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REPUBLIC OF TURKEY
MINISTRY OF ENVIRONMENT
AND URBANIZATION

15yıl

15th Year



15th Year


In our 15th year,
With the first day's excitement,
With our new image







ESÇEM Environmental and Occupational Hygiene Laboratories

- Emission (Flue Gas) Measurements
 - Continuous Emission Measurements (QAS2 and AVT Tests)
 - Imission (Air Quality Dispersion Modelling Studies) Measurements
 - Analysis of Water, Wastewater, Process Water, Sea Water, Surface Water
 - Sludge and Soil Analyses
 - Waste Analysis, Waste Oil Analysis
 - Sampling Services
 - Occupational Health and Safety (Occupational Hygiene) Measurements
 - Environmental Noise and Vibration Measurements
 - Acoustic Noise Measurements and Mapping
 - Thermal Camera Measurements
 - Biogas Measurement and Analysis
 - Biogas Plant Equipment (PLC, Analyser, Gas Tank, Blower, H₂S Elimination, Gas Cooler)
 - Project Presentation File Solutions
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Our Certificates



Environmental Measurement and Analysis
Qualification Certificate



Accreditation Certificate



Occupational Hygiene Measurement, Test and
Analysis Qualification Certificate

ESÇEM Environmental and Occupational Hygiene Laboratories

Established in 2002 in Kocaeli to provide services in the fields of energy and environment.

Apart from its activities in the field of energy, ESÇEM created an adequate laboratory infrastructure for Environmental Measurement and Analysis with its experienced and expert staff and established the measurement and analysis laboratory named "ESÇEM Environmental Laboratory" in 2006.

ESÇEM Environmental and Occupational Hygiene Laboratories serve in accordance with the "Environmental Measurement and Analysis Qualification Certificate" from the Ministry of Environment and Urbanization, the "Occupational Hygiene Measurement, Testing, and Analysis Qualification Certificate" from the Ministry of Labour and Social Security, and the accreditation certificate from TURKAK according to the "TS EN ISO/IEC 17025 General Requirements for the Competence of Testing and Calibration Laboratories" standard.





EMISSION AND IMMISSION MEASUREMENTS

ESÇEM Environmental and Occupational Hygiene Laboratories have successfully passed the audits carried out by the Ministry of Environment and Urbanization according to the "Environmental Measurement and Analysis Laboratories Qualification Regulation". As a result of these audits, it was awarded the "Environmental Measurement and Analysis Qualification Certificate" by the relevant ministry. In addition, our laboratory has successfully passed the audits carried out by the Turkish Accreditation Agency within the scope of the TS EN ISO/IEC 17025 "General Requirements for Testing and Calibration Laboratories" standard and has been awarded the Accreditation Certificate.

Our laboratory performs Emission and Immission Measurements in our Accreditation Scope and Qualification Certificate by expert personnel authorized and certified by the Ministry of Environment and Urbanization within our company.



EMISSION (FLUE GAS) MEASUREMENTS

- Combustion Gases (O_2 , CO, CO_2 , NO, NO_2 , NO_x , SO_2) Determination
- * Speed Determination and Flow Calculations
- Temperature and Humidity Determination
- Sootiness Determination
- Dust (Particulate Matter) Sampling and Determination
- Volatile Organic Compounds (VOC) Sampling and Determination
- Total Organic Carbon (TOC) Determination
- Dioxin and Furan (PCDD & PCDF) Sampling
- Polycyclic Aromatic Hydrocarbons (PAH) Sampling and Determination
- Sampling and Determination of Heavy Metals
- Chlorine/Hydrogen Chloride (HCl) Sampling and Determination
- Fluorine/Hydrogen Fluoride (HF) Sampling and Determination
- Ammonia (NH_3) Sampling and Determination
- Formaldehyde (HCOH) Sampling and Determination
- Sulfuric Acid (H_2SO_4) Sampling and Determination
- Hydrogen Sulfide (H_2S) Sampling and Determination
- Phosphoric Acid (H_3PO_4) Sampling and Determination
- Nitric Acid (HNO_3) Sampling and Determination
- Polychlorinated Biphenyl (PCB) Sampling and Determination
- Hydrogen Cyanide (HCN) Sampling and Determination
- SO_3 Sampling and Determination
- Sampling and Analysis of Halogens (HCl, HF, HBr, Br_2 , Cl_2)
- Hexavalent Chromium (Cr^{+6}) Sampling and Determination
- Calcium Oxide (CaO) and Magnesium Oxide (MgO) Sampling and Determination

