

Karl Fischer Reagents



RIGHT

Uncompromising Quality

READY

4 Manufacturing/
Inventory Locations

RICCA

Tightest Tolerances in the Industry,
Lowest Lot-to-Lot Variability

RICCA Chemical Company offers a full line of Karl Fischer Reagents for Moisture Analysis. Our product line includes both Coulometric and Volumetric Reagents, all formulated for high performance and reliable results. Our Reagents support a wide range of samples types from Ethanol and Fuels to Fats and Oils and General Organic Chemicals. Volumetric Reagents are available for both one- and two-component titrations, and also include solvents compatible with a variety of sample types. Coulometric Reagents are available for titration cells with or without a diaphragm. Specialized Reagents are designed to better analyze samples insoluble in Methanol to ensure fast, reliable, and reproducible results. RICCA also offers a full line of NIST Traceable Water Standards to monitor instrument performance.

HydroSpec®

Have Confidence in Your Analyses

- Reliable, Safe, Pyridine-free Karl Fischer Reagents
- 1 L Bottles have the Industry Standard GL45 Neck Finish for Convenient Connection
- Stable Formulations and Comprehensive Chemical Compatibility
- 5 Year Shelf Life for Most Reagents
- Technical Support Every Step of the Way
- Tight Specifications for More Accurate Results and Low Lot-to-Lot Variability
- Serving Scientists Successfully for over 45 Years



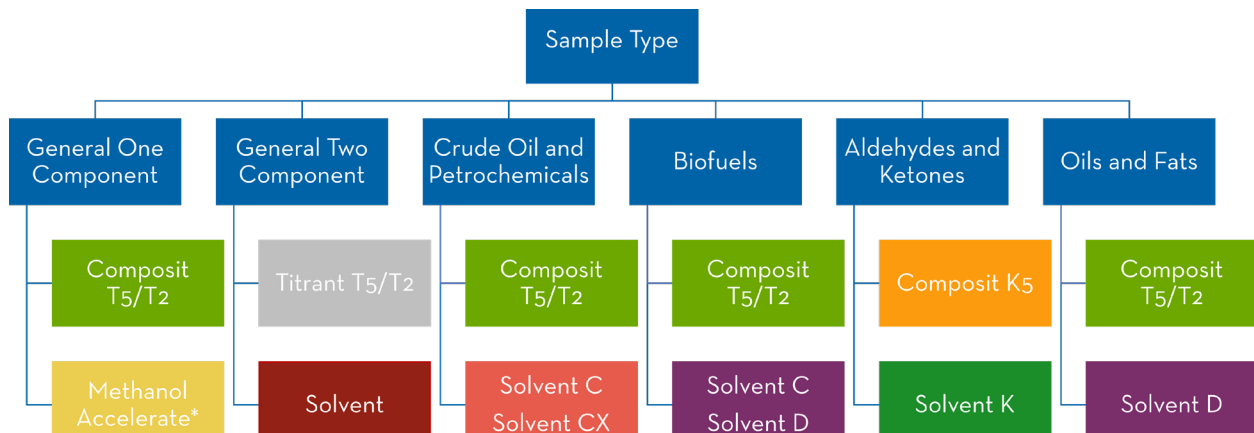
Contact Us At:

sales@riccachemical.com
(888) GO - RICCA (467-4222)

Visit Us Online:

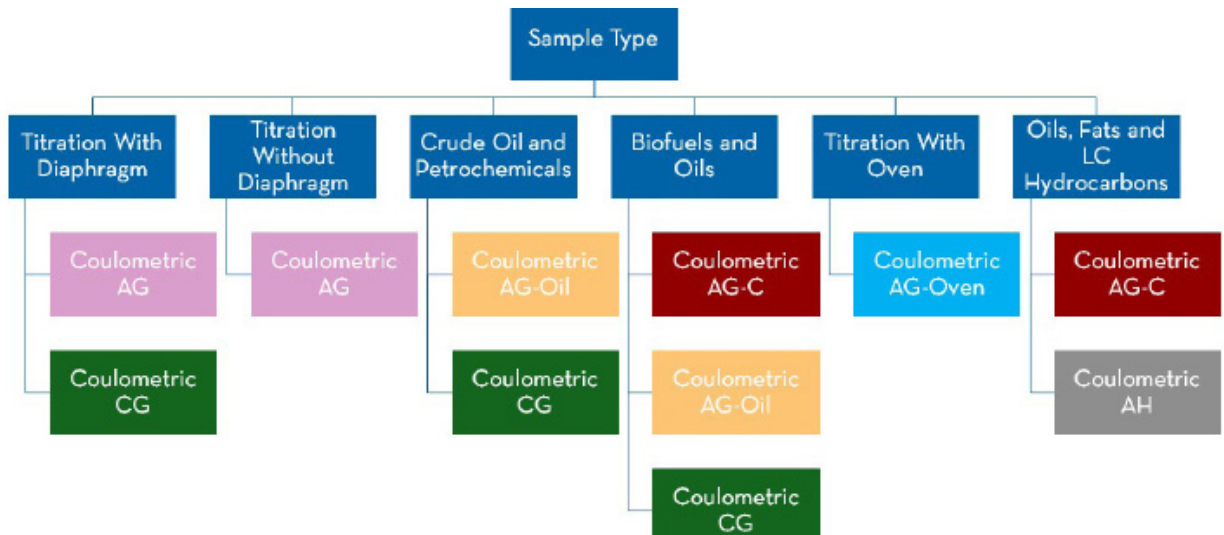
www.riccachemical.com

Volumetric determination of water content is performed with either a One Component or Two Component Titration. In One Component Titrations, all the necessary reactants are present in a single reagent. For Two Component Titrations, the process uses two solutions – a solvent and a titrant in which Iodine is present. In either titration, the sample will be dissolved in the solvent contained in the titration cell before the test begins. The titrant is then added by a dosing pump. The amount of water present in the sample is then calculated based upon the volume of titrant needed to complete the reaction. RICCA's HydroSpec® Line of Reagents for Volumetric Titrations includes products for One and Two Component Titrations as well as specialty formulas created for specific sample types.



*Add to titration cell to accelerate the reaction and increase end point precision

Coulometric Titrations measure water content by generating free Iodine with an electrochemical current. The amount of current used to complete the titration is then used to determine water content. This test is performed one of two ways: In a cell with a diaphragm or without a diaphragm. Titrations with a diaphragm require two reagents: an anolyte solution for the anodic chamber and a catholyte solution for the cathodic chamber. Titrations without a diaphragm only use one reagent, an anolyte solution, as the cathodic chamber of the cell is designed not to need a reagent. RICCA's HydroSpec™ Line of Reagents for Coulometric Titrations covers both cell types; HydroSpec™ Coulometric AG and HydroSpec® Coulometric AH are versatile and can be used with or without a diaphragm.



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Coulometric Reagents

RK100000	Coulometric AG General Purpose Analyte Solution for Cells With or Without Diaphragm	500 mL, 1 L
RK120000	Coulometric AH Analyte Solution for Titration of Long-chain Hydrocarbons in Cells With or Without Diaphragm	500 mL, 1 L
RK130000	Coulometric CG Catholyte Solution for Cells with a Diaphragm	500 mL, 1 L
RK140000	Coulometric AG Oven Analyte Solution for Titration with an Oven	500 mL, 1 L
RK150000	Coulometric AG-C Analyte Solution with Chloroform for Cells With or Without Diaphragm	500 mL, 1 L
RK160000	Coulometric AG Oil Analyte Solution for Samples Insoluble in Methanol for Cells With or Without Diaphragm	500 mL, 1 L

Volumetric Reagents

RK200000	Composit T5 For General Use One Component Volumetric Titrations	1 L
RK210000	Composit T2 For One Component Volumetric Titrations with Lower Moisture Content	1 L
RK220000	Composit K5 For One Component Volumetric Titrations of Aldehydes and Ketones	1 L
RK230000	Titrat T5 For General Use Two Component Volumetric Titrations	1 L
RK250000	Titrat T2 For Two Component Volumetric Titrations with Lower Moisture Content	1 L

Buffers

RK500000	Acid Buffer, for titrating strong acids with Volumetric Solutions	1 L
RK510000	Base Buffer, for titrating strong bases with Volumetric and Coulometric Solutions	1 L

Specialized Solvents

RK300000	Methanol Accelerate Medium for One Component Volumetric Titrations	1 L
RK310000	Solvent D Medium for One and Two Component Volumetric Titrations of Oils, Fats, and Long-chain Hydrocarbons	1 L
RK320000	Solvent CX Medium for One and Two Component Volumetric Titrations with Chloroform and Xylene	1 L
RK330000	Solvent C Medium for One and Two Component Volumetric Titrations with Chloroform	1 L
RK340000	Solvent K Medium for One and Two Component Volumetric Titrations of Aldehydes and Ketones	1 L
RK350000	Solvent Medium for Two Component Volumetric Titrations	1 L

