Quantitative sulphur determination in $BaSO_4$ with rapid CS cube

Task

$BaSO_4$ has a decomposition temperature of 1580°C and the remaining BaO can retain the release of SO_2. A quantitative sulphur analysis therefore requires a very high temperature during combustion and binding of the formed BaO.

Specification

	Instrument		**Sample**
Basic instrument:	rapid CS cube	Amount:	10 mg
Mode:	S	Consistency:	powder
Peripheral:	manual sample former	Preparation:	not necessary

Procedure

The sample is weighed in tin foil and formed to a pellet by means of the manual sample former after adding WO_3 powder 3 times of the sample weight to bind the BaO during combustion.

Results

Sample no. BaSO4		**S [%]**
1		13.80
2		13.69
3		13.59
4		13.86
5		13.71
6		13.63
	Mean	13.71 ± 0.10 (theory 13.72% S)

The 100% S recovery and excellent precision show the ability to decompose compounds at an actual temperature of 1580°C and more due to tin oxidation during combustion.

mail: info@elementar.de
web: www.elementar.de
phone: +49 6181/9100-0
fax: +49 6181/9100-10
Donaustr. 7
63452 Hanau, Germany