

TITRATION SYSTEMS

1) TitraLab® AT1000 & KF1000 Series

The Titralab AT1000 Series laboratory analysis systems are one touch, automatic analysers, covering both Potentiometric Titration (AT1000 Series) and Karl Fischer volumetric Titration



(KF1000 Series) with pre-set methods that can quickly deliver accurate and reliable results straight from the box, allowing anyone in the laboratory to immediately perform accurate and reproducible titrations.

A Titralab 1000 Series system is composed of two elements: The Application Package and the Titrator (AT1000 or KF1000). The Titrator is delivered preassembled for quick setup, and the application package includes all specific elements to make it quick and easy for anyone to set up and operate a test without need for any complex programming.

| Part Number | Burette for Titrant | Pumps | Measurement method | Required Application Package/s |
|-------------|---------------------|-------|--------------------|--------------------------------|
| AT1102.98 | 1 | 0 | | AP0001.AT1102 |
| | | | | AP0002.AT1102 |
| | | | | AP0006.AT1102 |
| | | | | AP0008.AT1102 |
| | | | | AP0015.AT1102 |
| | | | | AP0016.AT1102 |
| AT1112.98 | 1 | 1 | | AP0003.AT1112 |
| | | | | AP0004.AT1112 |
| | | | | AP0009.AT1112 |
| | | | | AP0010.AT1112 |
| | | | | AP0017.AT1112 |
| AT1122.98 | 1 | 2 | | AP0007.AT1122 |
| | | | | AP0012.AT1122 |

By providing automatic titrations that reduce testing complexity, the Titrilab AT1000 Series increase confidence in results and eliminates operator interpretation commonly associated with manual titration.

| Part Number | Burette for Titrant | Pumps | Measurement method | Required Application Package/s |
|-------------|---------------------|-------|---|---|
| AT1222.98 | 2 | 2 | | <p>AP0005.AT1222 pH, Alkalinity & Hardness in Water</p> <p>AP0011.AT1222 pH, Total Acidity & Chlorides in Food & Beverage</p> <p>AP0013.AT1222 pH, Total Acidity, Free & Total SO₂ in Wine</p> |
| KF1121.98 | For Titrant 1 | 2 | Volumetric Karl Fischer, AC or DC imposed current | AP0014.KF1121 Moisture Content |

2) AT1000 Application Packs



Application Packages for use with Titrilab 1000 Series titrators from Hach contain all elements except reagents to make it quick and easy for everyone to set up and operate a test. Each Application Package is specifically designed for unique parameters to ensure accurate and reproducible measurements at a glance, including*:

- Adapters
- Glass bottle
- Magnetic stirring bars
- Polypropylene beakers
- Bottle stopper with desiccant tube
- Electrode(s) (Digital Intellical or Analogue)

- High precision glass syringe (Hamilton)
- USB key containing application notes and applications to automatically program titrators for selected parameters.

Setting up your application has never been so simple.

* Application package content varies depending on application/parameters.

| Part Number | Application | Parameter | Compatible instruments | Type |
|-----------------|-----------------|-------------------|--------------------------------------|------------------|
| AP0025.AT1102 | Food & Beverage | pH, Total Acidity | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0026.AT1222 | Food & Beverage | pH, Total Acidity | AT1222 | Application Pack |
| AS1000.98.20090 | | | | Sample Changer |
| AS1000.98.30050 | | | | Sample Changer |

| | | | | |
|-----------------|--------------------|----------|----------------------------|------------------|
| AS1000.98.12150 | | | | Sample Changer |
| AP0009.AT1112 | Water Applications | Chloride | AT1112 AT1122 AT1222 | Application Pack |

| Part Number | Application | Parameter | Compatible instruments | Type |
|---------------|------------------------------|---|--------------------------------------|------------------|
| AP0005.AT1222 | Water Applications | pH/Alkalinity & Hardness | AT1222 | Application Pack |
| AP0001.AT1102 | Water Applications | pH/Alkalinity | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0002.AT1102 | Water Applications | pH/Alkalinity & Conductivity | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0003.AT1112 | Water Applications | Ca & Mg Hardness (ISE) | AT1112 AT1122 AT1222 | Application Pack |
| AP0011.AT1222 | Food & Beverage Applications | pH, Total Acidity & Chloride | AT1222 | Application Pack |
| AP0013.AT1222 | Food & Beverage Applications | pH, Total Acidity, Free & Total SO ₂ in Wine | AT1222 | Application Pack |
| AP0008.AT1102 | Food & Beverage Applications | pH, Total Acidity | AT1102 AT1112 AT1122 AT1222 | Application Pack |



| | | | | |
|--------------------|------------------------------|--|--------------------------------------|------------------|
| AP0010.AT1112 | Food & Beverage Applications | Salt in food products | AT1112 AT1122 AT1222 | Application Pack |
| AP0012.AT1122 | Food & Beverage Applications | Free & Total SO ₂ in Wine | AT1122 AT1222 | Application Pack |
| AP0006.AT1102 | Environmental Applications | FOS/TAK (Biogas) | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0007.AT1122 | Environmental Applications | Free & Total Chlorine, Chlorine Dioxide, Chlorite, Sulfite (Autocat) | AT1122 AT1222 | Application Pack |
| Part Number | Application | Parameter | Compatible instruments Type | |
| AP0015.AT1102 | Petrochemical Applications | TAN (Total Acid Number) | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0016.AT1102 | Petrochemical Applications | TBN (Total Base Number) | AT1102 AT1112 AT1122 AT1222 | Application Pack |
| AP0014.KF1121 | Moisture Content Application | Moisture Content (Karl Fischer) | KF1121 | Application Pack |
| AP0004.AT1112 | Water Applications | Total Hardness (Color) | AT1112 AT1122 AT1222 | Application Pack |

| | | | | |
|---------------|----------------------------|--|--------|------------------|
| AP0017.AT1112 | Petrochemical Applications | R-SH (Thiol) | AT1112 | Application Pack |
| | | | AT1122 | |
| | | | AT1222 | |
| AP0018.AT1102 | Petrochemical Applications | BR ₂ /I ₂ Number | AT1102 | Application Pack |
| | | | AT1112 | |
| | | | AT1122 | |
| | | | AT1222 | |

3) Manual Titrators



Get accurate ($\pm 1\%$), convenient manual titrations performed without the bulk, fragility, or waste of a conventional glass burette, using the Hach Digital Titrator. Test for eighteen parameters including chlorine, hardness, and iron. Uses interchangeable titrant cartridges.

| Part Number | Reagents included | Includes | Carrying case included | Accessories included | AED Price |
|-------------|-------------------|-----------------------|------------------------|----------------------|-----------|
| 1690001 | No | Digital Titrator only | No | No | |