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Accreditation Scope

 <b>Test</b> <b>TS EN ISO/IEC 17025</b> <b>AB-0551-T</b>	<b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b> Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016	
	<b>As a Testing Laboratory</b>	
	<b>Address:</b> Yeni Yol Sok. Etap İş Merkezi B Blok No:20/7-8 Acıbadem Kadıköy  İSTANBUL / TÜRKİYE	<b>Phone</b> : 0216 326 27 78 <b>Fax</b> : 0216 545 87 03 <b>E-Mail</b> : info@astlab.com.tr <b>Website</b> : www.astlab.com.tr

<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sampling of rivers and streams	TS ISO 5667-6
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sampling of groundwaters	TS ISO 5667-11
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sampling of Lake and Pond Water	TS 6291

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	pH Electrometric Method	SM 4500-H <sup>+</sup> B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Conductivity Laboratory Method	SM 2510 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Temperature Laboratory and Field Methods	SM 2550 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Turbidity Nephelometric Method	SM 2130 B

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VE DANIŞMANLIK TİC. A.Ş.

Accreditation Nr: AB-0551-T

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Color Spectrophotometric Method	SM 2120 C
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Color Spectrometric Method	TS EN ISO 7887
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Hardness Titrimetric Method	SM 2340 C
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Calcium Titrimetric Method	SM 3500-Ca B

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Magnesium Calculation Method	SM 3500-Mg B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Alkalinity Titration Method	SM 2320 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Acidity Titration Method	SM 2310 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Dissolved oxygen-Oxygen saturation Optical sensor method	ISO 17289

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Chemical Oxygen Demand (COD) Open Reflux Method	TS 2789/T1
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Chemical Oxygen Demand (COD) Closed Reflux Method	SM 5220 C
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Biological Oxygen Demand (BOİ <sub>5</sub> ) 5-Day BOD Test	SM 5210 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Solids Dried Gravimetric Method	SM 2540 B

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Dissolved Solids Gravimetric Method	SM 2540 C
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Suspended Solids (TSS) Gravimetric Method	SM 2540 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Settleable Solids Volimetric and Gravimetric Method	SM 2540 F
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Oil and Grease Gravimetric Method	SM 5520 B

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Oil and Grease Soxhlet Extraction Method	SM 5520 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Hydrocarbons Soxhlet Extraction Method	SM 5520 D SM 5520 F
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Hydrocarbon Oil Index (C10 - C40) GC-FID Method	ISO 9377-2
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Ammonia/Nitrogen (Ammonia) Preparation: Distillation Method Measurement: Spectrometric Method	SM 4500-NH <sub>3</sub> B SM 4500-NH <sub>3</sub> F

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Kjeldahl Nitrogen (TKN) Macro-Kjeldahl Method	SM 4500-Norg B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Nitrite/ Nitrite Nitrogen Spectrometric Method	SM 4500-NO <sub>2</sub> <sup>-</sup> B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Nitrate/ Nitrate Nitrogen Cadmium Reduction Method	SM 4500 NO <sub>3</sub> <sup>-</sup> E
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Nitrogen (TN) Calculation Method	SM 4500-Norg B, SM 4500-NO <sub>2</sub> <sup>-</sup> B, SM 4500-NO <sub>3</sub> <sup>-</sup> E, TS EN ISO 10304-1



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Phosphate / phosphate phosphorus Spectrometric Method	SM 4500-P D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Phosphorus (P) / Ortophosphate Preparation : Digestion Method Measurement: Spectrometric Method	SM 4500-P B SM 4500-P D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Phosphorus (P) ICP/OES Method	EPA 200.7
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sulfide Iodometric Method	SM 4500-S <sup>2-</sup> F

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sulfite Iodometric Method	SM 4500-SO <sub>3</sub> <sup>2-</sup> -B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Anions Bromide(Br <sup>-</sup> ), Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Nitrite(NO <sub>2</sub> <sup>-</sup> ), Nitrite Nitrogen(NO <sub>2</sub> <sup>-</sup> -N), Nitrate (NO <sub>3</sub> <sup>-</sup> ), Nitrate Nitrogen (NO <sub>3</sub> <sup>-</sup> -N),Phosphate(PO <sub>4</sub> <sup>2-</sup> ), Phosphate Phosphorus (PO <sub>4</sub> <sup>2-</sup> -P), Sulphate (SO <sub>4</sub> <sup>2-</sup> ) Ion Chromatography	TS EN ISO 10304-1
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Surfactant (MBAS) Spectrometric Method	TS 6550 EN 903
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Hexavalent Chromium (Cr <sup>+6</sup> ) Spectrometric Method	SM 3500-Cr B

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Free Chlorine/ Active Chlorine/ Exccess Chlorine and Total Chlorine Titrimetric method using N,N-diethyl-1,4-phenylenediamine	TS 5489 EN ISO 7393-1
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Free Chlorine/ Active Chlorine/ Exccess Chlorine and Total Chlorine DPD FerrousTitrimetric Method	SM 4500-CI F
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Active Chlorine / Free Chlorine/ Excess Chlorine DPD Spectrometric Method	SM 4500-CI G
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Free Cyanide Spectrometric Method	SM 4500-CN I SM 4500-CN E

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Total Cyanide Preparation: Distillation Measurement: Spectrometric Method	SM 4500-CN C SM 4500-CN E
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Phenol/Phenol Index Spectrometric Method	TS 6227 ISO 6439
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Phenol/Phenol Index Preparation : 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)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper,(Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li). Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Phosphorus (P), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Thallium, (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Acid Digestion Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	SM 3030 B SM 3030 E SM 3030 K EPA 200.7
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Heavy Metals Sulfur, Total Sulfur (S), Silicium, Silica, Total Silica, Colloidal Silica (Si), Tungsten (W) ICP-OES Method	ISO 11885
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Fish Toxicity Test (ZSF)	SKKY Numune Alma ve Analiz Metotları Tebliği

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	chlorophyll- A Spectrometric Method	TS 9092 ISO 10260
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Transparency / Secchi Disk Depth	EPA 841-B97-003
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 138, 141, 149, 151, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Liquid Liquid Extraction Preparation: Sulfuric Acid and Permanganate Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3665 A EPA 8082 A

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Polycyclic Aromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3630 C EPA 8270 D

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	<p>Volatile Organic Compounds (VOCs) (Continue) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3 -dichlorobenzene, 1,4-dichlorobenzene, 1,2 -dichlorobenzene, 1,2-dibromo 3 -chloropropane, 1,2,4-Trichlorobenzene, Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4 -trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4 -isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1 -Dichloroethane, 1,1-Dichloroethene, Trichlorofluoromethane (CFC) Preparation: Headspace Method Measurement: GC/MS Method</p>	<p>EPA 5021 A EPA 8260 C</p>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	<p>Phenol and Phenol Compounds (4-chlorophenol, 2,4-dichlorophenol, 2 -chlorophenol, 2,4,6-trichlorophenol, Phenol, 3&amp;4-methylphenol, 2 -methylphenol) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method</p>	<p>EPA 3510 C EPA 3630 C EPA 8270 D</p>



