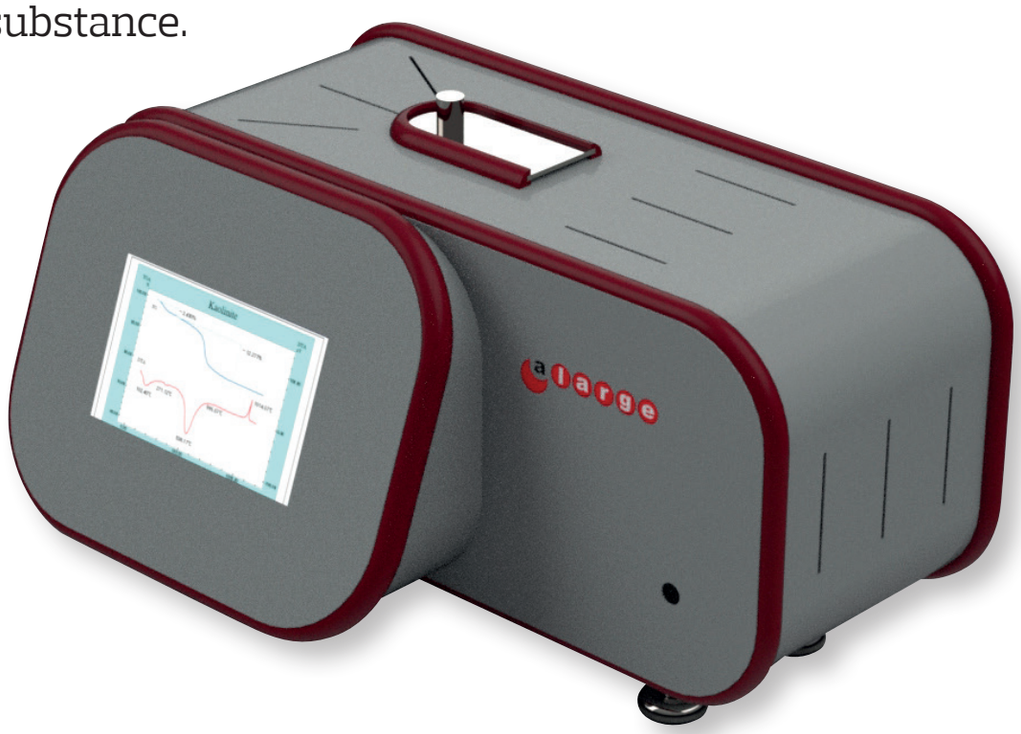
AGILE, ROBUST,
SMART LAB SYSTEM.

SUSTAINABILITY AND RESILIENCE.

THERMAL ANALYSIS TEST MACHINES

Compliance with standards
ISO EN 11357–1, 11357–3, 11357–6, 11358–1, ASTM E1131
Thermal analysis techniques are techniques in which the physical properties of the substance and / or reaction products are measured as a function of temperature when a controlled temperature program is applied to a substance.

These techniques are widely used in both quality control and research studies of a wide range of industrial products such as polymers, drugs, clays and minerals, metals and alloys.



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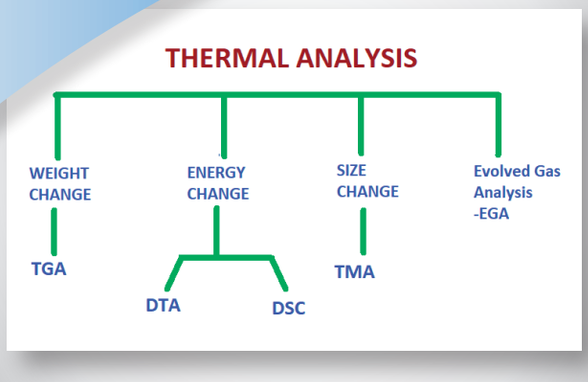
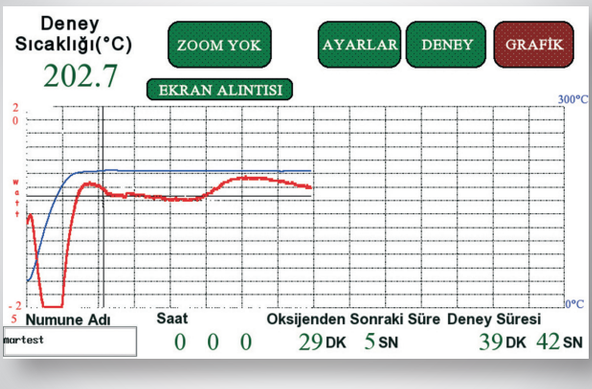
THERMAL ANALYSIS TEST MACHINES





