

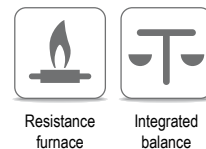
Moisture and weight loss determination in limestone

Suitable analyzers

- TGA Thermostep

Used accessories

- Ceramic crucible (26063)
- Spatula (23111)



Settings

- Temperature: 105 °C
- Speed: 0 °C (= automatic)
- Type: Stop by deviation
- Time: 0 sec
- Deviation: 0.001
- Gas: Nitrogen

Step Moisture ----->

Step Annealing

- 950 °C
- 0 °C (= automatic)
- Stop by deviation
- 0 sec
- 0.001
- Nitrogen

Formulas

- Moisture: $(X[0] - (X[1] - Y[1])) / X[0] * 100$
- Weight loss (dry base): $100 - ((X[2] - Y[2]) / X[1] * 100)$

Procedure

- Prepare and clean the ELTRA analyzer (e.g. remove ash from the crucibles)
- Check pressure of the nitrogen bottle
- Prepare the application according to the recommended settings
- Select this application in the TGA software; log in the sample names
- When the current crucible is placed on the pedestal fill in approximately 1 g of sample

-> Proceed like this for all samples and start analysis by pressing the analysis button in the software.

Typical results

Limestone		
Weight (g)	Moisture (%)	Weight loss, dry base (%)
1.31	0.07	43.81
0.91	0.05	43.82
0.81	0.04	43.81
0.91	0.04	43.81
1.17	0.08	43.84
0.95	0.03	43.84
0.96	0.04	43.86
1.23	0.02	43.84
0.94	0.04	43.91
0.89	0.03	43.88
1.21	0.05	43.85
0.84	0.02	43.92
1.09	0.07	43.77
0.90	0.07	43.88
0.81	0.02	43.85
0.96	0.03	43.82
1.14	0.01	43.83
0.81	0.02	43.82
0.91	0.02	43.85
Average values		
	0.04	43.84
Deviation		
	0.02	0.04