IMMISSION (AIR QUALITY) MEASUREMENTS

- Particulate Matter (PM 10) Measurements and Determination
- Heavy Metal Determination in PM 10 Fraction (Pb, Cd, Tl, Ni, As)
- Settled Dust Measurements and Determination
- Heavy Metal Determination in Settled Dust (Pb, Cd, Ni, As, Tl, Be, Co, Cr, Cu, Hg, Mn, Ni, Sb, Zn, Al, Ba, Ca, Fe, K, Mg, Na, Se, Sn, V)
- Passive Sampling and Determination (VOC, SO_2 , NO_2 , H_2S , HF, HCl, NH_3 , HE_3 , BTEX, Formaldehyde, NO_x)

AIR QUALITY DISPERSION MODELLING

- Dust Modelling (Settled Dust, PM10 Emissions)
- Modelling of gas and vapour pollutants

TEST BURN MEASUREMENTS

GREENHOUSE GAS MEASUREMENTS



CONTINUOUS EMISSION MEASUREMENT SYSTEMS (CEMS)

ESÇEM Environmental and Occupational Hygiene Laboratories carry out QGS2, QGS3, and AVT measurements within the scope of the "Communiqué on Continuous Emission Measurement Systems" with their adequate equipment infrastructure and expert staff.





PREPARATION AND APPROVAL OF FISIBILITY REPORTS

2nd LEVEL QUALITY GUARANTEE SYSTEMS (QGS2 TESTS)

- Performance of Functionality and Parallel Tests
- Evaluation of the Data
- Calibration Function and Determination of Validity
- Calculation and Reporting of Variability

3RD LEVEL QUALITY GUARANTEE SYSTEMS (QGS3 TESTS)

- Zero and Span Controls at least once a month
- Controlling the Consistency of Zero and Span Values with the Characteristics Determined during QGS1

ANNUAL VALIDITY TESTS (AVT)

- Functionality Tests, Controlling the Consistency of Zero and Span Values with the Characteristics Determined during QGS1
- Performance of Parallel Tests
- Evaluation of the Data
- Calibration Function and Determination of Validity
- Calculation and Reporting of Variability
- Checking whether it remains within the calibration range



WATER AND WASTEWATER ANALYSIS

ESÇEM Environmental and Occupational Hygiene Laboratories provide sampling and analysis services with authorised sampling personnel in accordance with the "Communiqué on Sampling and Analysis Methods of Water Pollution Control Regulation" in order to prevent water pollution in accordance with sustainable development goals for the protection and optimum use of the country's groundwater and surface water resources potential.



WATER ANALYSIS

- Groundwater Analysis
- Spring Water Analysis
- Domestic Water Analysis
- Well Water Analysis

WASTE WATER ANALYSIS

- Discharge Water Analysis
- Treatment Performance Analysis
- Process Water Analysis
- Characterization Analysis
- Seepage Water Analysis