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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Pesticides (op DDD, pp DDT, pp DDD, op DDT, b-BHC, Atrazine, a-BHC, g-BHC, alachlor, trans (a-) chlordane, aldrin, cis (g-) chlordane, op DDE, Dieldrin, Endrin, pp DDE) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Nitrogen (Triazine) Pesticides (Atrazine, Atraton, Ametryn, Prometon, Prometryn, Sebumeton, Propazine, Simetryn Simazine, Terbutryn, Terbutylazine) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Organochlorine Pesticides (1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, Pentachlorobenzene, 1,2,4,5-tetrachlorobenze, Hexachlorobenzene) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Organo Phosphorous Pesticides (Diazinon, Disulfoton, Ethion, Parathion-ethyl, Parathion-methyl, Malathion) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethykhexyl) phthalate, di-n-octyl phthalate) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Aromatic Compounds aniline o-anisidine o-p toluidine diphenylamine Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Volatile Solids Gravimetric Method	SM 2540 E

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Sodium Adsorption Ratio (SAR) Calculation Method	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Changeable Sodium Percentage (%) Calculation Method	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Residual Sodium Carbonate Index (RSC) Calculation Method	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Carbon Dioxide Titration Method	SM 4500 CO <sub>2</sub> C

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Percentage Humidity Gravimetric Method	SM 2540 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Salinity Electrical Conductivity Method	SM 2520 B
Water (Except Republic of Turkey-Ministry of Health" Regulation Concerning Water Intended for Human Consumption), Wastewater, Surfacewater	Permanganate Index	TS 6288 EN ISO 8467
Wastewater	Sampling of waste waters	TS ISO 5667-10
Wastewater	Sampling of groundwater at contaminated sites	TS ISO 5667-11
Wastewater	pH Electrometric Method	SM 4500-H*B
Wastewater	Conductivity Laboratory Method	SM 2510 B

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Wastewater	Temperature Laboratory and Field Methods	SM 2550 B
Wastewater	Turbidity Nephelometric Method	SM 2130 B
Wastewater	Color Spectrophotometric Method	SM 2120 C
Wastewater	Color Spectrometric Method	TS EN ISO 7887
Wastewater	Chemical Oxygen Demand (COD) Open Reflux Method	TS 2789/T1
Wastewater	Chemical Oxygen Demand (COD) Closed Reflux Method	SM 5220 C
Wastewater	Biochemical Oxygen Demand (BOİ <sub>5</sub> ) 5-Day BOD Test	SM 5210 B
Wastewater	Total Solids	SM 2540 B
Wastewater	Total Dissolved Solids Dried	SM 2540 C
Wastewater	Total Suspended Solids Dried (TSS)	SM 2540 D
Wastewater	Settleable Solids	SM 2540 F
Wastewater	Oil and Grease Gravimetric Method	SM 5520 B
Wastewater	Oil and Grease Soxhlet Extraction Method	SM 5520 D
Wastewater	Hydrocarbons Soxhlet Extraction Method	SM 5520 D SM 5520 F
Wastewater	Hydrocarbon Oil Index (C10 - C40) GC-FID Method	ISO 9377-2
Wastewater	Ammonia/Nitrogen (Ammonia) Preparation: Distillation Method Measurement: Spectrometric Method	SM 4500-NH <sub>3</sub> B SM 4500-NH <sub>3</sub> F
Wastewater	Total Kjeldahl Nitrogen (TKN) Macro-Kjeldahl Method	SM 4500-Norg B

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Accreditation Scope

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Nitrite/ Nitrite Nitrogen Spectrometric Method	SM 4500-NO <sub>2</sub> <sup>-</sup> B
Wastewater	Nitrate/ Nitrate Nitrogen Cadmium Reduction Method	SM 4500 NO <sub>3</sub> <sup>-</sup> E
Wastewater	Total Nitrogen (TN) Calculation Method	SM 4500-Norg B, SM 4500-NO <sub>2</sub> <sup>-</sup> B, SM 4500-NO <sub>3</sub> <sup>-</sup> E, TS EN ISO 10304-1
Wastewater	Phosphate / phosphate phosphorus Spectrometric Method	SM 4500-P D
Wastewater	Total Phosphorus (P) / Ortophosphate Preparation: Digestion Method Measurement: Spectrometric Method	SM 4500-P B SM 4500-P D
Wastewater	Total Phosphorus (P) ICP/OES Method	EPA 200.7
Wastewater	Sulfide Iodometric Method	SM 4500-S <sup>2-</sup> F
Wastewater	Sulfite Iodometric Method	SM 4500-SO <sub>3</sub> <sup>2-</sup> B
Wastewater	Anions Bromide(Br <sup>-</sup> ), Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Nitrite(NO <sub>2</sub> <sup>-</sup> ), Nitrite Nitrogen(NO <sub>2</sub> <sup>-</sup> -N), Nitrate (NO <sub>3</sub> <sup>-</sup> ), Nitrate Nitrogen (NO <sub>3</sub> <sup>-</sup> -N,)Phosphate(PO <sub>4</sub> <sup>2-</sup> ), Phosphate Phosphorus (PO <sub>4</sub> <sup>2-</sup> -P), Sulphate (SO <sub>4</sub> <sup>2-</sup> ) İon Chromatography	TS EN ISO 10304-1

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Accreditation Scope



AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ  
VE DANIŞMANLIK TİC. A.Ş.

Accreditation Nr: AB-0551-T

Revision Nr: 03 Date: 04 October 2016

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper,(Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li). Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Phosphorus (P), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Thallium, (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Acid Digestion Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	SM 3030 B SM 3030 E SM 3030 K EPA 200.7
Wastewater	Heavy Metals Sulfur, Total Sulfur (S), Silicium, Silica, Total Silica, Colloidal Silica (Si), Tungsten (W) ICP-OES Method	ISO 11885
Wastewater	Hexavalent Chromium (Cr <sup>+6</sup> ) Spectrometric Method	SM 3500-Cr B
Wastewater	Free Cyanide Spectrometric Method	SM 4500-CN I SM 4500-CN E
Wastewater	Total Cyanide Spectrometric Method	SM 4500-CN C SM 4500-CN E
Wastewater	Phenol/Phenol Index Spectrometric Method	TS 6227 ISO 6439
Wastewater	Phenol/Phenol Index Preparation: Distillation Measurement: Spectrometric Method	SM 5530 B SM 5530 D
Wastewater	Surfactants (MBAS) Spectrometric Method	TS 6550 EN 903
Wastewater	Fish Toxicity Test (ZSF)	SKKY Numune Alma ve Analiz Metotları Tebliği

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Accreditation Scope

 TÜRKAK Test TS EN ISO/IEC 17025 AB-0551-T	<p style="text-align: center;"><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p style="text-align: center;">Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 138, 141, 149, 151, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Liquid Liquid Extraction Preparation: Sulfuric Acid and Permanganate Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3665 A EPA 8082 A
Wastewater	Polycyclic Aromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3630 C EPA 8270 D



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AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ  
VE DANIŞMANLIK TİC. A.Ş.

