



# Fisher Chemical Aqualine Reagents

Your solution for water content  
determination by Karl Fischer titration

**COULOMETRIC TITRATION**  
**VOLUMETRIC TITRATION**  
**WATER STANDARD**

# AQUALINE REAGENTS

Our Fisher Chemical™ Aqualine™ Karl Fischer reagents portfolio is designed to meet the needs of the analytical chemist by providing accurate water content determination using volumetric or coulometric titration with unique benefits.

## AQUALINE COULOMETRIC RANGE: FOR LOW WATER CONTENT AT PPM LEVEL

Fisher Chemical Aqualine coulometric reagents are ideal for use in coulometric Karl Fischer titrations for detecting low concentrations of water. Our Aqualine anolyte and catholyte solutions have been re-formulated to offer better performance. The improved formulation increases both the speed and accuracy of titration when determining water content at microgram level.

### Highlights:

- **Fast** – Reach the endpoint quickly
- **Convenient** – Long product shelf-life
- **Reliable** – Very stable endpoint



## AQUALINE COULOMETRIC RANGE PERFORMANCE

The performance of Fisher Chemical Aqualine Electrolyte A coulometric reagent was tested in terms of water recovery and titration. Results indicate that Aqualine coulometric reagents are fast and accurate with a stable endpoint.

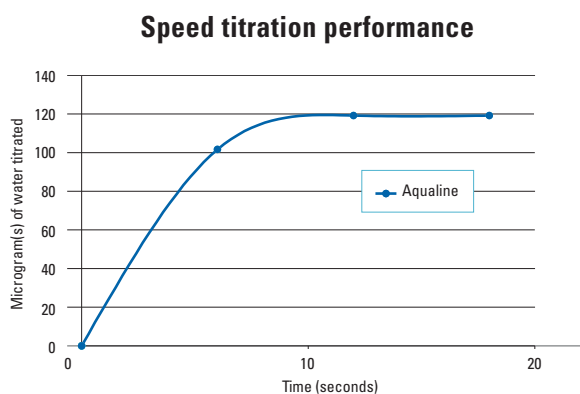


Figure 1: The speed of titration of a 1mL injection of methanol with Aqualine Electrolyte A was measured.

## AQUALINE WATER STANDARD

We offer a series of long shelf-life Aqualine water standard reagents, which support the calibration of the Karl Fischer titrator instrument. Our water standard reagents are packaged in glass ampoules for your convenience.





## AQUALINE VOLUMETRIC RANGE: FOR HIGH WATER CONTENT ANALYSIS

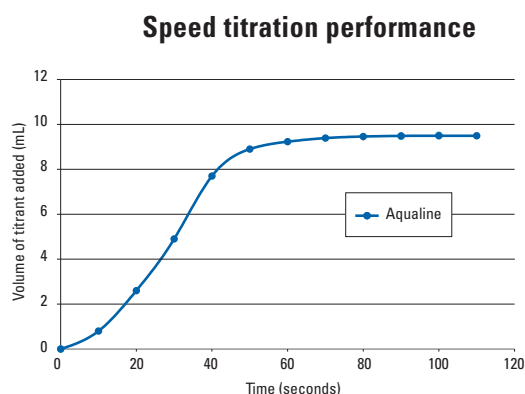
For the Karl Fischer titration by volumetry, we offer you the choice between single component reagents, two component reagents and reagents especially designed for aldehydes and ketones. **Our Aqualine reagents for Karl Fischer titration by volumetry have comparable performance to other Karl Fischer reagents on the market.**

### Highlights:

- **Reliable** – Fast and stable endpoints ensure reliable and accurate results
- **Safe** – Low toxicity and pyridine free
- **Convenient** – Available as a one or two component solution

### AQUALINE VOLUMETRIC RANGE PERFORMANCE

Fisher Chemical Aqualine Complete 5 water recovery and speed titration performance were tested, using imidazole as base.



**Figure 3:** The speed of titration of 50µg water with Aqualine Complete 5 was recorded using an automated volumetric moisture meter.

