

Green Petroleum Coke

• Accredited tests

- determination of total moisture
- determination of volatile matter in accordance with standard ASTM D 3175
- determination of ash in accordance with standard ASTM D 3174
- determination of Ca, Fe, Na, Ni, S, Si, and V by wavelength dispersive X-ray fluorescence spectrometry (WD-XRF) in accordance with the standard ASTM D6376

• Non-accredited tests

- determination of “shot”
- determination of the molturability index HGI in accordance with standard ASTM D 409
- determination of particle size distribution in accordance with standard ASTM D 5709
- determination of gross and net calorific value in accordance with standard ASTM D 5865
- determination of sulphur (standard ASTM D 5016), C, H and N (standard ASTM D 5373)
- Determination Al, Ba, Cr, Cu, Ge, K, Mg, Mn, Mo, P, Pb, Sb, Se, Sn, Sr, Ti, and Zn by WD-XRF

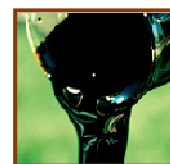


Calcined Petroleum Coke

- determination of total moisture
- determination of volatile matter in accordance with standard ASTM D 3175
- determination of ash in accordance with standard ASTM D 3174
- determination of Ca, Fe, Na, Ni, S, Si, and V by wavelength dispersive X-ray fluorescence spectrometry (WD-XRF) in accordance with the standard ASTM D6376
- determination of particle size distribution (by sieving) in accordance with standard ASTM D 5709
- determination of gross and net calorific value in accordance with standard ASTM D 5865
- determination of real density in accordance with the standard ASTM D2638
- determination of particle size distribution by laser diffraction
- determination of dust control material in accordance with standard ASTM D 4930

Naphtas

- determination of Si by ICP-OES (with detection limit lower than 0.025 ppm)



Crude oils and middle distilled petroleum products

- determination of Ag, Al, B, Ba, Ca, Cd, Cr, Cu, Fe, Mg, Mn, Mo, Na, Ni, P, Pb, Si, Ti, V, and Zn by ICP-OES

- GAZULLA, M. F.; RODRIGO, M.; ORDUÑA, M.; VENTURA, M.J.; ANDREU, C. High precision measurement of silicon in naphthas by ICP-OES using isooctane as diluent. *Talanta*, 164, 563–569, 2017.
- GAZULLA, M. F.; RODRIGO, M.; ORDUÑA, M.; VENTURA, M.J.; ANDREU, C. Determination of Phosphorus in Crude Oil and Middle Distillate Petroleum Products by Inductively Coupled Plasma–Optical Emission Spectrometry. *Analytical letters*, 50(15), 2465–2474, 2017.
- GAZULLA, M.F.; RODRIGO, M.; VICENTE, S.; ORDUÑA, M. Methodology for the determination of minor and trace elements in petroleum cokes by WD-XRF. *X-ray Spectrometry*, 39 (5), 321-327, 2010

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