM 2520 B
Wastewater	Determination of Turbidity Nephelometric Method	SM 2130 B
Wastewater	Determination of Dissolved Oxygen Membrane Electrode Method	SM 4500-O G
Wastewater	Determination of Dissolved Oxygen Luminance Method	ASTM D888
Wastewater	Determination of Flowrate Flowrate Method	TS 5699
Wastewater	Determination of Mercury(Hg) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Cold Vapor Atomic Absorption	SM 3030 K SM 3112 B
Wastewater	Determination of Silver (Ag), Gold (Au), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Magnesium (Mg), Manganese (Mn), Nickel (Ni), Lead (Pb), Antimony (Sb), Tin (Sn), Thallium (Tl), Zinc (Zn), Sodium (Na) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Direct Air-Acetylene Flame Method	SM 3030 K SM 3111 B
Wastewater	Determination of Silver (Ag), Aluminum (Al), Arsenic (As), Barium (Ba), Beryllium (Be), Cadmium (Cd), Cobalt (Co), Chromium (Cr), Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Lead (Pb), Selenium (Se), Antimony (Sb), Tin (Sn) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Spectrometer	SM 3030 K SM 3113 B



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Determination of Aluminum (Al), Barium (Ba), Beryllium (Be), Calcium (Ca), Molybdenum (Mo) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Direct Nitrous Oxide-Acetylene Flame Method	SM 3030 K SM 3111 D
Wastewater	Determination of Suspended Solids (SS) Gravimetric Method	SM 2540 D
Wastewater	Determination of Total Solid Gravimetric Method	SM 2540 B
Wastewater	Determination of Total Dissolved Solids Gravimetric Method	SM 2540 C
Wastewater	Determination of Settleable Solids Volumetric-Gravimetric Method	SM 2540 F
Wastewater	Determination of Total Fixed and Volatile Solids Gravimetric Method	SM 2540 E
Wastewater	Determination of Chemical Oxygen Demand (COD) Open Reflux-Titrimetric Method	SM 5220 B
Wastewater	Determination of Total Kjeldahl Nitrogen Macro Kjeldahl Method	SM 4500-Norg B
Wastewater	Determination of Biological Oxygen Demand (BOD) 5-Day BOD Test	SM 5210 B
Wastewater	Determination of Ammonia/Ammonium Nitrogen Pre Treatment: Distillation Measurement: Spectrometric Method	SM 4500-NH ₃ B SM 4500-NH ₃ F
Wastewater	Determination of Ammonia/Ammonium Nitrogen Pre Treatment: Distillation Measurement: Titrimetric Method	SM 4500-NH ₃ B SM 4500-NH ₃ C
Wastewater	Determination of Alkalinity Titrimetric Method	SM 2320 B
Wastewater	Determination of Fluoride Pre Treatment: Distillation Measurement: SPANDS Method	SM 4500-F B SM 4500-F D
Wastewater	Determination of Chlorine Titrimetric Method	SM 4500-Cl ⁻ B