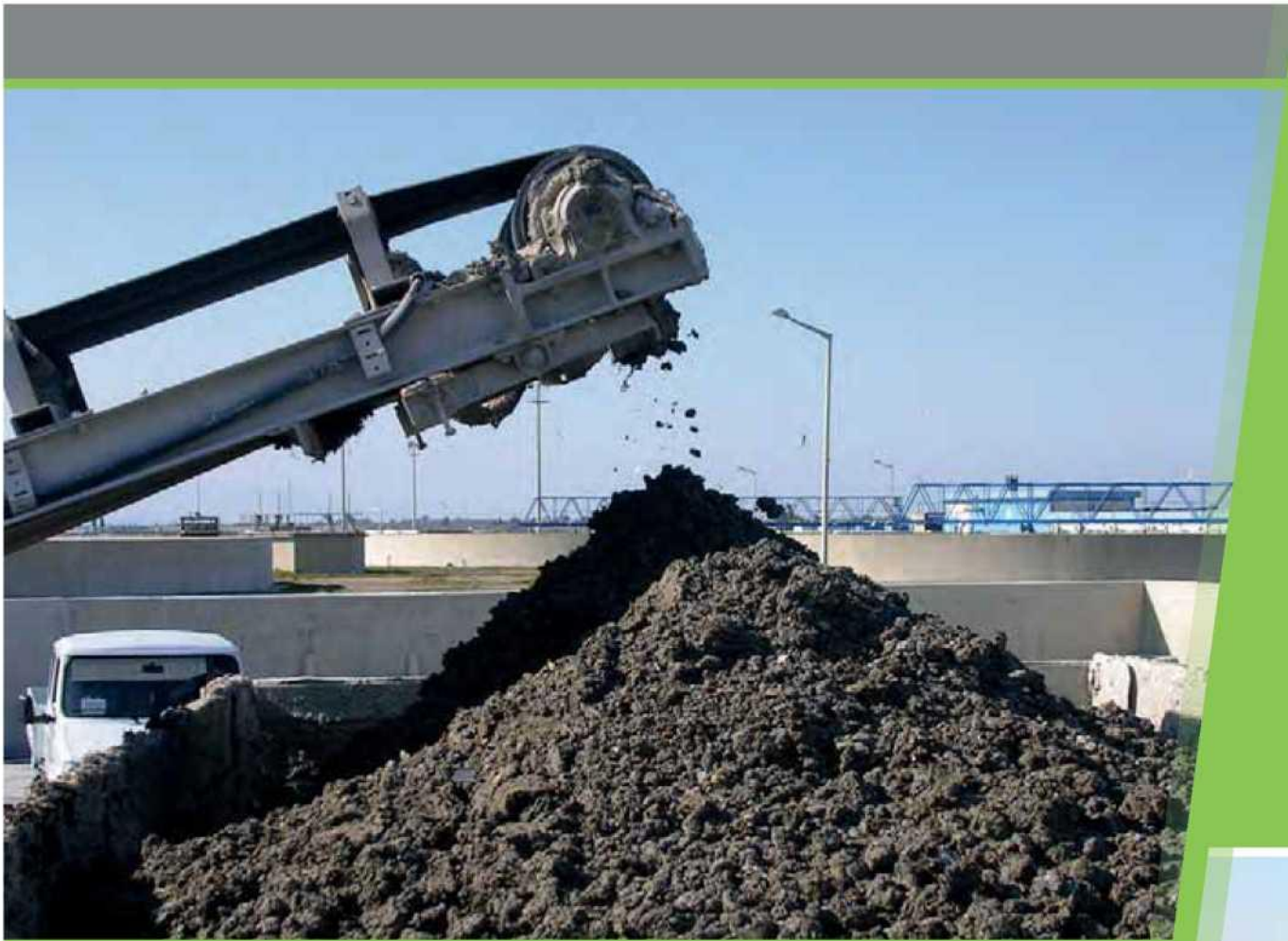
SURFACE WATER ANALYSIS

- Sea Water Analysis
- Stream Analysis
- Lake Water Analysis
- Dam Water Analysis

CONTINUOUS WASTEWATER MONITORING SYSTEMS (CWMS)

- Comparison Tests
- Integrated Comparison Tests





PROCESS WASTE ANALYSIS
SLUDGE ANALYSIS
SEDIMENT (BOTTOM MUD) ANALYSES
SOIL ANALYSIS
SOIL POLLUTION LOAD DETERMINATION ANALYSIS
LANDFILL ANALYSIS
WASTE OIL CATEGORY DETERMINATION ANALYSIS
ISOLATION FLUID ANALYSES
ORGANIC WASTE ANALYSIS
SAMPLING SERVICES



ATIK, ATIK YAĞ ARITMA ÇAMURU ve TOPRAK ANALİZLERİ

ESÇEM Environmental and Occupational Hygiene Laboratories

provide sampling and analysis services by authorised sampling personnel within the scope of the Regulation on Landfill of Wastes, Regulation on Control of Waste Oils, Regulation on the Use of Domestic and Urban Sludge in Soil and Regulation on Control of Soil Pollution and Point Source Contaminated Sites.





OCCUPATIONAL HEALTH AND SAFETY (OCCUPATIONAL HYGIENE) MEASUREMENTS

NOISE MEASUREMENTS

- Indoor Noise Measurements
- Preparation of an Indoor Noise Map
- Noise Exposure Measurements

DUST AND AEROSOL MEASUREMENTS

- Preparation of the Dust Map
- Total Dust Measurements and Exposure
- Inhalable Dust Measurements and Exposure
- Total Aerosol Measurements and Exposure
- Inhalable Aerosol Measurements and Exposure

HEAVY METAL MEASUREMENTS

- Heavy Metal Ambient Measurements
- Heavy Metal Exposure Measurements

LIGHTING MEASUREMENTS

- Indoor and Outdoor Lighting Levels (Day and Night)

