

KES

Analysis of Calcium and Barium in Grease

KES T – M101

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1. Scope of application

This standard shall prescribe quantitative analysis method for calcium and barium by atomic absorbance spectrometer.

2. Equipment

- (1) Atomic absorbance spectrometer
- (2) Crucible

3. Reagent

- (1) Hydrochloric acid
- (2) Nitric acid
- (3) Fluorine hydracid
- (4) Aqua regia (Hydrochloric acid 3 : nitric acid 1)
- (5) Sodium carbonate
- (6) Strontium solution (20 mg Sr/ml) :

Make 1 ℓ with melting strontium chloride ($\text{SrCl}_2 \cdot 6\text{H}_2\text{O}$) 61.5g into water.

- (7) Lanthanum solution (20 mg La/ml) :

Put lanthanum oxide (La_2O_3) 23.5g into beaker then put water into it, add hydrochloric acid with mixing it, but if lanthanum oxide is melted completely, stop adding lanthanum oxide and cool it down to make 1 ℓ

- (8) Calcium standard solution: it shall be based on KS M 0002
- (9) Barium standard solution: it shall be based on KS M 0002

4. Operation

- (1) After extracting a sample in material crucible, measure weight by 1 mg
- (2) Burn it by heating crucible

At this time, if combustion does not be executed well, it can be possible to burn it after