Accreditation Nr: AB-0551-T

Revision Nr: 03 Date: 04 October 2016

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Wastewater	Volatile Organic Compounds (VOCs) (Continue) Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3 -dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, 1,1,2,2 -Tetrachloroetane. Bromobenzene, 1,3,5 -trimetilbenzene, 1,3-dichlorobenzene, 1,4 -dichlorobenzene, 1,2-dichlorobenzene, 1,2-dibromo 3-chloropropane, 1,2,4 -Trichlorobenzene, Naphthalene, 1,2,3 -Trichlorobenzene, Hexachloro 1,3 -butadiene,1,2,4-trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4-Isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2-Dichloroethene trans-1,2-Dichloroethene, Methylene chloride, 1,1-Dichloroethane, 1,1 -Dichloroethene, Trichlorofluoromethane (CFC)) Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Wastewater	Pesticides (op DDD, pp DDT, pp DDD, op DDT, b-BHC, Atrazine, a-BHC, g-BHC, alachlor, trans (a-) chlordane, aldrin, cis (g-) chlordane, op DDE, Dieldrin, Endrin, pp DDE) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater	Nitrogen (Triazine) Pesticides (Atrazine, Atraton, Ametryn, Prometon, Prometryn, Seccumeton, Propazine, Simetryn, Simazine, Terbutryn, Terbutylazine) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater	Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethyhexyl) phthalate, di-n-octyl phthalate) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater, Surfacewater	Organochlorine Pesticides 1,2-dichlorobenzene 1,3-dichlorobenzene 1,2,4-trichlorobenzene 1,4-dichlorobenzene pentachlorobenzene 1,2,4,5-tetrachlorobenze hexachlorobenzene Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D

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**Accreditation Scope**

 <p><b>TÜRKAK</b> Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Wastewater	Organo Phosphorous Pesticides (Diazinon, Disulfoton, Ethion, Parathion-ethyl, Parathion-methyl, Malathion) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater	Phenol and Phenol Compounds (4-chlorophenol, 2,4-dichlorophenol, 2-chlorophenol, 2,4,6-trichlorophenol, Phenol, 3&4-methylphenol, 2-methylphenol) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater	Aromatic Compounds aniline o-anisidine o-p toluidine diphenylamine Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Wastewater	Alkalinity Titration Method	SM 2320 B
Wastewater	TEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Wastewater	Free Chlorine, Total Chlorine Titrimetric method using N,N-diethyl-1,4-phenylenediamine	TS 5489 EN ISO 7393-1
Wastewater	Free/Active/ Excess and Total Chlorine DPD FerrousTitrimetric Method	SM 4500-Cl F
Wastewater	Free/Active/ Excess Chlorine DPD Spectrometric Method	SM 4500-Cl G

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 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Wastewater	Volatile Solids Gravimetric Method	SM 2540 E
Wastewater	Sodium Adsorption Ratio (SAR) Calculation Method	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Wastewater	Changeable Sodium Percentage (%)	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Wastewater	Residual Sodium Carbonate Index (RSC) Calculation Method	SKKY Atıksu Artıma Tesisleri Teknik Usuller Tebliği
Wastewater	Carbon Dioxide Titration Method	SM 4500-CO <sub>2</sub> C
Wastewater	Magnesium Calculation Method	SM 3500-Mg B
Wastewater	Hardness Titrimetric Method	SM 2340 C
Wastewater	Calcium Titrimetric Method	SM 3500-Ca B
Wastewater	Acidity Titration Method	SM 2310 B
Wastewater	Salinity Electrical Conductivity Method	SM 2520 B
Wastewater	Dissolved oxygen-Oxygen saturation Membrane Electrode Method	ISO 17289
Wastewater	Coagulation Flocculation Jar Test	ASTM D 2035
Wastewater	Permanganate Index	TS 6288 EN ISO 8467
Sea Waters	Sampling from marine waters	TS ISO 5667-9
Sea Water	pH Electrometric Method	SM 4500-H*B
Sea Water	Turbidity Nephelometric Method	SM 2130 B

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Sea Water	Salinity Electrical Conductivity Method	SM 2520 B
Sea Water	Temperature Laboratory and Field Methods	SM 2550 B
Sea Water	Color Spectrophotometric Method	SM 2120 C
Sea Water	Color Spectrometric Method	TS EN ISO 7887
Sea Water	Total Suspended Solids Dried (TSS)	SM 2540 D
Sea Water	Ammonia/Nitrogen (Ammonia) Preparation: Distillation Method Measurement: Spectrometric Method	SM 4500-NH3 B SM 4500-NH3 F
Sea Water	Nitrite/ Nitrite Nitrogen Spectrometric Method	SM 4500-NO <sub>2</sub> <sup>-</sup> B
Sea Water	Nitrate/ Nitrate Nitrogen Cadmium Reduction Method	SM 4500 NO <sub>3</sub> <sup>-</sup> E
Sea Water	Total Nitrogen (TN) Calculation Method	SM 4500-Norg B, SM 4500-NO <sub>2</sub> <sup>-</sup> B, SM 4500-NO <sub>3</sub> <sup>-</sup> E, TS EN ISO 10304-1
Sea Water	Total Phosphorus (P) ICP/OES Method	EPA 200.7
Sea Water	Anions Bromide(Br <sup>-</sup> ), Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Nitrite(NO <sub>2</sub> <sup>-</sup> ), Nitrite Nitrogen(NO <sub>2</sub> <sup>-</sup> -N), Nitrate (NO <sub>3</sub> <sup>-</sup> ), Nitrate Nitrogen (NO <sub>3</sub> <sup>-</sup> -N,)Phosphate(PO <sub>4</sub> <sup>2-</sup> ), Phosphate Phosphorus (PO <sub>4</sub> <sup>2-</sup> -P), Sulphate (SO <sub>4</sub> <sup>2-</sup> ) Ion Chromatography	TS EN ISO 10304-1

