

Rapid Vitrinite Coal Analysis With Point Counting: GeoImage™ from CRAIC Technologies

GeoImage™ is an imaging photometer for your microscope to measure vitrinite reflectance and for point counting.

SAN DIMAS, CA, US, March 30, 2022 /EINPresswire.com/ -- Coal is a vital source of energy. [GeoImage™](#) is the newest [Vitrinite Reflectance](#) Measurement System from CRAIC Technologies and is designed to determine the grade of coal and coke by vitrinite reflectance per the ISO 7404-5 and ASTM D2798 standards. These procedures are used ensure that the coal blends used in energy generation and steel making are optimal and consistent from batch to batch. However, GeoImage™ does far more than that. It can also be run either manually or automatically or acquire high resolution color images of the reflectance and fluorescence of coal samples. It also features a point counting module as well as a number of sophisticated image analysis routines. GeoImage™ can also be used in conjunction with CRAIC's microspectrometers to also acquire reflectance and fluorescence spectra of the coal samples.

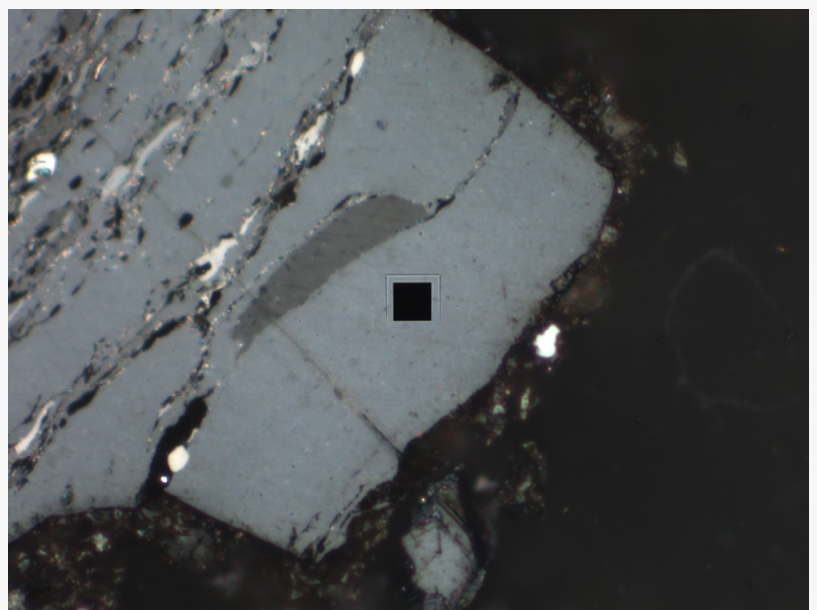
Vitrinite is a maceral of coal and is comprised of various polymers, cellulose and lignin. Measuring the amount of light reflected by vitrinite macerals is a key test to determine the thermal maturity of the coal blend and its suitability for steel production. The procedure has been standardized by a number of international bodies including both ISO and ASTM. All of the standards require the use of a solution such as GeoImage™ to measure the intensity of light reflected from a microscopic area on the sample. The procedure is simple: GeoImage™ measures the amount of light reflected from coal samples, using a high resolution camera fitted to a petrographic microscope. Hundreds of points are measured on the sample and the results of the statistical analysis of the data are used to determine the amount of vitrinite in the coal blend, its thermal maturity and thus its energy content. As hundreds of measurements need to be done on each sample, this used to be a very time consuming process. Now, with GeoImage™, hundreds of points can quickly measured to dramatically improve a



GeoImage system on petrographic microscope

throughput and accuracy. Geolmage™ can also be automated for even faster results.

Geolmage™ can also do more than just measure vitrinite reflectance. It can also be used for point counting to the fraction of different macerals in a coal sample. The system can also be used to capture high resolution digital images in full color of coal in both fluorescence and reflectance. This ability to perform multiple analytical techniques with a single instrument is a hallmark of CRAIC Technologies solutions.



Vitrinite coal being analyzed for thermal maturity

For more information about Geolmage™ Vitrinite Reflectance Measurement System and vitrinite reflectance analysis, please visit www.microspectra.com.

About CRAIC Technologies

CRAIC Technologies, Inc. is a global technology leader focused on developing technology and methodologies for Raman and UV-visible-NIR microscopy and microspectroscopy. CRAIC Technologies creates innovative solutions, along with the very best in customer support, by listening to our customers and implementing developments that integrate operational excellence and technologic expertise. CRAIC Technologies provides solutions for customers in the forensic sciences, biology, health sciences, semiconductor, geology, nanotechnology and materials science markets whose applications demand accuracy, precision, speed and the best in expert customer support.

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