### RESULTS OF TESTS ON ACTUAL SAMPLES

Sample	Working medium	Aqualine	
		Titration time min (std dev)	Water content % (std dev)
Acetic acid (water added)	Methanol	3:23 (0:12)	1.51 (0.00)
Triethylamine	Methanol	1:24 (0:17)	1.39 (0.01)
Dichloroacetic acid	Methanol + Imidazole	1:11 (0:13)	1.90 (0.01)
Vegetable oil	50% Methanol + 50% Xylene	1:39 (0:28)	0.03 (0.00)
Shower gel	Methanol	2:01 (0:02)	81.09 (0.06)
Acetone	Ketosolver	1:50 (0:13)	1.01 (0.01)
Hand cream	50% Methanol + 50% Chloroform	1:24 (0:08)	84.80 (0.03)
Coffee	50% Methanol + 50% Formamide	5:30 (0:01)	5.44 (0.01)
Chocolate	50% Methanol + 50% Chloroform	4:26 (0:31)	1.75 (0.02)

# SELECT THE SUITABLE FISHER CHEMICAL AQUALINE REAGENT FOR YOUR KARL FISCHER TITRATION

Aqualine coulometric range: for low water content at ppm level		
Product code	Product Description	Pack size
<b>Anolyte solutions</b>		
These contain methanol and chloroform as solvents		
K/2500/08	Aqualine Electrolyte A – For general use in conventional cells with a diaphragm	500mL
K/2510/08	Aqualine Electrolyte AD – For use in fritless (diaphragm-free) cells	500mL
These contain methanol as a solvent		
K/2515/08	Aqualine Electrolyte AD-G – For use in fritless (diaphragm-free) cells	500mL
K/2520/08	Aqualine Electrolyte AG – For general use in conventional cells with diaphragm	500mL
This contains methanol and pentan-1-ol as solvents		
K/2530/08	Aqualine Electrolyte AG-H – For samples with high level of hydrocarbon content	500mL
<b>Catholyte solution</b>		
K/2560/04	Aqualine Electrolyte CG – For general use in conventional cells with a diaphragm, contains methanol as a solvent	25mL
<b>Aqualine water standard</b>		
K/2740/99	Aqualine Standard 0.2 – 0.2 mg/ml H <sub>2</sub> O standard	10 x 4mL
K/2710/99	Aqualine Standard 1.0 – 1 mg/ml H <sub>2</sub> O standard	10 x 4mL
K/2730/08	Aqualine Standard 5.0 – 5 mg/ml H <sub>2</sub> O standard	500mL
K/2720/99	Aqualine Standard 10.0 – 10 mg/ml H <sub>2</sub> O standard	10 x 8mL
K/2760/45	Aqualine Water Standard-KF oven – For use in KF oven technique, contains 5.55 ±0.05% water	10g
K/2770/48	Aqualine Sodium-tartrate Dihydrate Standard – Primary standard for volumetric analysis, contains 15.66 ±0.05% water	100g
<b>Aqualine volumetric range: for high water content analysis</b>		
<b>Single component reagents</b>		
K/1900/15	Aqualine Complete 1 – Water equivalent 1mg H <sub>2</sub> O/ml	1L
K/1950/15	Aqualine Complete 2 – Water equivalent 2mg H <sub>2</sub> O/ml	1L
K/1950/17	Aqualine Complete 2 – Water equivalent 2mg H <sub>2</sub> O/ml	2.5L
K/2000/15	Aqualine Complete 5 – Water equivalent 5mg H <sub>2</sub> O/ml	1L
K/2000/17	Aqualine Complete 5 – Water equivalent 5mg H <sub>2</sub> O/ml	2.5L
<b>Reagents for aldehydes and ketones</b>		
K/2250R/15	Aqualine Complete 5K – Water equivalent 5 mg H <sub>2</sub> O/ml	1L
K/2300R/15	Aqualine Matrix K – Matrix K should be used in conjunction with Complete 5K	1L
<b>Two component reagents</b>		
K/2150/15	Aqualine Titrant 2 – Water equivalent 2 mg H <sub>2</sub> O/ml	1L
K/2150/17	Aqualine Titrant 2 – Water equivalent 2 mg H <sub>2</sub> O/ml	2.5L
K/2200/15	Aqualine Titrant 5 – Water equivalent 5 mg H <sub>2</sub> O/ml	1L
K/2200/17	Aqualine Titrant 5 – Water equivalent 5 mg H <sub>2</sub> O/ml	2.5L
K/2100/15	Aqualine Solvent	1L
K/2100/17	Aqualine Solvent	2.5L
K/2110/15	Aqualine Solvent CM – Solvent for samples with high hydrocarbon content	1L
K/2110/17	Aqualine Solvent CM – Solvent for samples with high hydrocarbon content	2.5L

All our Aqualine solutions are pyridine free

To place an order, contact your local distributor.



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