

DATA BULLETIN

Oxygen determination of different pure chemicals using the rapid OXY cube

The rapid OXY cube is a dedicated analyzer for highly precise and matrix-independent oxygen concentration measurement. The analysis bases on pyrolytic conversion of oxygen to carbon monoxide at 1450°C. To show the performance of the rapid OXY cube different pure chemicals, including halogen containing substances, have been analyzed.

All standards have been weighed into silver boats. The sample weight has been chosen so that the absolute oxygen content ranges between 300 and 350 µg. All samples were analyzed three times. The average oxygen content, and the absolute and relative standard deviation of the analyses are shown below.

SAMPLE	O _{THEORY} [%]	O [%]	SD [%]	RSD [%]
Hippuric acid	26.8	26.9	0.073	0.27
Antipyrine	8.50	8.60	0.012	0.14
Benzoin	15.1	15.2	0.073	0.48
Caffeine	16.5	16.6	0.042	0.25
Sulfathiazole	12.5	12.6	0.022	0.18
Bromo-acetanilide	7.47	7.65	0.105	1.37
Methyl- α -D-glucopyranoside	49.4	49.8	0.204	0.41
Chlorine-dinitrobenzene	31.6	31.7	0.067	0.21

The results show that the rapid OXY cube analyzes the oxygen content of different pure chemicals with an excellent precision and accuracy.

The rapid OXY cube achieves full conversion of sample oxygen to carbon monoxide. Even persistent organic as well as most inorganic substances are digested and are detected matrix-independently. In addition, the novel backflush technology guarantees blank-free measurements also of the most difficult samples.

INSTRUMENT:

rapid OXY cube

DETAILS:

carrier gas: helium

sample: 0.5 – 4 mg pure chemicals



Elementar Analysensysteme GmbH
Elementar-Straße 1
63505 Langenselbold (Germany)
phone: +49 (0) 6184 9393-0
info@elementar.de | www.elementar.de