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Determination of Chlorine Titrimetric Method	SM 4500-Cl ⁻ C
Wastewater	Determination of Sulfate Gravimetric Method	SM 4500-SO ₄ ²⁻ C
Wastewater	Determination of Sulfate Gravimetric Method	SM 4500 SO ₄ ²⁻ D
Wastewater	Determination of Sulfate Spectrometric Method	SM 4500 SO ₄ ²⁻ E
Wastewater	Determination of Color Spectrometric Method	TS EN ISO 7887 B
Wastewater	Determination of Color Spectrometric Method	SM 2120 C
Wastewater	Determination of Nitrate Spectrometric Method	SM 4500-NO ₃ ⁻ B
Wastewater	Determination of Nitrate/Nitrate Nitrogen Spectrometric Method	SM 4500-NO ₃ ⁻ E
Wastewater	Determination of Total Cyanide Pre Treatment: Distillation Measurement: Spectrometric Method	SM 4500-CN C SM 4500-CN E
Wastewater	Determination of Free Cyanide Spectrometric Method	SM 4500-CN E
Wastewater	Determination of Hexavalent Chromium(VI) Spectrometric Method	SM 3500-Cr B
Wastewater	Determination of Nitrite/Nitrite Nitrogen Spectrometric Method	SM 4500-NO ₂ ⁻ B
Wastewater	Determination of Sulfite Titrimetric Method	SM 4500 SO ₃ ⁻² B
Wastewater	Determination of Oil And Grease Soklet Ekstration Method	SM 5520 D
Wastewater	Determination of Toxicity Test	TS 5676 SKKY Communiqué on Sampling and Analysis Annex-1
Wastewater	Determination of Free Chlorine/Total Chlorine/Residual Chlorine Spectrometric Method	SM 4500-Cl G
Wastewater	Determination of Phenol Pre Treatment: Distillation Measurement: Spectrometric Method	SM 5530 B SM 5530 D



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Determination of Sulfide Spectrometric Method	SM 4500-S ²⁻ D
Wastewater	Determination of Sulfide Titrimetric Method	SM 4500-S ²⁻ F
Wastewater	Determination of Total Phosphorus Pre Treatment: Extraction Method Measurement: Spectrometric Method	SM 4500-P B SM 4500-P D
Wastewater	Phosphate/ Phosphate Phosphorus Spectrometric Method	SM 4500-P D
Wastewater	Determination of Hydrazine Spectrometric Method	ASTM D1385
Wastewater	Determination of Hydrocarbons Soxhlet Ekstration Method	SM 5520 D ve F
Wastewater	Determination of Vanadium (V) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Spectrometer	SM 3030 K ASTM D3373
Wastewater	Determination of Hardness EDTA Titrimetric Method	SM 2340 C
Wastewater	Methylene Blue Active Substances(MBAS) Spectrometric Method	SM 5540 B SM 5540 C
Wastewater	Determination of Boron(B) Spectrometric Method	TS 3661
Wastewater	Determination of Floating Matter Visual Method	In-House Method- "TA.345.Rev.00"
Waste Oil	Waste Oil and Petroleum Liquids Manual sampling	TS 900-1 EN ISO 3170
Waste Oil	Petroleum Liquids Automatic Pipeline Sampling	TS 900-2 EN ISO 3171
Waste Oil	Method of sampling insulating liquids	TS EN 60475



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste Oil	Determination of Arsenic (As), Cadmium (Cd), Chromium (Cr), Lead (Pb) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Method	EPA 3051A SM 3113 B
Waste Oil	Determination of Lead (Pb) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Direct Air-Acetylene Flame Method	EPA 3051A SM 3111 B
Waste Oil	Determination of Flash Point Pensky-Martens Closed Cup Tester	ASTM D93
Waste Oil	Pre-treatment for Halogens and Chloride Calorimeter Method	EPA 5050
Waste Oil	Determination of Chloride Titrimetric Method	EPA 9253
Types of Gasoline, Types of Diesel, Gas Oil, Fuel Oil	Determinnitnation of Density Hydrometer method	TS 1013 EN ISO 3675
Types of Diesel, Gas Oil, Fuel Oil	Determination of Flash Point Pensky-Martens Closed Cup Tester	ASTM D93
Types of Gasoline	Determination of Amount of Lead (Pb) AAS- Direct Air-Acetylene Flame Method	ASTM D 3237
Types of Diesel, Fuel Oil	Determination of Amount of Ash	ASTM D 482
Types of Diesel, Types of Gasoline	Doctor Test	ASTM D 4952
Sea Water	Sampling from Sea Water	TS ISO 5667-9
Sea Water	Light Scattering / Determination of Secchi Disk Depth Secchi Disk Method	EPA 841-B-97-003
Sea Water	Determination of Temperature Laboratory and Field Method	SM 2550 B
Sea Water	Determination of pH Electrometric Method	SM 4500 H ⁺ B



