

Application Memo

Total Acid Value and Free Acid Value of Phosphoric Acid Solution

Industry	Nonferrous metal
Instrument	Automatic potentiometric titrator
Measurement method	Acid base titration
Standards	

1. Overview

Total acid value and free acid value of the diluted phosphoric acid solution for parkerizing are measured by titration with 1mol/L sodium hydroxide solution. Two endpoints are potential levels at pH3.65 and pH8.01 on the titration curve. The free acid value is calculated from the titration volume of sodium hydroxide at first endpoint. The total acid value is calculated from the titration volumes of sodium hydroxide at both endpoints.

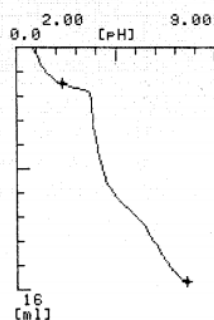
2. Apparatus

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

3. Reagents

Titrant	1mol/L sodium hydroxide solution
Solvent	Pure water

4. Example



-Titration curve-

—Measurement results—

	free acid value	Total acid value
Average	4.893	31.216
SD	0.008	0.080
RSD(%)	0.2	0.25

Please feel free to contact us for any further information.
 <Contact> Kyoto Electronics Manufacturing Co., Ltd.
 Overseas Sales & Marketing Sect.
<http://www.kyoto-kem.com/en/contact/form.php>