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**Accreditation Scope**

 <p><b>TÜRKAK</b> Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Sea Water	Heavy Metals Arsenic (As), Cadmium (Cd), Chrome (Cr), Copper,(Cu), Mercury (Hg), Nickel (Ni), Phosphorus (P), Lead (Pb), Strontium (Sr), Zinc (Zn) Preparation: Acid Digestion Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	SM 3030 B SM 3030 E SM 3030 K EPA 200.7
Sea Water	Dissolved oxygen-Oxygen saturation Membrane Electrode Method	ISO 17289
Sea Water	Biochemical Oxygen Demand (BOI <sub>5</sub> ) 5-Day BOD Test	SM 5210 B
Sea Water	Hydrocarbon Oil Index (C10 - C40) GC-FID Method	ISO 9377-2
Sea Water	Transparency / Secchi Disk Depth	EPA 841-B97-003
Sea Water	Total Kjeldahl Nitrogen (TKN) Macro-Kjeldahl Method	SM 4500-Norg B
Sea Water	Phenol/Phenol Index Spectrometric Method	TS 6227 ISO 6439
Sea Water	Phenol/Phenol Index Preparation: Distillation Measurement: Spectrometric Method	SM 5530 B SM 5530 D
Sea Water	Surfactant (MBAS) Spectrometric Method	TS 6550 EN 903
Sea Water	Hexavalent Chromium (Cr <sup>+6</sup> ) Spectrometric Method	SM 3500-Cr B
Sea Water	Permanganate Index	TS 6288 EN ISO 8467
Sea Water	chlorophyll- A Spectrometric Method	TS 9092 ISO 10260
Sea Water	TRIX Index Calculation Method	In-House Method/AST.SOP.53

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 <p><b>TÜRKAK</b> Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sea Water	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 138, 141, 149, 151, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Liquid Liquid Extraction Preparation: Sulfuric Acid and Permanganate Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3665 A EPA 8082 A
Sea Water	Polycyclic Aromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/ECD Method	EPA 3510 C EPA 3630 C EPA 8270 D

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**Accreditation Scope**



**AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ  
VE DANIŞMANLIK TİC. A.Ş.**

Accreditation Nr: AB-0551-T

Revision Nr: 03 Date: 04 October 2016

Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sea Water	Volatile Organic Compounds (VOCs) (Continue) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3 -dichlorobenzene, 1,4-dichlorobenzene, 1,2 -dichlorobenzene, 1,2-dibromo 3 -chloropropane, 1,2,4-Trichlorobenzene Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4 -trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4 -isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1 -Dichloroethane, 1,1-Dichloroethene, Trichlorofluoromethane (CFC)) Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Sea Water	Pesticides (b-BHC, Dieldrin, Parathion-ethyl, Parathion-methyl) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D



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**Accreditation Scope**

 <p><b>TÜRKAK</b> Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sea Water	Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethykhexyl) phthalate, di-n-octyl phthalate) Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Sea Water	Phenol and Phenol Compounds (4-chlorophenol, 2,4-dichlorophenol, 2-chlorophenol, 2,4,6-trichlorophenol, Phenol, 3&4-methylphenol, 2-methylphenol) Preparation: Liquid Liquid Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Sea Water	Aromatic Nitrogen Compounds aniline o-anisidine o-p toluidine diphenylamine Preparation: Liquid Liquid Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3510 C EPA 3630 C EPA 8270 D
Sea Water	BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Soil	Practices for Sampling From Surface soil, Preserving and Transporting Soil Samples	TS 9923
Soil	pH Electrometric Method	TS ISO 10390
Soil	Organic Matter Walkley-Black Method	TS 8336

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**Accreditation Scope**

 <p><b>TÜRKAK</b> Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Conductivity Preparation: Water Saturation Measurement: Electrometrical Method	TS 8333 TS 8334
Soil	Salinity Preparation: Water Saturation Measurement: Electrometrical Method	TS 8333 TS 8334
Soil	Nitrogen (N) /Total Nitrogen (TN) Measurement: Modified Kjeldahl Method	TS 8337 ISO 11261
Soil	Phosphorus (P)/Total Phosphorus (TP) Measurement: Modified Bray and Kurtz No.1 Method	TS 8338
Soil	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li). Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Thallium (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Soil	Free Cyanide Preparation: Leaching Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN I SM 4500-CN E
Soil	Total Cyanide Preparation: Leaching Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN C SM 4500-CN E
Soil	Mineral Oils (C10-C40) Measurement: GC-FID Method	TS EN 14039

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 118, 138, 141, 149, 151, 153, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Soxhlet Extraction Preparation: Sulfuric acid/Permanganate Cleanup Measurement: GC/ECD Method	EPA 3540 C EPA 3665 A EPA 8082 A
Soil	Polyaromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoanthene, Benzo(k)fluoanthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Soil	Anions Bromide(Br <sup>-</sup> ), Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Phosphate(PO <sub>4</sub> <sup>=</sup> ), Sulphate (SO <sub>4</sub> <sup>=</sup> ) Preparation: Leaching Method Measurement: Ion Chromatography Method	TS EN 12457-4 TS EN ISO 10304-1
Soil	Phenol /Phenol Index Preparation :Leaching Method Measurement: Spectrometric Method	TS EN 12457-4 TS 6227 ISO 6439
Soil	Phenol/Phenol Index Preparation :Leaching Method + Distillation Measurement: Direct Photometric Method	TS EN 12457-4 SM 5530 B SM 5530 D

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Hexavalent Chromium (Cr <sup>+6</sup> ) Preparation: Leaching Method Measurement: Spectrometric Method	TS EN 12457-4 SM 3500-Cr B
Soil	BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Soil	Volatile Organic Compounds (VOCs) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3 -dichlorobenzene, 1,4-dichlorobenzene, 1,2 -dichlorobenzene, 1,2-dibromo 3 -chloropropane, 1,2,4-Trichlorobenzene Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4 -trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4 -Isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2 -Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1-Dichloroethane, 1,1 -Dichloroethene, Trichlorofluoromethane (CFC)) Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethyhexyl) phthalate, di-n-octyl phthalate) Preparation: Soxhlet Extraction Method Measurement: GC/MS Method	EPA 3540 C EPA 8270 D
Soil	Organochlorine Pesticides (1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,2,4-trichlorobenzene, 1,4-dichlorobenzene, Pentachlorobenzene, 1,2,4,5-tetrachlorobenze Hexachlorobenzene) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Soil	Phenol and Phenol Compounds (4-chlorophenol, 2,4-dichlorophenol, 2-chlorophenol, 2,4,6-trichlorophenol, Phenol, 3&4-methylphenol, 2-methylphenol) Preparation: Soxhlet Extraction Measurement: GC/MS Method	EPA 3540 C EPA 8270 D
Soil	Aromatic Nitrogen Compounds aniline o-anisidine o-p toluidine diphenylamine Preparation: Soxhlet Extraction Measurement: GC/MS Method	EPA 3540 C EPA 8270 D

