



CSC SCIENTIFIC AQUAPAL COULAMETRIC TITRATOR

The Karl Fischer Method

Karl Fischer Titration is a technique for the determination of moisture content. The technique was developed by a chemist named Karl Fischer. It is based on a reagent which reacts with water and converts the water into a non-conductive chemical. Karl Fischer provides for the specific detection of water content in a product.

Coulometric Karl Fischer

In this approach, the reagent and solvent are combined in the titration cell. When a sample is introduced into the titration cell and dissolved, reagent is released by the induction of an electrical current. The amount of current required to convert the water is the determinant of the amount of moisture. A Coulometric Karl Fischer instrument is often referred to as a coulometer.

The advantage of the Coulometric Karl Fischer method is the capability to accurately measure small amounts of moisture. Sensitivity of these instruments is as low as 0.1 microgram (μg) of water. This method is normally used for moisture content below 1% or for samples where the moisture is less than 200 micrograms.

This instrument has a sensitivity of one tenth of a microgram (0.1 μg) of water. The Aquapal III provides moisture measurements in terms of % moisture, parts per million (PPM), micrograms (μg) of water and a number of relationships of water to the sample size.

The instrument includes:

- an interface with electronic balance that facilitates automatic entry of sample sizes
- an interface for transferring test results to a computer

The on-board printer displays these results, and when combined with the test memory feature can provide a statistical analysis over several tests of factors such as mean values, coefficient of variation and standard deviation.

The Aquapal III is widely used in the areas of transformer oil monitoring, crude and lube oil analysis and many applications in the solvent, pharmaceutical and chemicals industries.

VIDEO



Specifications

Range 1 ppm to 100%
Speed 2 mg/minute
Sensitivity 0.1 ug
Precision 0.5% at 1mg
Drift Correction Automatic

Input/Output Built-in RS232C for balance interface or computer
Unique Specs: Single Reagent system available
Carry case offers portability for use in the field.

Compact size of 14"W x 8"D x 10.8"H
350 x 200 x 280mm

Light weight of 15 lbs. or 6.8kg

Built in printer with standard paper backs up test with hard copy results.
Obtain results in percent solubility.
Simple menu operation

Run tests by weight, volume or dilution
Result Specs:
Result Format ppm - % - ug

Data Calculation mean, standard deviation and coefficient of variation
Memory stores from 1 -99999 sample I.D. numbers

Other Specs:
Tests according to ASTM D4928, D1533, D1744 and equivalent methods.

CE approved manufacturer.