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sea Water	Determination of Suspended Solids (SS) Gravimetric Method	SM 2540 D
Sea Water	Determination of Dissolved Oxygen Membrane Electrode Method	SM 4500-O G
Sea Water	Determination of Salinity Electrical Conductivity Method	SM 2520 B
Sea Water	Determination of Color Spectrometric Method	SM 2120 C
Sea Water	Determination of Color Spectrometric Method	TS EN ISO 7887 B
Sea Water	Determination of Nitrite/Nitrite Nitrogen Spectrometric Method	SM 4500-NO ₂ ⁻ B
Sea Water	Determination of Nitrate/Nitrate Nitrogen Spectrometric Method Metot	SM 4500-NO ₃ ⁻ E
Sea Water	Determination of Ammonia/Ammonium Nitrogen Pre Treatment: Distillation Measurement: Spectrometric Method	SM 4500-NH ₃ B SM 4500-NH ₃ F
Sea Water	Determination of Total Phosphorus Pre Treatment: Extraction Method Measurement: Spectrometric Method	SM 4500-P B SM 4500-P E
Sea Water	Phosphate/ Phosphate Phosphorus Spectrometric Method	SM 4500-P E
Sea Water	Determination of Turbidity Nephelometric Method	SM 2130 B
Sea Water	Determination of Oil And Grease Soklet Ekstration Method	SM 5520 D
Sea Water	Determination of Hexavalent Chromium(VI) Spectrometric Method	SM 3500-Cr B
Sea Water	Determination of Total Kjeldahl Nitrogen Macro Kjeldahl Method	SM 4500-Norg B
Sea Water	Determination of Nitrate Spectrometric Method	SM 4500-NO ₃ ⁻ B
Sea Water	Determination of Chlorophyll-a Spectrometric Method	TS 9092 ISO 10260



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sea Water	Determination of Chlorophyll-a Spectrometric Method	SM 10200 H
Sea Water	Determination of Toxicity Test	TS 5676 SKKY Communiqué on Sampling and Analysis Annex-1
Sea Water	Determination of Cadmium (Cd), Copper (Cu), Lead (Pb), Nickel (Ni) Pre Treatment: Method for Metals Analysis: AAS - Graphite Furnace Method	In-House Method "TA.321 Rev.00" (Seawater Analysis Third Extended Willey-VHC Klaus Grasshoff:2009) SM 3113 B
Sea Water	Determination of Zinc (Zn) Pre Treatment: Method for Metals Analysis: AAS- Direct Air-Acetylene Flame Method	In-House Method "TA.321 Rev.00" (Seawater Analysis Third Extended Willey-VHC Klaus Grasshoff:2009) SM 3111 B
Sea Water	Determination of Floating Matter Visual Method	In-House Method- "TA.345.Rev.00"
Sewage Sludge	Sludge Sampling from Sewage and Water Treatment Plants	TS EN ISO 5667-13
Sewage Sludge	Determination of Arsenic (As), Beryllium (Be), Molybdenum (Mo), Selenium (Se), Thallium (Tl), Lead (Pb), Cadmium (Cd), Nickel (Ni), Antimony (Sb), Copper (Cu), Barium (Ba), Chromium (Cr) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS - Graphite Furnace Method	TS EN 12457-4 EPA 3051A SM 3113 B
Sewage Sludge	Determination of Silver (Ag), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Tin (Sn), Zinc (Zn), Antimony (Sb) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Direct Air-Acetylene Flame Method	TS EN 12457-4 EPA 3051A SM 3111 B
Sewage Sludge	Determination of Barium (Ba) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Direct Nitrous Oxide-Acetylene Flame Method	TS EN 12457-4 EPA 3051A SM 3111 D



