

RDC-142 Air Reactivity Coke

Reactivity to oxidant gases is one of the most important coke properties as it dictates the anode burning behaviour i.e. the excess anode consumption.

The same furnace and reactive tube is used for air reactivity determination. As the combustion in air is exothermic, a loss in weight test is not appropriate. The ignition temperature of the coke is correlated to the air reactivity.

The typical range for coke lies between 520 and 555 °C ignition temperature i.e. between 0.5 and 0.1 %/min air reactivity at 525 °C. Repeatability can be estimated to be below 2 °C and reproducibility below 4 °C if a calibration sample is used.

The RDC-142 is used for the determination of the Air Reactivity of granular coke and it complies with the standard ISO 12982-1. R&D Carbon in Switzerland provides the reference material required to guarantee the accuracy of the tests and ensures consistent and repeatable values.



*Photos and Illustrations are not contractual.

Standards	Compatible	ISO 12982-1
	RDC	RDC-1142
Specifications	Measurement	Ignition Temperature [°C] Air Reactivity Coke 525°C (0.5°C/min) [%/min.] Air Reactivity Coke 600°C (10°C/min.) [% / min.]
	Sample	5g Coke 1.4-1 mm
	Sample / test	1
	Process time	~ 4 hours
Configuration	Set up	Workbench
	Dimensions	70 x 40 x 70 cm (LxWxH)
	Weight	42 kg
Facilities	Electrical connection	230V 1/N/PE, 50/60Hz
	Power	0.90 kW
	Ventilation	Fume hood
	Air pressure	3 - 7 bar (50 l/h)
	Gas supply	Air, 50 l/h, min 3 bar
	Gas quality	Air (N ₂ : 78 %, O ₂ : 21 %, Air: 1 %; H ₂ O < 150 mg/Nm ³) Free of oil

Microprocessor Features:

- The Microprocessor features and advantages:
- User friendly operating system (wide colour screen, soft touch key panel)
- Fully interlinked with Key Lab application (LIMS)
- Data history (measured value, calibration factor, date, time...)
- Connectivity (database, external printer, USB mass storage, WIFI network)