

GLI Method Summary

Determination of Gross Calorific Value

Governing SOP: S-231, Rev 3

Analyte: Calorific Value (BTU/lb)

Instrument	LECO AC-350 Automatic Calorimeter
Quality Control	Benzoic Acid
Sample Types	The procedure can handle a range of materials of varying combustibility. A combustion aid may be used to improve the combustion.
Sample Mass	0.5 grams per analysis
Determination	The sample is weighed into a bomb cup and is placed in a sample holder within a combustion bomb. The combustion bomb is charged to 500 psig with pure oxygen and the bomb is submerged in a known volume of water. The sample is ignited and the heat imparted to the water is used to calculate the calorific value of the sample.
Calculation	Uncorrected results are calculated automatically by the instrument. Results are corrected for the contribution from the ignition wire and nitrogen. The corrected results are reported to the client.
Results	Results are reported in BTU/lb. The results can be reported in alternate units as required, please contact GLI for more information.

References

ASTM D5865-10a, Standard Test Method for Gross Calorific Value of Coal and Coke, Feb 2010.

AC-350 User Manual, LECO Corporation, 1994.