

Application Memo

Accuracy Check of KF Reagents (with Water Standard)

| | |
|--------------------|--------------------------------|
| Instrument | Karl Fischer moisture titrator |
| Measurement method | Volumetric titration |
| Standards | JIS K 0113, ISO 760, ASTM E203 |

1. Overview

Moisture titration with Karl Fischer reagent is the most reliable moisture measurement method in the world. The procedure is adopted in many official standards as test method specified in ISO, ASTM, DIN, BS and JIS.

This application note is an example where the accuracy of water standard 10.0 is verified using the factor determined in the application memo KVX-01001.

2. Apparatus

| | |
|-----------|---|
| Main unit | Karl Fischer moisture titration volumetric system |
| Electrode | Twin platinum electrode |

3. Reagents

| | |
|---------|-----------------------|
| Titrant | HYDRANAL™ Composite 5 |
| Solvent | HAYASHI™ Solvent ML |

4. Example

—Measurement results—

| Run | Size Wt1-Wt2 (g) | Vol. (mL) | Water content (%) | Statistics | |
|-----|---------------------|--------------|----------------------|------------|----------|
| | | | | Mean | |
| 1 | 1.0183 | 2.015 | 0.9947 | Mean | 0.9974 % |
| 2 | 0.9977 | 1.970 | 0.9925 | SD | 0.0066 % |
| 3 | 0.9954 | 1.990 | 1.0049 | RSD | 0.66 % |

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