



## ***AutoFlex R837*** ***Flexible Automation Solution***



United States of America  
National Institute of Standards and Technology



NVLAP LAB CODE: 200898-0  
Accreditation to ISO/IEC 17025:2005

# AutoFlex R837

## Flexible Automation Solution

Automate your Density, Specific Gravity, Refractive Index, Color, and pH measurements.

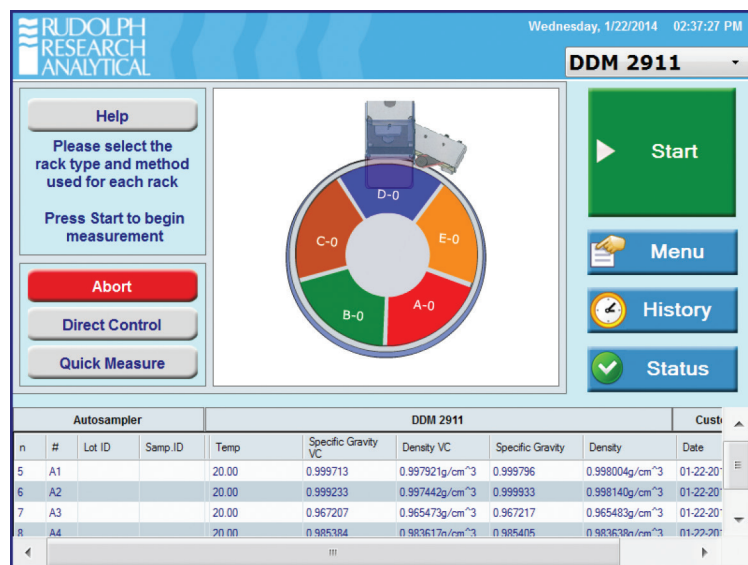
- Push the Start button and Measure Density, Specific Gravity, Refractive Index, Optical Rotation, Specific Rotation, Color, and pH. All results are exported automatically to your LIMS with a sample ID number.
- Flexible Sample Vials: Test Tubes, Boston Rounds, 1 OZ, ½ OZ, virtually any size bottle.
- Flexible rack configurations: Heated and unheated on the same carousel.
- Flexible Method Selection: Suction Mode, Pressure Mode, 3 variable rinse selections and endless drying time options.

## Smart Sample loading technology

- SMART TECHNOLOGY™ automatically adjusts pump speed ranging from thin to high viscosity samples up to 36,000 mPa-s (cP).
- A heated rack option handles heavy crudes and waxes.
- Standard Methods: Define measurement configuration, Sample load configuration (Vacuum or Gas Displacement) solvent choices, and drying time.
- No Loss of Accuracy or Reproducibility over manually loaded samples.

## Flexibility Unmatched with embedded Windows 7

The user interface allows the operator to interrupt a measurement routine with an urgent sample. If you need to quickly find and measure a sample in the rack, the auto-find feature will search and measure for you.



## Flexible Rack Configurations for Your Application

Rudolph Research can provide a sample rack configured to the bottles used in your laboratory so there is no decanting.