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Soil	Pesticides (op DDD, pp DDT, pp DDD, op DDT, b-BHC, Atrazine, a-BHC, g-BHC, alachlor, trans (a-) chlordane, aldrin, cis (g-) chlordane, op DDE, Dieldrin, Endrin, pp DDE) Preparation: Soxhlet Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Soil	Organo Phosphorous Pesticides (Diazinon, Disulfoton, Ethion, Parathion-ethyl, Parathion-methyl, Malathion) Preparation: Soxhlet Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Soil	Nitrogen (Triazine) Pesticides (Atrazine, Atraton, Ametryn, Prometon, Prometryn, Seclubumeton, Propazine, Simetryn Simazine, Terbutryn, Terbutylazine) Preparation: Soxhlet Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Sludge	Sampling Sludge from Sewen Systems and Waste water Treatment Centers	TS EN ISO 5667-13
Sludge	pH Preparation: Leaching Method Measurement : Electrometric Method	TS EN 12457-4 SM 4500-H <sup>+</sup> B
Sludge	pH Electrometric Method	TS ISO 10390
Sludge	Organic Matter Walkley-Black Method	TS 8336

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Sludge	Dry Residue and Water Content Gravimetric Method	TS 9546 EN 12880
Sludge	Loss of Ignition of Dry Mass (LOI) Gravimetric Method	TS EN 12879
Sludge	Total Dissolved Solids Dried Preparation: Leaching Method Measurement : Gravimetric Method	SM 2540 C
Sludge	Anions Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Phosphate(PO <sub>4</sub> <sup>=</sup> ), Sulphate (SO <sub>4</sub> <sup>=</sup> ) Preparation: Leaching Solid Method Measurement: İon Chromatography Method	TS EN 12457-4 TS EN ISO 10304-1
Sludge	Phenol / Phenol Index Preparation: Leaching Solid + Distillation Measurement: Spectrometric Method	TS EN 12457-4 TS 6227 ISO 6439
Sludge	Phenol/Phenol Index Preparation: Leaching Solid +Distillation Measurement: Direct Photometric Method	TS EN 12457-4 SM 5530 B SM 5530 D
Sludge	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li). Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Thallium (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Leaching Solid Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	TS EN 12457-4 SM 3030 B SM 3030 E SM 3030 K EPA 200.7

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sludge	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li). Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium(Sr), Thallium (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Sludge	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 118, 138, 141, 149, 151, 153, 170, 180, 183, 187, 194, 206, 209) Preparation: Soxhlet Extraction Preparation: Sulfuric acid/Permanganate Cleanup Measurement: GC/ECD Method	EPA 3540 C EPA 3665 A EPA 8082 A
Sludge	BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Sludge	Mineral Oil (C10-C40) Measurement: GC-FID Method	TS EN 14039
Sludge	Oil and Grease/Hydrocarbons	SM 5520 D SM 5520 F
Sludge	Hexavalent Chromium (Cr <sup>+6</sup> ) Preparation :Leaching Solid Method Measurement: Spectrometric Method	TS EN 12457-4 SM 3500-Cr B
Sludge	Nitrogen (N)/Total Nitrogen (TN) Measurement: Modified Kjeldahl Method	TS 8337 ISO 11261



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sludge	Phosphorus (P) / Total Phosphorus (TP) Measurement: Modified Bray and Kurtz No.1 Method	TS 8338
Sludge	Total Phosphorus (P) Preparation: Microwave-Assisted Digestion Measurement: ICP/OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Sludge	Total Cyanide Preparation: Leaching Solid Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN C SM 4500-CN E
Sludge	Free Cyanide Preparation: Leaching Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN I SM 4500-CN E

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sludge	Volatile Organic Compounds (VOCs) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, 1,2-dibromo 3-chloropropane, 1,2,4-Trichlorobenzene Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4-trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4-Isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1-Dichloroethane, 1,1-Dichloroethene, Trichlorofluoromethane (CFC)) Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
	Aromatic Hydrocarbons (Benzene, Trichlorobenzene, Toluene, o,m,p-Xylene) Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C
Sediment	sampling from bottom sediments	ISO 5667-12
Sediment	pH Electrometric Method	TS ISO 10390

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Sediment	Organic Matter Walkley-Black Method	TS 8336
Sediment	Loss of Ignition of Dry Mass (LOI) Gravimetric Method	TS EN 12879
Sediment	Nitrogen (N)/Total Nitrogen (TN) Measurement: Modified Kjeldahl Method	TS 8337 ISO 11261
Sediment	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li), Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium(Sr), Thallium (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Sediment	Crude Oil and Oil Derivatives , Total Petroleum Hydrocarbon and Mineral Oil (C10-C40) Measurement: GC-FID Method	TS EN 14039
Sediment	Oil and Grease Soxhlet Extraction Method	SM 5520 E
Sediment	Total Cyanide Preparation: Distillation Measurement: Spectrometric Method	SM 4500-CN C SM 4500-CN E

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sediment	Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethykhexyl) phthalate, di-n-octyl phthalate) Preparation: Soxhlet Extraction Method Measurement: GC/MS Method	EPA 3540 C EPA 8270 D
Sediment	Phenol and Phenol Compounds (4-chlorophenol, 2,4-dichlorophenol, 2-chlorophenol, 2,4,6-trichlorophenol, Phenol, 3&4-methylphenol, 2-methylphenol) Preparation: Soxhlet Extraction Measurement: GC/MS Method	EPA 3540 C EPA 8270 D
Sediment	Pesticides (op DDD, pp DDT, pp DDD, op DDT, b-BHC, Atrazine, a-BHC, g-BHC, alachlor, trans (a-) chlordane, aldrin, cis (g-) chlordane, op DDE, Dieldrin, Endrin, pp DDE) Preparation: Soxhlet Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Sediment	Organo Phosphorous Pesticides (Diazinon, Disulfoton, Ethion, Parathion-ethyl, Parathion-methyl, Malathion) Preparation: Soxhlet Extraction Preparation: :Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Sediment	Nitrogen (Triazine) Pesticides (Atrazine, Atraton, Ametryn, Prometon, Prometryn, Secbumeton, Propazine, Simetryn Simazine, Terbutryn, Terbutylazine) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Sediment	Organochlorine Pesticides (1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,2,4-trichlorobenzene, 1,4 -dichlorobenzene, Pentachlorobenzene, 1,2,4,5-tetrachlorobenze, Hexachlorobenzene) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sediment	<p>Volatile Organic Compounds (VOCs) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3 -dichlorobenzene, 1,4-dichlorobenzene, 1,2 -dichlorobenzene, 1,2-dibromo 3 -chloropropane, 1,2,4-Trichlorobenzene, Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4 -trimetilbenzene, Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4 -isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane, (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2 -Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1-Dichloroethane, 1,1 -Dichloroethene, Trichlorofluoromethane (CFC))</p> <p>Preparation: Headspace Method Measurement: GC/MS Method</p>	<p>EPA 5021 A EPA 8260 C</p>
Sediment	<p>BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method</p>	<p>EPA 5021 A EPA 8260 C</p>

