

Application Memo

Total Base Number of Gear Oil

Industry	Petrochemicals
Instrument	Automatic potentiometric titrator
Measurement method	Acid-base titration
Standards	JIS K2501, ASTM D2896, ISO3771

1. Overview

The standard test method of total base number of petroleum products and lubricant is specified by JIS K 2501-2003 "Petroleum products and lubricants - Determination of neutralization number". The test sample is dissolved in mixture of chlorobenzene and acetic acid and titrated with 0.1mol/L perchloric acetate solution up to the endpoint.

Total base number is calculated from the titration volume of perchloric acetate

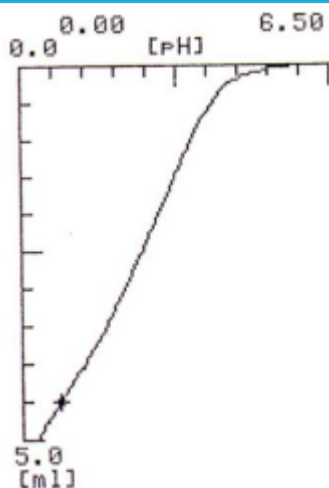
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier STD)
Electrode	pH glass electrode Double junction reference electrode Temperature compensation electrode

3. Reagents

Titrant	0.1mol/L perchloric acetic acid solution
Solvent	Chlorobenzene + Acetic acid (2+1)

4. Example



-Titration curve-

Please feel free to contact us for any further information.

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-Measurement results-			
	Sample (g)	Titer (mL)	Total base number (mg/g)
1	10.0257	4.5181	2.5282
2	10.0206	4.4568	2.4951
3	10.0193	4.5929	2.5717
Average			2.5317
SD			0.0384
RSD(%)			1.52