**Send us your bottle and we will manufacture customized racks for your lab.**



# Laboratory Automation

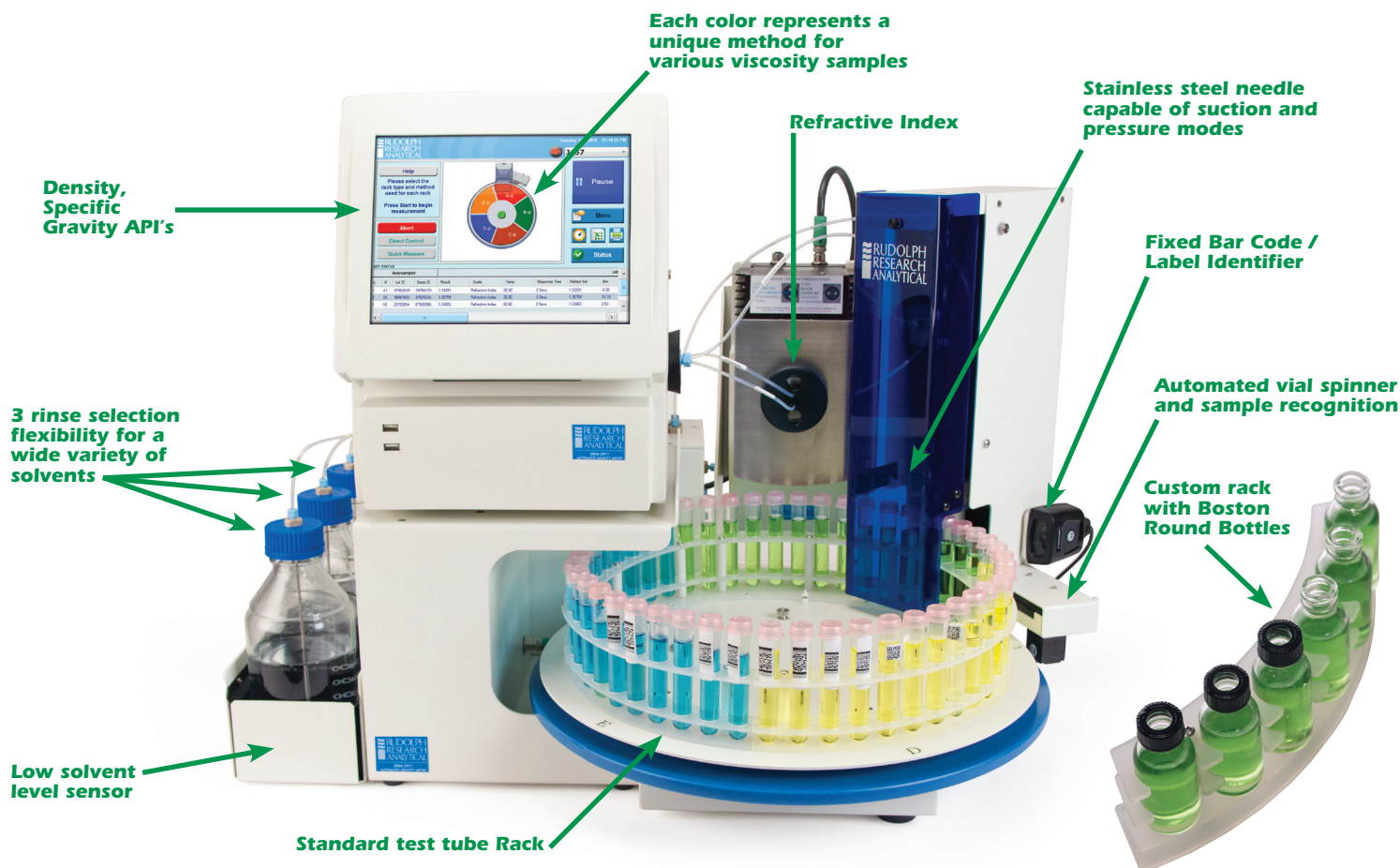
## The Autoflex R837 is Engineered to work better and built to last

The Rudolph R837 Automatic Sampling System is rugged and, specifically designed to stand-up in harsh laboratory and industrial applications.

- Superior Material Construction: Stainless Steel Needle, PTFE, Teflon, and PEEK liquid flow path materials.
- Robust needle with a sufficient torque to pierce any septum.
- Never miss piercing a sample vial with precision engineered probe arm and sample racks which virtually eliminate misalignment errors.
- Safety guard protects hands, and automated needle detects no-sample condition.
- Modular design reduces combined footprint.