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sewage Sludge	Determination of Mercury (Hg) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Cold Vapor Atomic Absorption	TS EN 12457-4 EPA 3051A SM 3112 B
Sewage Sludge	Determination of Chlorine Pretreatment: Leaching Measurement: Argentometric Method	TS EN 12457-4 SM 4500-Cl ⁻ B
Sewage Sludge	Determination of Chlorine Pretreatment: Leaching Measurement: Titrimetric Method	TS EN 12457-4 SM 4500-Cl ⁻ C
Sewage Sludge	Determination of Fluoride Pre Treatment: Leaching +Distillation Measurement: SPANDS Method	TS EN 12457-4 SM 4500-F B SM 4500-F D
Sewage Sludge	Determination of Sulfate Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 4500-SO ₄ ²⁻ C
Sewage Sludge	Determination of Sulfate Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 4500 SO ₄ ²⁻ D
Sewage Sludge	Determination of Sulfate Pre Treatment: Leaching Measurement: Turbidimetric Method	TS EN 12457-4 SM 4500-SO ₄ ²⁻ E
Sewage Sludge	Determination of Total Dissolved Solids Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 2540 C
Sewage Sludge	Determination of Vanadium (V) Pre Treatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Graphite Furnace Method	TS EN 12457-4 EPA 3051A ASTM D 3373
Sewage Sludge	Determination of the Loss on Ignition of Dry Mass Gravimetric Method	TS EN 12879



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sewage Sludge	Determination of pH Electrometric Method	TS ISO 10390
Sewage Sludge	Determination of Dry Residue(%) and Water Content(%) Gravimetric Method	TS 9546 EN 12880
Sewage Sludge	Determination of Electrical Conductivity Electrometric Method	TS 8334
Sewage Sludge	Determination of Organic Matter Titrimetric Method	TS 8336
Sewage Sludge	Determination of Phenol Index Pre Treatment: Leaching Measurement: Spectrometric Method	TS EN 12457-4 TS 6227 ISO 6439
Waste	Sampling from Solid Wastes	TS 12090
Waste	Determination of Arsenic (As), Beryllium (Be), Molybdenum (Mo), Selenium (Se), Thallium (Tl), Lead (Pb), Cadmium (Cd), Nickel (Ni), Antimony (Sb), Copper (Cu), Barium (Ba), Chromium (Cr) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS - Graphite Furnace Method	TS EN 12457-4 EPA 3051A SM 3113 B
Waste	Determination of Silver (Ag), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Tin (Sn), Zinc (Zn), Antimony (Sb) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Direct Air-Acetylene Flame Method	TS EN 12457-4 EPA 3051A SM 3111 B
Waste	Determination of Barium (Ba) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Direct Nitrous Oxide-Acetylene Flame Method	TS EN 12457-4 EPA 3051A SM 3111 D
Waste	Determination of Mercury (Hg) Pretreatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Cold Vapor Atomic Absorption	TS EN 12457-4 EPA 3051A SM 3112 B



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	Determination of Chlorine Pretreatment: Leaching Measurement: Argentometric Method	TS EN 12457-4 SM 4500-Cl ⁻ B
Waste	Determination of Chlorine Pretreatment: Leaching Measurement: Titrimetric Method	TS EN 12457-4 SM 4500-Cl ⁻ C
Waste	Determination of Fluoride Pre Treatment: Leaching +Distillation Measurement: SPANDS Method	TS EN 12457-4 SM 4500-F B SM 4500-F D
Waste	Determination of Sulfate Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 4500-SO ₄ ²⁻ C
Waste	Determination of Sulfate Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 4500 SO ₄ ²⁻ D
Waste	Determination of Sulfate Pre Treatment: Leaching Measurement: Turbidimetric Method	TS EN 12457-4 SM 4500-SO ₄ ²⁻ E
Waste	Determination of Total Dissolved Solids Pre Treatment: Leaching Measurement: Gravimetric Method	TS EN 12457-4 SM 2540 C
Waste	Determination of Vanadium (V) Pre Treatment: Microwave Assisted Digestion of Leachate Measurement: AAS- Graphite Furnace Method	TS EN 12457-4 EPA 3051A ASTM D 3373
Waste	Determination of the Loss on Ignition of Dry Mass Gravimetric Method	TS EN 12879
Waste	Determination of pH Electrometric Method	TS ISO 10390
Waste	Determination of Dry Residue(%) and Water Content(%) Gravimetric Method	TS 9546 EN 12880
Waste	Determination of Electrical Conductivity Electrometric Method	TS 8334