DSC/OIT TEST MACHINE

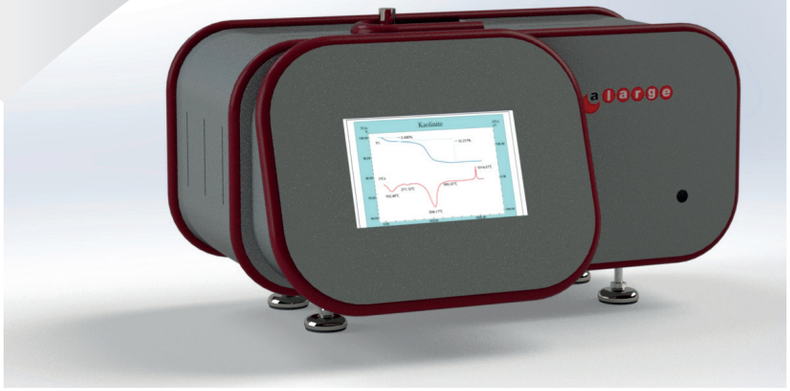
Oxidation Induction Time (OIT) is defined as the time period from the first contact with oxygen until the beginning of oxidation. The temperatures remain constant as the pure substance or compounds change state. The energy exchange is calculated by comparing the sample with a pure substance while keeping the sample at a certain temperature without heating / cooling or state changing.

AL-DSC/OIT PROPERTIES

- ✓ The sample amount is max 50 mg
- ✓ Temperature range is between –170 + 900 °C.
- ✓ Temperature accuracy ±0.2 °C
- ✓ Temperature resolution ±0.02°C
- ✓ Heating rate 0.01 – 500 °C / min
- ✓ Calorimeter accuracy < ±0.3 %
- ✓ Calorimeter sensitivity 0.35 mW
- ✓ OIT works according to the 11357-6 standard in the range of 10 – 1000 mg.
- ✓ 5.4 "touch screen user panel
- ✓ Data transmission rate in microseconds

AL-DSC/OIT SOFTWARE

- ✓ Real time mW / temperature and temperature / time curve
- ✓ Setting OIT time
- ✓ Enthalpy calculation from the curve
- ✓ Crystallinity calculation from the curve
- ✓ Determining the melting temperature
- ✓ Determination of thermal and temperature peaks
- ✓ Creating reports in PDF format
- ✓ Plotting different experiments in a row



THERMOGRAVIMETRIC ANALIZ TEST MACHINE (TGA)

TGA is a quantitative analysis technique based on temperature and weight variation of the sample. This changes are observed according to result of rupture of physical or chemical bonds in the environment full of nitrogen or argon. It provides the determination of the purity and quantity of components in the sample based on degradation.

Melting Enthalpy
ΔH J/gr and crystallization

TGA PROPERTIES

- ✓ Temperature Range –170/900 °C
- ✓ Temperature accuracy ±0.2 °C
- ✓ Automatic Gas Switch Nitrogen to Oxygen
- ✓ Minimum Sample Weight 0,015g/ max 50
- ✓ Weighting Range 0,015 – 1 g
- ✓ Weight Resolution 0,1 mg

THERMAL ANALYSIS TEST MACHINES
TECHNICAL SPECIFICATIONS

MODEL	AL DSC/OIT
Standards	TS EN ISO 11357-1, 11357-6, 11357-3
Working Temperature	-170 / +900 °C
Resolution	0,02 °C
Accuracy	0,02 °C
Temperature Control	Dijital PID
Sample Weight	17 mg
Heating Speed	0.01 - 500 °C/min
Calorimeter Accuracy	< ±0.3 %
Calorimeter Sensitivity	0.35 mW
Control Panel	5.4'' Touchscreen User Panel
Dimensions	600x600x170 mm
Net Mass	21,5 kg
Power Consumption	2,6 A (0-240 V AC 50-60 Hz)
Required Gases	Nitrogen, Oksigen (Ultra Pure, Ultra Dry)

MODEL	AL TGA
Standards	TS EN ISO 11358-1, ASTM E1131
Working Temperature	-170 / +900 °C
Resolution	0,02 °C
Accuracy	0,02 °C
Temperature Control	Dijital PID
Sample (Max.)	50 mg
Heating Speed	0.01 - 500 °C/min
Calorimeter Accuracy	< ±0.3 %
Calorimeter Sensitivity	0.35 mW
Control Panel	5.4'' Touchscreen User Panel
Dimensions	600x600x170 mm
Net Mass	21,5 kg
Power Consumption	2,6 A (0-240 V AC 50-60 Hz)
Required Gases	Nitrogen, Oksigen (Ultra Pure, Ultra Dry)

Available ✓ Optional ❑ Not Applicable ✗

Technical Identity:

High precision, PLC control.

Usage Identity:

PC PLC Touch Screen Control Panel, Detailed test report, Ergonomical design.