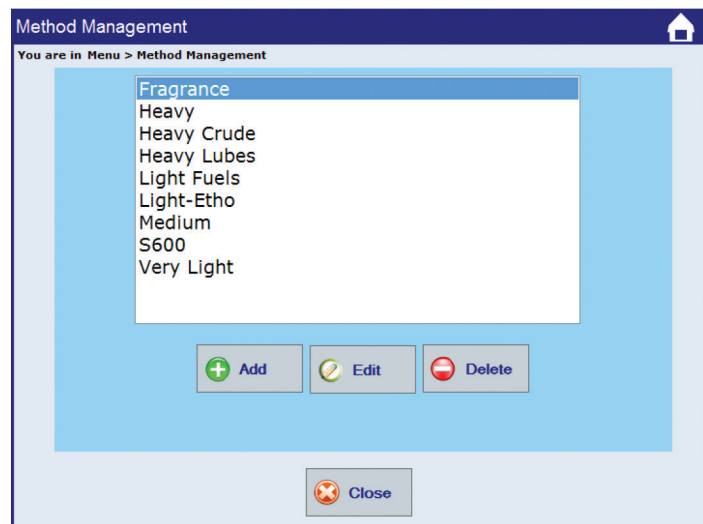
## Eliminate sample cross contamination with complete needle cleaning - a Rudolph Exclusive Feature

- Self-cleaning needle eliminates cross contamination by washing both inside and outside areas of the needle between each sample. Most commercially available automation systems only flush the inside of the sample needle but neglect cleaning the outside of the needle thereby carrying over small amounts of the prior sample into new samples.
- The R837 rinses the entire system with your choice of 3 solvents between each sample.
- Low solvent level sensing: The 3 solvent bottles have non-contact low level sensor which will prompt the user with a low solvent level message.
- Sample return feature: Allows 95% of the original sample to be returned to the sample vial.
- Solvent selection flexibility: By using highly solvent resistant materials for all sample pathways a wide variety of solvents may be used including; Water, Acetone, Isopropanol, Toluene, Hexane, and Heptane.



## Application Flexibility

The AutoFlex R837 can be configured with various instruments and measurement methods to automate a wide range of sample viscosities. Perfect for high throughput laboratories looking to increase productivity. The R837 is excellent when used in combination with Rudolph Research laboratory instruments in the Petroleum, Chemicals, Flavor, Fragrance, Pharmaceutical, and Toxicology Industries.



### Standard Features:

- 3 Rinses available
- Inside and Outside Needle Wash
- Low Solvent Level Detection
- Suction Mode
- Pressure Gas Displacement Mode
- Flexible Method Selection
- LIMS Compatible
- 5 Test Tube Racks Handling 50 Samples
- Rack Specific Method Selection
- SAP Compatible
- Variable Drying and Rinse Times

### Optional Features:

- Racks (Customized to your bottles)
- Heated Racks
- Built in Bar Code / Label Reader with Vial Spinner
- Handheld Bar Code / Label Reader
- Automated Empty Vial Recognition
- Extra Racks
- Sample Return Feature: Allows 95% of Sample to be Returned to Sample Vial
- Custom Programming

## Automate Data collection

Automated sampling manages electronic data recording, sample IDs, and reduces operator errors. Test tubes and bottles can be automatically identified by the system with a built in bar code and label reader.

- Use any format of Bar codes, PDF 417, 2D Matrix, UPC, or any bar code your lab chooses.
- The bar code is recorded as the Sample ID, measurements are taken, and data is available for export to a USB, Network Server, LIMS or any data storage system.
- Labeling sample vials is also simplified as each bar code can be placed at any rotation on the sample vial or bottle because the sample vials are spun as they pass the bar code reader.



QR CODE



2D MATRIX



PDF 417



UPC

### Specifications:

#### Sample Viscosity:

Samples up to 36,000 mPa-s (cP)

#### Sample Volume Requirements:

3.5ml typical, optional to 1.5ml

#### Rack Sample Capacity:

50 - 16 x 100mm Test tubes. 70 - 13 x 100 mm, or optionally dozens of sample vial configurations and capacities.

#### Cleaning Cycle:

1:45 minutes nominal – Time varies by application

#### Full Measurement and Cleaning Cycle:

2:30 minutes nominal - Time varies by application

#### Software interface:

Compatible with Rudolph Research instruments running Windows 7 embedded OS

#### Power Requirements:

100-240 volts - 50-60 Hz – 10 amps

#### Operating Dimensions: L: 24"

W: 24"

H: 20.5"

L: 61 cm

W: 61 cm

H: 52cm

#### Weight: 42 lbs / 19 kg