Water Standards

RK410000	Water Standard, 0.10 mg/g Standard for Coulometric Karl Fischer Titration	10 x 5 mL
RK420000	Water Standard, 1.00 mg/g Standard for Coulometric Karl Fischer Titration	10 x 5 mL
RK430000	Water Standard, 10.0 mg/g Standard for Coulometric Karl Fischer Titration	10 x 5 mL

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Product Offerings

Buffers

pH Calibration ISO 17025

- Reference
- Precision Reference
- Buffer Concentrates

pH Control

- Dissolution
- Phosphate
- Acetate
- Other Buffers

Compendial Solutions

- ASTM
- APHA
- EPA
- USP/EP
- ACS
- AOAC
- TAPPI

Solvents

- Alcohol
- Blends
- Extraction Chemicals
- HPLC Grade Reagents
- Hydrocarbon
- Oxygenated
- Surface Cleaning Solutions
- Surfactant

General Use

HPLC Reagents

Cleaning Solutions

- Electrode
- Surface
- Glassware
- Equipment

Acids

- Hydrochloric Acid
- Sulfuric Acid
- Nitric Acid
- Trichloroacetic Acid
- Acetic Acid
- Boric Acid
- Citric Acid
- Hydrofluoric Acid
- Phosphoric Acid
- Other Acids

Bases

- Sodium Hydroxide
- Potassium Hydroxide
- Ammonium Hydroxide
- Other Bases

Other Aqueous Solutions

Non-Aqueous Solutions

Reagent Grade Chemicals

Standards

Conductivity/TDS - ISO 17025

- Potassium Chloride
 - Sodium Chloride
- Ion Selective Electrode (ISE)*

- Ionic Strength Adjustors
- Filling Solutions
- ISE Standards

*Ion Chromatography (IC) ISO 17025/
Guide 34*

- Eluants
- Standards

Color Standards

- USP Colorimetric
- EP Colorimetric
- Gardner
- Platinum-Cobalt (APHA-Hazen)

UV-VIS Absorbance

Oxidation-Reduction Potential

Turbidity

Specific Gravity

Spectroscopy ISO 17025/17034

ICP/ICP-MS

- Single Elements
- Multi-element

Atomic Absorption (AA)

- Single Elements
- Ionization Buffer Agents
- GFAA
- Calibration & Spiking Blends
- Matrix Modifiers
- CVAA

Ion Chromatography ISO 17025/17034

Anions/Nonmetals

- Chlorine Equivalent
- Nitrogen/Nitrate/Nitrite
- Ammonia
- Carbon
- BOD/COD
- Chloride
- Fluoride
- Sulfate
- Phosphate

High Purity Water

- ACS/ASTM Type I-IV
- Sterile Molecular Biology Grade
- USP Purified, Sterile Filtered
- USP/EP Purified
- HPLC
- LC/MS Grade Water
- Distilled

Titriments

Acids (Aqueous, Non-Aqueous)

- Hydrochloric
- Sulfuric
- Nitric
- Acetic
- Perchloric

Bases (Aqueous, Non-Aqueous)

- Sodium Hydroxide
- Potassium Hydroxide
- Sodium Carbonate
- Ammonium Hydroxide

Oxidation-Reduction (Redox)

- Sodium Thiosulfate
- Potassium Permanganate
- Phenylarsine Oxide
- Iodate
- Iodate-Iodide
- Biiodate
- Bromate-Bromide
- Potassium Dichromate
- Iodine
- Ferrous Ammonium Sulfate
- Ceric Sulfate

Other Titrants

- EDTA
- Mercuric Nitrate
- Calcium Chloride
- Potassium Thiocyanate
- Sodium Chloride
- Zinc Sulfate
- Silver Nitrate

Karl Fischer Reagents

- Coulometric Reagents
- Volumetric Reagents
- Solvents
- Water Standards

Indicators

pH Indicators

- Mixed Indicators
- Universal Indicators
- Acid-Base Indicators
- Adsorption Indicators
- Hardness Indicators
- Oxidation Reduction Indicators
- Complexometric Indicators
- Other Indicators



RICCA[®]