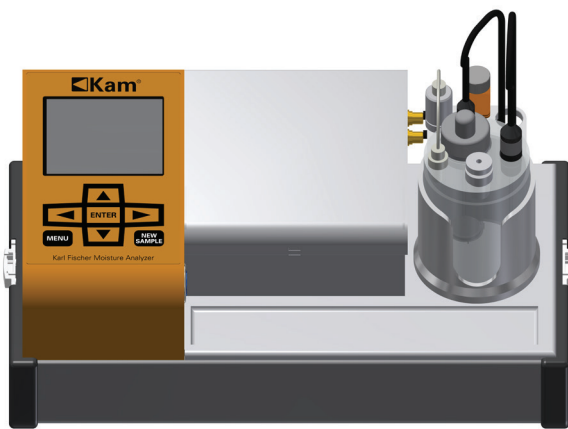


## APPLICATION: DETERMINATION OF MOISTURE IN BIODIESEL BY COULOMETRIC KARL FISCHER MOISTURE ANALYSIS PER ASTM E1064

Because biodiesel is far more susceptible to water absorption/contamination vs standard diesel, the KAM® KF Karl Fischer Moisture Analyzer is key in detecting such contamination in sample analysis per ASTM E1064. Water contamination can come from improper fuel handling or condensation, and it can lead to microbial growth causing issues in storage and equipment, in particular, fuel injection systems. Using the preferred coulometric method, the KAM® KF meets both repeatability and reproducibility requirements for the standard. The unit comes in both portable and laboratory models and uses standard KAM® Reagents and accessories in this application. Steps for sampling handling, volume, etc. per ASTM E1064 should be observed at all times. KAM has been manufacturing Karl Fischer coulometric titrators for over 30 years for a wide variety of field and laboratory applications.



**KAM® KF**  
Karl Fischer Moisture Analyzer  
PER ASTM E1064



**KAM® Reagents**

### KEY FEATURES

- Data storage for up to 100 samples
- USB port
- Fully portable with 16-hour battery life
- Automatic reagent expiration notification
- Consumables storage
- Bluetooth®
- Windows based software
- Spanish/English menu options
- Optional printer

KAM sells the highest quality reagents available, pre-measured to the proper volumes for immediate use and quick replacement

## STEPS

1. Turn the unit on. The main menu will appear on the display. Select sample size based on recommendations in ASTM E1064.
2. Navigate to "Start Titration" and press "Enter." The unit will automatically titrate any ambient moisture in the reagent/cathode cell, beeping when complete. Excessive ambient moisture can be removed by gently swirling reagent within the cathode cell.
3. Prepare/mix sample per ASTM E1064 requirements. All sample vessels, including syringe, should be completely dry.
4. After fully flushing syringe with the sample fluid, draw the sample into the syringe slightly beyond the desired volume mark.
5. Inverting the syringe, slowly depress plunger to expel the extra fluid and any air bubbles. Stop when the fluid level exactly meets the volume marker, and cap tip of syringe with a rubber septum.
6. Press "New Sample" on the keyboard. You will have a thirty-second window to inject the sample.
7. Insert the tip of the needle into the sample injection port and inject the sample into the reagent.
8. Titration begins automatically. When it is done the machine will beep. Sample value will be displayed as well as recorded in the unit by date and time.

**See KAM KF User Manual for full instructions.**

## SPECIFICATIONS

Method:	Coulometric Karl Fischer titration
Detection:	Polarization detection
Control:	Automatic electrolysis current control
Display:	320 x 240 LCD
Sample size:	0.1, 0.25, 0.5, 1.0 ml or less than 2 grams (or ml)
Range:	10 µg - 100,000 µg H <sub>2</sub> O
Sensitivity:	1 µg H <sub>2</sub> O
Repeatability:	Meets or exceeds E1064
Reproducibility:	Meets or exceeds E1064
Generator	
Electrode Config.:	With diaphragm
Titration speed:	1000 µg H <sub>2</sub> O/min. (max. at high H <sub>2</sub> O concentrations)
Power requirements:	Operates on either AC or DC. AC - 110/120, 220/240 V, 50/60 Hz 12V rechargeable lithium battery
Ambient Temperature	5°C – 40°C
Communication:	USB port, Bluetooth <sup>®</sup> , Windows based software
Printer:	Optional
Dimensions:	Portable 15.5" x 8" x 10" (394 mm x 203 mm x 254 mm) Lab 10.5" x 8" x 9" (267 mm x 203 mm x 229 mm)
Weight:	Approx. 16 lbs. (9 kg)

## FOR MORE INFORMATION ON KAM PRODUCTS

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