THERMAL COMFORT MEASUREMENTS

- Thermal Comfort (WBGT) Measurement
- Thermal Comfort (PMV/PPD) Measurement



VIBRATION MEASUREMENTS

- Ground Vibration
- Hand-Arm Vibration Exposure
- Whole Body Vibration Exposure

GAS MEASUREMENTS

- Toxic Gas Measurements and Exposure
- Inorganic Acid Measurements and Exposure
- Ambient VOC and Its Exposure
- %LEL
- Source Gas Measurements

FIBRE POWDER (ASBEST-FIBRE COUNTING) MEASUREMENTS AND EXPOSURE

SILICA and SILICA CRYSTALS ANALYSIS

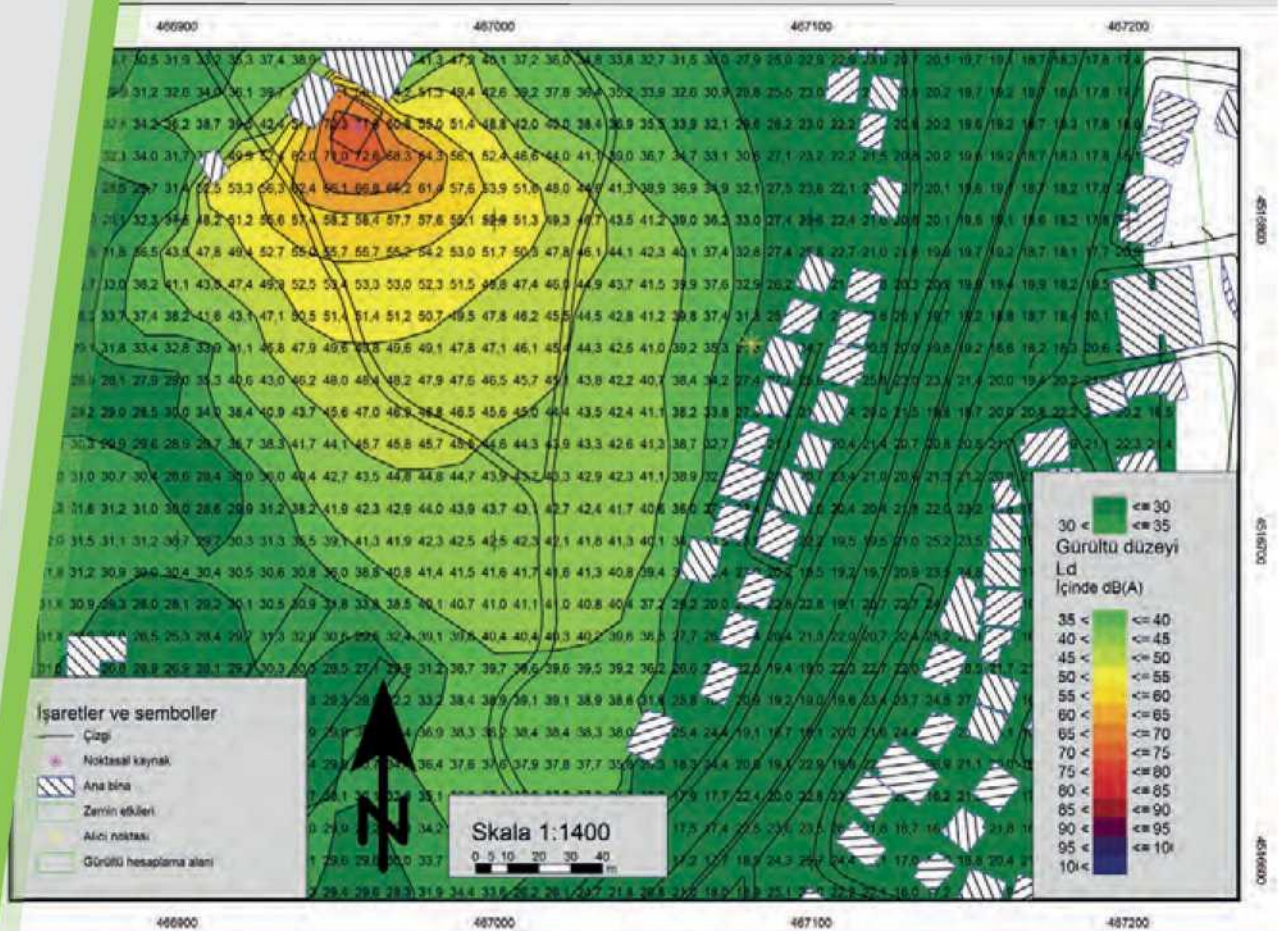
ELECTROMAGNETIC FIELD MEASUREMENTS



ACOUSTIC, ENVIRONMENTAL NOISE and VIBRATION MEASUREMENTS

ESÇEM Environmental and Occupational Hygiene Laboratories provide acoustic and environmental noise measurements and mapping in facilities, enterprises and entertainment centres, vibration measurements and evaluation in mines and similar facilities, determination of equipment noise in industry and enterprises within the scope of international standards.





