

LithoFact™ Rock Analysis Service, Including Pyrolysis, TOC, and CC Analysis

REAL-TIME MINERALOGY ANALYSIS OF CUTTINGS SAMPLES

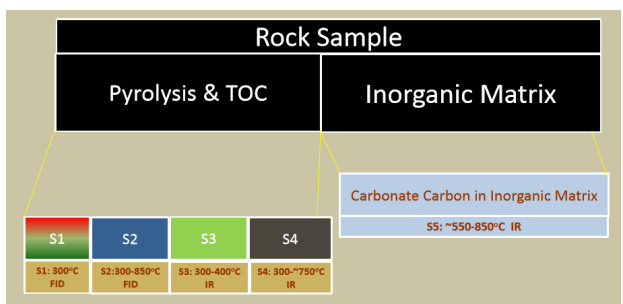
OVERVIEW

Responding to the need for fast, reliable, and accurate pyrolysis, total organic carbon (TOC), and carbonate carbon (CC) analysis in near real time at the wellsite, Halliburton Sperry Drilling utilizes the HAWK pyrolysis, TOC, and CC analyzer at the wellsite and in our regional laboratories. Our consistent methodology of gathering, cleaning, and preparing samples ensures accurate and repeatable analysis.

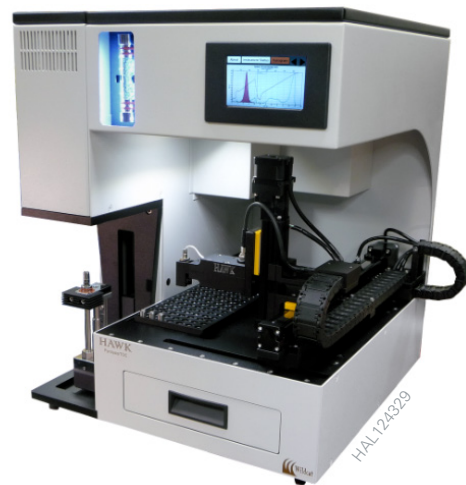
Although the HAWK analyzer is small compared to other pyrolysis instruments, it is recommended that a separate, small analytical cabin be mobilized, as we typically combine this analysis with other measurements, such as X-ray diffraction (XRD) and X-ray fluorescence (XRF). The analyzer is easy to use and utilizes the HAWK-Eye software. This software package provides both a table and a graphical set of analytical results showing the pyrolysis, TOC, and CC parameters with precise temperature values obtained from kinetic analysis. The software also provides interpretive parameters including hydrogen index (HI), oxygen index (OI), adsorption index (AI), oil saturation index (OSI), production index (PI), generative organic carbon (GOC), and non-generative organic carbon (NGOC). The software has built-in methods for pyrolysis, TOC, and CC analysis that can be customized as needed. Calibration is another unique feature of HAWK-Eye software.

HAWK-Eye software enables you to monitor analyses in real time and even to view these analyses and output reports in multiple windows simultaneously.

HAWK-Eye software is unique in that it records into a database every analysis that is done on the HAWK instrument, so results are always available whenever needed and reports can be output into a rich Excel format.



For more information, contact us at sperry@halliburton.com or visit us on the web at www.halliburton.com



HAWK pyrolysis, TOC, and CC analyzer

FEATURES

- » Performs rapid and accurate pyrolysis and TOC analysis on cuttings, cores, and outcrops
- » Enables analysis both at the wellsite and in the laboratory
- » Evaluates both conventional and unconventional petroleum resources
- » Obtains results on oil saturation, hydrogen index, and maturity in near real time to facilitate geosteering, utilizing HAWK-Eye software

BENEFITS

- » HAWK (Hydrocarbon Analyzer with Kinetics) system provides oil and kerogen yields on petroleum source rocks, oil yields on reservoir rocks, and thermal maturity assessments with an equivalent vitrinite reflectance value (%Roe) derived from Tmax.
- » For kinetic experiments, the HAWK system measures true temperatures by using highly conductive helium (not nitrogen) carrier gas.

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