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Sediment	Polyaromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Sediment	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 118, 138, 141, 149, 151, PCB 153, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Soxhlet Extraction Preparation: Sulfuric acid/Permanganate Cleanup Measurement: GC/ECD Method	EPA 3540 C EPA 3665 A EPA 8082 A
Waste	Sampling From Solid Waste	TS 12090

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Boron (B), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Mercury (Hg), Potassium (K), Lithium (Li), Magnesium (Mg), Manganese (Mn), Molibden (Mo), Sodium (Na), Nickel (Ni), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Thallium (Tl), Titanium (Ti), Vanadium (V), Zinc (Zn) Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Waste	pH Electrometric Method	TS ISO 10390
Waste	Organic Matter Walkley-Black Method	TS 8336
Waste	Dry Residue and Water Content Gravimetric Method	TS 9546 EN 12880
Waste	Loss of Ignition of Dry Mass (LOI) Gravimetric Method	TS EN 12879
Waste	Nitrogen (N)/Total Nitrogen (TN) Measurement: Modified Kjeldahl Method	TS 8337 ISO 11261
Waste	Phosphorus (P)/Total Phosphorus (TP) Measurement: Modified Bray and Kurtz No.1 Method	TS 8338
Waste	Free Cyanide Preparation: Leaching Solid Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN I SM 4500-CN E
Waste	Total Cyanide Preparation: Leaching Solid Method Preparation: Distillation Measurement: Spectrometric Method	TS EN 12457-4 SM 4500-CN C SM 4500-CN E



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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	Crude Oil and Oil Derivatives , Total Petroleum Hydrocarbon and Mineral Oil (C10-C40) Measurement: GC-FID Method	TS EN 14039
Waste	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 118, 138, 141, 149, 151, 153, 170, 180, 183, 187, 194, 206, 209) (Aroklor 1016, Aroklor 1221, Aroklor 1232, Aroklor 1242, Aroklor 1248, Aroklor 1254, Aroklor 1260) Preparation: Soxhlet Extraction Preparation: Sulfuric acid/Permanganate Cleanup Measurement: GC/ECD Method	EPA 3540 C EPA 3665 A EPA 8082 A
Waste	Polyaromatic Hydrocarbons (PAHs) (Naphthalene, Acenaphthylene, Acenaphthene, Fluorene, Phenanthrene, Anthracene, Fluoranthene, Pyrene, Benzo(a)anthracene, Chrysene, Benzo(b)fluoranthene, Benzo(k)fluoranthene, Benzo(a)pyrene, Indeno(1,2,3-c,d)pyrene, Dibenzo(a,h)anthracene, Benzo(ghi)perylene) Preparation: Soxhlet Extraction Preparation: Silicagel Cleanup Measurement: GC/MS Method	EPA 3540 C EPA 3630 C EPA 8270 D
Waste	Anions Chloride (Cl <sup>-</sup> ), Fluoride(F <sup>-</sup> ), Phosphate(PO <sub>4</sub> <sup>=</sup> ), Sulphate (SO <sub>4</sub> <sup>=</sup> ) Preparation :Leaching Method Measurement: İon Chromatography Method	TS EN 12457-4 TS EN ISO 10304-1

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 Test TS EN ISO/IEC 17025 AB-0551-T	<p style="text-align: center;"><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p style="text-align: center;">Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	Phenol Index Preparation: Leaching+ Distillation Measurement: Spectrometric Method	TS EN 12457-4 TS 6227 ISO 6439
Waste	Phenol /Phenol Index Preparation :Leaching Distillation Measurement: Direct Photometric Method	TS EN 12457-4 SM 5530 B SM 5530 D
Waste	Hexavalent Chromium (Cr <sup>+6</sup> ) Preparation :Leaching Method Measurement: Spectrometric Method	TS EN 12457-4 SM 3500-Cr B
Waste	Total Phosphorus (P) Preparation: Microwave-Assisted Digestion Measurement: ICP/OES Method	EPA 3050 B EPA 3051 A EPA 200.7
Waste	BTEX Compounds Preparation: Headspace Method Measurement: GC/MS Method	EPA 5021 A EPA 8260 C

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Waste	<p>Volatile Organic Compounds (VOCs) (Tetrachloromethane (Carbon Tetrachloride), Dibromomethane, Toluene, 1,3-dichloropropene cis+trans, Chlorobenzene, 1,1,1,2-Tetrachloroethane, p+m xilene, Etilbenzene, Styrene, o xilene, Bromobenzene, 1,3,5-trimetilbenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, 1,2-dibromo 3-chloropropane, 1,2,4-Trichlorobenzene Naphthalene, 1,2,3-Trichlorobenzene, Hexachloro 1,3-butadiene, 1,2,4-trimetilbenzene. Bromodichloromethane, sec-butylbenzene, p-isopropyltoluene (4-isopropyltoluene), 1,2-dibromoethane, n-Propylbenzene, n-butylbenzene, Tetrachloroethene, Benzene, tert-butylbenzene, Dibromochloromethane (Chlorodibromomethane), Isopropylbenzene, 1,1-Dichloropropene, Bromoform, cis-1,2-Dichloroethene, trans-1,2-Dichloroethene, Methylene chloride, 1,1-Dichloroethane, 1,1-Dichloroethene, Trichlorofluoromethane (CFC)) Preparation: Headspace Method Measurement: GC/MS Method</p>	<p>EPA 5021 A EPA 8260 C</p>
Waste	<p>Phthalates (dimethyl phthalate, butyl benzyl phthalate, diethyl phthalate, bis(2-ethylhexyl) adipat, di-n-butyl phthalate, bis(2-ethylhexyl) phthalate, di-n-octyl phthalate) Preparation: Soxhlet Extraction Method Measurement: GC/MS Method</p>	<p>EPA 3540 C EPA 8270 D</p>
Used Oil	Used Oil and Petroleum Liquids- Manual sampling	TS 900-1 EN ISO 3170