ENVIRONMENTAL NOISE AND ACOUSTIC MEASUREMENTS

- Acoustic Noise Measurements
- Environmental Noise Measurements
- Noise Measurements Within the Scope of EIA

ENVIRONMENTAL VIBRATION MEASUREMENTS

- Ground, Building and Mining Vibration Measurements

EQUIPMENT NOISE MEASUREMENTS

- Evaluation of Noise Emission
- CE Marking and Quality Certification Measurements



OUR BIOGAS ACTIVITIES

ESÇEM Environmental and Occupational Hygiene Laboratories serves as the first and only laboratory accredited by TURAK and authorised by the Ministry of Environment and Urbanisation in the field of biogas measurement and analysis.

Biogas Measurements (Determination of CH₄, CO₂, O₂, H₂S and H₂) and Calorific Value

Biogas Age Method, Elemental and Content Analysis

Biogas Potential Determination Analysis

Fixed (Online) and Portable Biogas Analyzer Sales

Biogas Plant Equipment Sales (Digester Equipment, Gas Tank, Gas Cooler, Blower, Gas Flare, H₂S Removal Systems, Sludge Exchangers, Filters etc.) Biogas Plant Consultancy Services

Biogas Plant Feasibility and Design

Turnkey Biogas Plant Installation

Biogas Plant PLC Automation System Installation

Biogas Measurement Services in Landfills (Landfills)

OUR BIOGAS REFERENCES

- Arbiogaz - Fritoley Biogas Plant
- * Arbiogaz - Tarsus Biogas Plant
- SUTAS Aksaray Biogas Plant
- IZAYDAS Biogas Plant
- Pamukova Biogas Plant
- Ak Gıda Biogas Plant
- Ekim Gurup Biogas Plant
- PWT Ambarlı Wastewater Treatment Plant
- Modern Karton Sanayi Wastewater Treatment Plant
- Polres Biogas Plant
- Avdan Landfill Gas Biogas Plant
- Kocaeli Renewable Energy Biogas Plant
- Remondis - Denizli Wastewater Treatment Plant
- Bilecik Biogas Plant
- Turkish Sugar Factories
- T-Energy
- Dericiler OSB
- WTE Wassertechnik GMBH
- A.B Gıda



Some of Our References



Some of Our References

KNAUF

AYHANLAR
HOLDİNG A.Ş.

Pakmaya

Henkel

HAYAT

KÜÇÜKÇALIK

Cam Elyaf A.Ş.

FritoLay

baymak

LİDER
KOZMETİK

aras
drenaj

PINAR

Ferrol

AKKISAN

ÜLKER

POSCO ASSAN
TST

ATLAS SHIPYARD

Scherer Mensucat

PORLAND

YURTBAY
SERAMİK

kastamonu

TERMAL
SERAMİK

Bien
SERAMİK

eEczacıbaşı

NUR
KİREÇ

BEŞİKTAŞ
SHIPYARD

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TATA STEEL

KALE
OTO RADYATOR

KALE BALATA

TEKNOROT

TIRSAN

CAVO
OTOMOTİV
TİC. VE SAN. A.Ş.

BURSA BETON

assanhanil

Nexans

FLOKSER
GROUP

İGSAŞ
DİŞİMLİ KİREÇ SANAYİ A.Ş.

TÜRK TUBORG

İPRAGAZ
"emin ellerdesiniz"

TÜRKSEKER
Türkçe Seker Fabrikası A.Ş.

KUTAHYA
İSİTİM SİSTEMLERİ

arslan alüminyum
SANAYİ VE TİCARET LİMİTED ŞİRKETİ

HYUNDAI

EGEDEMİR



Emission (Flue Gas) Measurements
Continuous Emission Measurements (QGS2 and AVT Tests)
Immission (Air Quality Dispersion Modelling Studies) Measurements
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