

KES

Analysis of Zinc for Lubricating Oils.

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Contents

1. Scope of Application
2. Atom Photometry (Acid Treatment)
3. MIBK- atom Photometry
4. Potassium-atom Photometry



1. Scope of application

This standard shall prescribe quantitative analysis of zinc by atom photometry in new and used oils.

2. Atom photometry (Acid treatment)

2.1 Summary of method.

In case of analysis, element content of element is 0.01 ~ 0.5 range. Take less than 0.2 gr sample and acidify with surfate and peroxide.

Acidify remained surfate with nitrate.

And in case of less than 10 ppm, make lime and after removing carbonate. Dissolve in nitrate then analyze with atom photometry.

2.2 Equipment

- (1) Atom photometry.
- (2) Electric heater : Available to keep 525 ± 20 °C
- (3) Kjeldahl flask : 100 ml capacity.
- (4) Material pot : 100 ml capacity.

2.3 Reagent

- (1) Nitrate(1 : 1)
- (2) Standard zinc solution : Take some according to consistency and dilute with nitrate 20 ml (1 : 1) then with using distilled water dilute.
- (3) Surfate.
- (4) Peroxide (30 %)

2.4 Operation

- (1) Take some amount of sample and weigh exactly then put to 100 ml Kjeldahl flask.

In this add 30 ml of surfate then heat till it becomes like coal.

With stopping heating and adding a few drops of peroxide (30 %), heat till white gas of