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Used Oil	Automatic sampling from Petroleum liquids and pipelines	TS 900-2 EN ISO 3171
Used Oil	Chloride Preparation: Samples Preparation for Halogen and Chloride Measurement: Titrimetric Method Measurement: İon Crhromatography Method	EPA 5050 EPA 9253 EPA 9056 A
Used Oil	Total Halogens Preparation: Samples Preparation for Halogen and Chloride Measurement: İon Crhromatography	EPA 5050 EPA 9056 A
Used Oil	Heavy Metals Arsenic (As), Cadmium (Cd), Chrome (Cr), Lead (Pb) Preparation: Acid Digeiton of Oils for Metals Preparation: Microwave-Assisted Digestion Measurement: ICP-OES Method	EPA 3031 EPA 3051 A EPA 200.7
Used Oil	Polychlorinated Biphenyls (PCBs) (18, 28, 31, 44, 52, 101, 118, 138, 149, 153, 170, 180, 194, 209) (Aroklor 1242, Aroklor 1254, Aroklor 1260) Measurement: GC-ECD Method	TS EN 12766-1 TS EN 12766-2
Used Oil	Flash Point Measurement: Pensky-Martens Closed Cup Method	TS EN ISO 2719 ASTM D 93
Insulation Liquids	Sampling Insulating Liquids	TS EN 60475
Insulation Liquids	Polychlorinated Biphenyls (PCBs) (1, 5, 18, 28, 31, 44, 52, 66, 87, 101, 110, 118, 138, 141, 149, 151, 153, 170, 180, 183, 187, 194, 206, 209) GC/ECD Methodu	TS EN 61619

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 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Stationary Source Emissions - Carbon Monoxide (CO), Carbon Dioxide (CO <sub>2</sub> ) Measurement: Infrared Absorption Method -Determination of Oxygen (O <sub>2</sub> ) Measurement: Paramagnetic Method	TS ISO 12039
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Sulfur Dioxide (SO <sub>2</sub> ) Measurement: Electrochemical Cell Method	ISO 7935
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Determination of Nitric Oxide (NO), Nitrogen Dioxide (NO <sub>2</sub> ), and Their Sum (NO <sub>x</sub> ) Electrochemical Cell Method	EPA CTM-022
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Mass concentration of particulate matter (0-1000 mg/m <sup>3</sup> ) Preparation-measurement: Reference Method	TS ISO 9096
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Mass concentration of particulate matter (<50 mg/m <sup>3</sup> ) Preparation-Measurement: Manual Gravimetric Method	TS EN 13284-1
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Particulate Matter Emissions at Nominal Reference Temperature Conditions Preparation-Measurement: Gravimetric Method	EPA Metod 5
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Humidity determination with Humidity Probe	In-House Method/AST.SOP.95
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Humidity ( Stack temperature to ≤ 180 ° C )	EPA Metot 4

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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Measurement of Velocity and Volumetric Flow Rate of Gas Streams in Ducts Sampling and Analysis: L and S-Type Pitot Tube	TS ISO 10780
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Smoke Density Bacharach Method	TS 9503

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**Accreditation Scope**

 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	<p>Mass Concentration of Individual Gaseous Organic Compounds (VOCs) (Toluene, Ethylbenzene, p+m Xylene, o Xylene, Benzene, Stirene, 1,3,5 -Trimethylbenzene, 1,2-Dibromo 3 chloropropane, Trichloroethene, 4 -Isopropyltoluene, 1,2-Dibromomethane, 1,2,3 -Trichloropropane, Dibromomethane, n-Propylbenzene, Bromobenzene, Naphtalene, 1,2 Dichlorobenzene, 1,1,1,2 -Tetrachloroethane, 1,3-Dichlorobenzene, Bromodichloromethane, 1,1,2,2 -Tetrachloroethane, 1,4-Dichlorobenzene, n-Butylbenzene, Tetrachloroethene, Tetrachloromethane, sec-Butylbenzene, tert-Butylbenzene, Chlorobenzene, 1,2,3 -Trichlorobenzene, 1,3-Dichloro propene trans, 2 Chlorotoluene, 4Chlorotoluene, Hexachloro 1,3 -butadien, 1,2,4Trichlorobenzene, Dibromochloromethane, 1,1,2 -Trichloroethane, Isopropylbenzene, 1,2,4 -Trimethylbenzene, Chloroform (Trichloromethane), 1,1-Dichloropropene, 1,2-Dichloroethane Carbon tetrachloride (Tetrachloromethane), 1,2-Dichloropropane, 1,1,1-Trichloroethane, Bromoform)</p> <p>Preparation: Activated Carbon and Solvent Desorption Method Measurement: GC-MS Method</p>	TS EN 13649

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 <p><b>TÜRKAK</b></p> <p>Test TS EN ISO/IEC 17025 AB-0551-T</p>	<p><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p>Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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<b>Tested Materials / Products</b>	<b>Name of Test</b>	<b>Testing Method (National, International standards, in house methods)</b>
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Halogen Emissions (HCl, HF, HBr, Cl <sub>2</sub> , Br <sub>2</sub> ) Measurement: İon Chromatography	EPA Metot 26 A
Flue Gas - Emission (in accordance with TS CEN/TS 15675 and TS EN 15259)	Sampling and Determination of Metals As, Cd, Co, Cr, Cu, Mn, Ni, Pb, Sb, Tl, V Preparation: Solution Adsorption Measurement: İCO-OES Method	EPA Metot 29 TS EN 14385
Acoustic Noise	Environmental Noise Levels / L <sub>aeq</sub> , L <sub>aeqt</sub> , L <sub>regt</sub> , L <sub>day</sub> , L <sub>den</sub> , L <sub>evening</sub> , L <sub>AFNT</sub> , L <sub>E</sub> , L <sub>afmax</sub> , L <sub>cenmax</sub> , L <sub>rden</sub> , L <sub>rden</sub>	TS 9315 ISO 1996-1 / TS 9315 ISO 1996-1/T1 ve TS ISO 1996-2 / TS ISO 1996-2/T1
Immission (Ambient Air)	Particulate Matter (PM10) Gravimetric Method	EPA 40 CFR Part 50
Immission (Ambient Air)	Settleable Particulates Measurement: Gravimetric Method	TS 2341
Immission (Ambient Air)	Settleable Particulates Gravimetric Method	TS 2342
Immission (Ambient Air)	Metals in Particulate Matter by ICP - OES (PM10) (Al, Hg, Sb, Mo, As, Ni, Ba, Be, K, B, Se, Cd, Si, Ca, Ag, Cr, Na, Co, Sr, Cu, Fe, Sn, Pb, Li, V, Mg, Zn, Mn)	VDI 2267 Part 1 VDI 2267 Part 5
Immission (Ambient Air)	Determination of Metals in Settleable Particulates by ICP - OES (Al, Hg, Sb, Mo, As, Ni, Ba, Be, K, B, Se, Cd, Si, Ca, Ag, Cr, Na, Co, Sr, Cu, Fe, Sn, Pb, Li, V, Mg, Zn, Mn)	VDI 2267 Part 5 VDI 2267 Part 14