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	Determination of Organic Matter Titrimetric Method	TS 8336
Waste	Determination of Phenol Index Pre Treatment: Leaching Measurement: Spectrometric Method	TS EN 12457-4 TS 6227 ISO 6439
Soil	Sampling From Surface soil, Preserving and Transporting Soil Samples	TS 9923
Soil	Determination of Arsenic (As), Beryllium (Be), Molybdenum (Mo), Selenium (Se), Thallium (Tl), Lead (Pb), Cadmium (Cd), Nickel (Ni), Antimony (Sb), Copper (Cu), Barium (Ba), Chromium (Cr) Pretreatment: Microwave Assisted Extraction Measurement: AAS - Graphite Furnace Method	EPA 3051A SM 3113 B
Soil	Determination of Silver (Ag), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Nickel (Ni), Lead (Pb), Tin (Sn), Zinc (Zn), Antimony (Sb) Pretreatment: Microwave Assisted Extraction Measurement: AAS- Direct Air-Acetylene Flame Method	EPA 3051A SM 3111 B
Soil	Determination of Barium (Ba) and Titanium (Ti) Pretreatment: Microwave Assisted Extraction Measurement: AAS- Direct Nitrous Oxide- Acetylene Flame Method	EPA 3051A SM 3111 D
Soil	Determination of Mercury (Hg) Pretreatment: Microwave Assisted Extraction Measurement: AAS- Cold Vapor Atomic Absorption	EPA 3051A SM 3112 B
Soil	Determination of Vanadium (V) Pre Treatment: Microwave Assisted Extraction Measurement: AAS- Graphite Furnace Method	EPA 3051A ASTM D 3373
Soil	Determination of the Loss on Ignition of Dry Mass Gravimetric Method	TS EN 12879
Soil	Determination of pH Electrometric Method	TS ISO 10390
Soil	Determination of Dry Residue (%) and Water Content(%) Gravimetric Method	TS 9546 EN 12880
Soil	Determination of Electrical Conductivity Electrometric Method	TS ISO 11265



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Determination of Organic Matter Titrimetric Method	TS 8336
Soil	Determination of Hexavalent Chromium(VI) Pre Treatment: Extracting with Acid Measurement: Spectrometric Method	EPA 3060 EPA 7196 A
Soil	Determination of Phosphorus Modified Bray and Kurtz Method	TS 8338
Sediment	Sampling from Bottom Sediments	TS 9547 ISO 5667-12
Sediment	Determination of Dry Residue(%) and Water Content(%) Gravimetric Method	TS 9546 EN 12880
Sediment	Determination of the Loss on Ignition of Dry Mass Gravimetric Method	TS EN 12879
Sediment	Determination of Electrical Conductivity Electrometric Method	TS ISO 11265
Sediment	Determination of pH Electrometric Method	TS ISO 10390
Sediment	Determination of Phosphorus Modified Bray and Kurtz Method	TS 8338
Air Flow Measurement (Air Sampling Pump) Flow rate:(0,2-6) Liter/minute	Measurement Error Test	TS - EN 1359, Subject:7.1.3.2 Comparative Method

*Temporary or mobile facilities or at a customer's facility.

End of Scope


G. Banu MÜDERRİSOĞLU
 Secretary General

