

Application Memo

Mol Concentration of 0.25mol/L Potassium Bromide-Potassium Bromate

Industry	Non-ferrous metals
Instrument	Automatic potentiometric titrator
Measurement method	Redox titration
Standards	JIS K 2605, ASTM D1159, ISO3839

1. Overview

Measurement of 0.25mol/L potassium bromide-potassium bromate reference liquid used for bromine number test of petroleum products is stipulated in the standards of JIS K 2605-1996, ASTM D1159-98 and ISO 3839:1996.

The test procedure is follows: 1) Acidify predetermined amount of Potassium bromide-potassium bromate reference solution cooled in ice water with acetic acid + hydrochloric acid. 2) Add potassium iodide to free iodine and titrate the freed iodine with 0.1mol/L sodium thiosulfate up to the endpoint.

The mol concentration of 0.25mol/L potassium bromide-potassium bromate reference liquid is calculated from the titration volume.

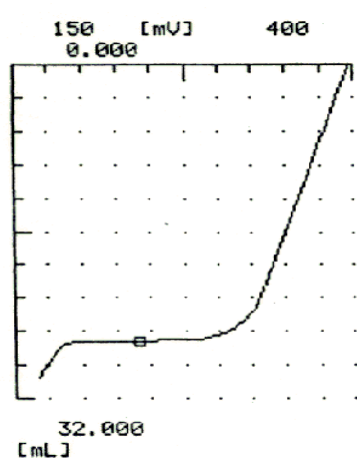
2. Apparatus

Main unit	Automatic potentiometric titrator (preamplifier POT)
Electrode	Combined platinum electrode

3. Reagents

Titrant	0.1mol/L sodium thiosulfate solution
Additive	0.25mol/L potassium bromide - potassium bromate Pure water, Hydrochloric acid, Acetic acid, 15% potassium iodide

4. Example



-Titration curve-

-Measurement results-

	Titer (mL)	Mol (mol/L)
1	26.5360	0.2664
2	26.5888	0.2670
3	26.5973	0.2670
Average		0.2668
SD		0.0003
RSD(%)		0.1

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