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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Industrial Hygiene	Heavy Metals Silver (Ag), Aluminum (Al), Arsenic (As), Barium (Ba), Beryllium (Be), Calcium (Ca), Cadmium (Cd), Cobalt (Co), Chrome (Cr), Copper (Cu), Iron (Fe), Potassium (K), Lanthanum (La), Lithium (Li), Magnesium (Mg), Manganese (Mn), Molibden (Mo), Nickel (Ni), Phosphour (P), Lead (Pb), Antimony (Sb), Selenium (Se), Tin (Sn), Strontium (Sr), Tellurium (Te), Thallium (Tl), Titanium (Ti), Tungsten (W), Vanadium (V), Yttrium (Y), Zirconium (Zr), Zinc (Zn) Preparation: Acid Digestion Measurement: ICP-OES Method	NIOSH 7300
Industrial Hygiene	Determination of Respirable Dust and total Dust Sampling Filter and Pump Measurement: Gravimetric Method	HSE-MDHS 14/3

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AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ  
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Industrial Hygiene	<p>Volatile Organic Compounds (VOCs) (Toluene, Ethylbenzene, p+m Xylene, o Xylene, Benzene, Stirene, 1,3,5 -Trimethylbenzene, 1,2-Dibromo 3 chloropropane, Trichloroethene, 4 -Isopropyltoluene, 1,2-Dibromomethane, 1,2,3-Trichloropropane, Dibromomethane, n-Propylbenzene, Bromobenzene, Naphtalene, 1,2 Dichlorobenzene, 1,1,1,2 -Tetrachloroethane, 1,3-Dichlorobenzene, Bromodichloromethane, 1,1,2,2 -Tetrachloroethane, 1,4-Dichlorobenzene, n-Butylbenzene, Tetrachloroethene, Tetrachloromethane, sec-Butylbenzene, tert-Butylbenzene, Chlorobenzene, 1,2,3 -Trichlorobenzene, 1,3-Dichloro propene trans, 2 Chlorotoluene, 4 Chlorotoluene, Hexachloro 1,3-butadien, 1,2,4 -Trichlorobenzene, Dibromochloromethane, 1,1,2-Trichloroethane, Isopropylbenzene, 1,2,4-Trimethylbenzene, Chloroform (Trichloromethane), 1,1-Dichloropropene, 1,2-Dichloroethane, Carbon tetrachloride (Tetrachloromethane), 1,2-Dichloropropane, 1,1,1-Trichloroethane, Bromoform)</p> <p>Sampling: Pumped Sampling Method-Sorbent Tubes Measurement: Solvent Desorption/Gas Chromatography (GC)</p>	TS 16200-1

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Industrial Hygiene	<p>Volatile Organic Compounds (VOCs) (Toluene, Ethylbenzene, p+m Xylene, o Xylene, Benzene, Stirene, 1,3,5 -Trimethylbenzene, 1,2-Dibromo 3 chloropropane, Trichloroethene, 4 -Isopropyltoluene, 1,2-Dibromomethane, 1,2,3-Trichloropropane, Dibromomethane, n-Propylbenzene, Bromobenzene, Naphtalene, 1,2 Dichlorobenzene, 1,1,1,2 -Tetrachloroethane, 1,3-Dichlorobenzene, Bromodichloromethane, 1,1,2,2 -Tetrachloroethane, 1,4-Dichlorobenzene, n-Butylbenzene, Tetrachloroethene, Tetrachloromethane, sec-Butylbenzene, tert-Butylbenzene, Chlorobenzene, 1,2,3 -Trichlorobenzene, 1,3-Dichloro propene trans, 2 Chlorotoluene, 4 Chlorotoluene, Hexachloro 1,3-butadien, 1,2,4 -Trichlorobenzene, Dibromochloromethane, 1,1,2-Trichloroethane, Isopropylbenzene, 1,2,4-Trimethylbenzene, Chloroform (Trichloromethane), 1,1-Dichloropropene, 1,2-Dichloroethane, Carbon tetrachloride (Tetrachloromethane), 1,2-Dichloropropane, 1,1,1-Trichloroethane, Bromoform)</p> <p>Sampling: Pumped Sampling Method-Activated Charcoal Tube Measurement: Gas Chromatography Mass Spectroscopy (GC/MS)</p>	<p>ASTM D 3686 ASTM D 3687</p>

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### Accreditation Scope

 TÜRKAK Test TS EN ISO/IEC 17025 AB-0551-T	<p style="text-align: center;"><b>AST LABORATUVAR HİZMETLERİ AST LABORATUVAR HİZMETLERİ VE DANIŞMANLIK TİC. A.Ş.</b></p> <p style="text-align: center;">Accreditation Nr: AB-0551-T Revision Nr: 03 Date: 04 October 2016</p>
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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Industrial Hygiene	Determination of Aromatic Hydrocarbons (Benzen, Toluene, Etilbenzen, o-ksilen, m-ksilen, p-ksilen, stiren) Sampling: Pumped Sampling Method-Activated Charcoal Sorbent Tubes Measurement: Gas Chromatography	NIOSH 1501
Industrial Hygiene	Aromatic Hydrocarbons-Charcoal Sampler Active Sampling Hekzan Measurement: GC-MS	NIOSH 1500
Industrial Hygiene	Toxic Gases or Vapors ( Formaldehyde, Ammonia, Sulfuric Acid , Arsenic) Sampling and Measurement: Using Detector Tubes	ASTM D 4490-96
Industrial Hygiene	Measurement of Oxygen (O <sub>2</sub> ) Sampling and Measurement: Elektrochemical Sensor Method	NIOSH-NMAM 6601
Industrial Hygiene	Measurement of Carbon Monoxide (CO <sub>2</sub> ) Sampling and Measurement: Elektrochemical Sensor Method	NIOSH-NMAM 6604
Industrial Hygiene	Measurement of Lighting Level	COHSR-928-IPG- 039
Industrial Hygiene	Ergonomics of the thermal environment - Analytical determination and interpretation of thermal comfort using calculation of the PMV and PPD indices and local thermal comfort criteria	TS EN ISO 7730
Industrial Hygiene	Hot environments; estimation of the heat stress on working man, based on the WBGT-index (wet bulb globe temperature) and PMV and PPD indices and local thermal comfort criteria	TS EN 27243 TS EN ISO 7730
Industrial Hygiene	Determination of human exposure to noise levels -induced hearing impairment	TS 2607 ISO 1999

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Tested Materials / Products	Name of Test	Testing Method (National, International standards, in house methods)
Industrial Hygiene	Measurement and evaluation of human exposure to hand-transmitted vibration	TS EN ISO 5349-1 TS EN ISO 5349-2
Industrial Hygiene	Evaluation of human exposure to whole-body vibration	TS ISO 2631-1

End of Scope

**Dr. H. İbrahim ÇETİN**  
Secretary General