Calibrating and Verifying Rock-Eval® 7 Sulfur

IFPEN-160 000
REFERENCE VALUES
Using the Bulk Rock method – Basic cycle

	S1	S2	Tmax	S3	S3CO	$S4CO_2$	S4CO	S5	HI	OI	PC	RC	TOC	MINC	Total C
	mg HC/ g rock		°C	mg CO_2/ g rock	mg CO/ g rock	mg CO_2/ g rock	mg CO/ g rock	mg CO_2/ g rock	mg HC/ g TOC	mg CO_2/ g TOC	wt.%				
Average value	0.12	12.4	416	0.77	0.35	65	9.3	110	383	24	1.1	2.2	3.3	3.2	6.5
Confidence interval*1	± 0.02	± 0.4	± 3	± 0.07	± 0.03	± 3	± 0.3	± 5	± 15	± 3	± 0.1	± 0.1	± 0.1	± 0.2	± 0.2
Confidence interval*2	± 0.01	± 0.3	± 2	± 0.05	± 0.02	± 2	± 0.2	± 3	± 10	± 2	± 0.1	± 0.1	± 0.1	± 0.1	± 0.1

	Pyro Tot S	Oxi Tot S	Total S*3
	wt.%		
Average value	0.06	0.24	0.30
Confidence interval*1	± 0.02	± 0.02	± 0.02
Confidence interval*2	± 0.01	± 0.02	± 0.02

The reference values were calculated from analytical data derived from 8 series of 5 repetitions gathered over a 4-month period on a single Rock-Eval® 7S instrument, using the Bulk Rock method - Basic cycle.

The confidence interval is expressed as a 95% confidence interval.

*1 Confidence interval for a single analysis = standard deviation of reproducibility x 2

*2 Confidence interval for a duplicate = standard deviation of reproducibility x √2

*3 The Total S quantified with the Basic cycle is a partial concentration because the maximum oxidation temperature is not high enough to decompose the sulfates.