

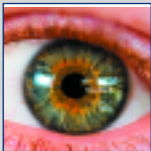
62 Series Fluorimeters



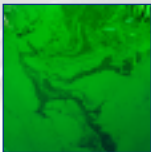
Intelligent...

- Three versatile models
- Wide ranging applications
- Easy intuitive operation
- Low maintenance
- Compatible with DataWay PC software

...fluorimetry



Jenway 62 Series Fluorimeters are designed to suit a wide range of budgets and applications. All three models offer intuitive operation with a user interface based on logical menus that can be navigated from a simple keypad.

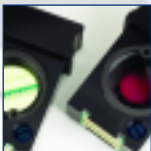


With press-to-read operation and Total Energy Transfer (TET) technology the output of the high-energy xenon lamp has an extended life expectancy and should never need replacing in normal use.



High quality optics are complemented by Intelligent Filter Modules (IFM) which can be identified by the system. Error messages are displayed if wrong or incorrectly positioned filters are fitted.

Model 6280 is recommended for the most sensitive determinations with emission wavelengths up to 650nm (page 3).

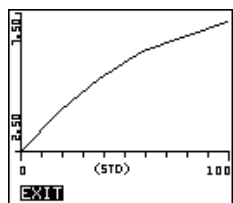


Model 6285 has a red-enhanced detector making it ideal for applications where higher emission wavelengths will be experienced (page 4).

Model 6270 is a low cost model that can be used for less sensitive applications with a broader wavelength range (page 5).

6280 fluorimeter 190-650nm

- High sensitivity photomultiplier detector
- Wavelength range 190 - 650nm
- Raw fluorescence and concentration display
- Kinetic (timed readings) function



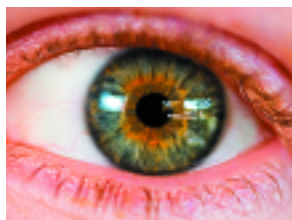
Calibration Curve

| | |
|-------------------|--------------|
| EXIT | |
| METHOD ID | 15 |
| NAME | RHODAMINE WT |
| EXCITATION NM | 546 |
| EMISSION NM | 580 |
| UNITS | PPb |
| RESOLUTION | 0.01 |
| CALIBRATION SETUP | |

Method Setup Rhodamine WT

| |
|----------------------|
| RHODAMINE WT |
| 152.0 ^{PPb} |
| SYSTEM GAIN: 72% |
| EXIT READ SAVE |

Measuring Rhodamine WT



Vitamin A deficiency can affect eyesight

The high sensitivity of fluorimetric measurement techniques enables trace levels to be determined in a broad range of samples. Selectivity is also enhanced enabling interference free analysis of even the most complex sample matrix.

All models in the 62 Series enable simple raw fluorescence measurements to be made without the need to calibrate. These comparative fluorescence levels can be used as a basic indicator or for method evaluation procedures.

Precise concentration measurements can be made by calibration with a blank and standard solution. Where expected sample concentrations may cover a wide range a calibration curve can be created, using up to six standards.

Twenty methods can be created and saved with both a numeric ID as well as an alphanumeric name. By entering the excitation and emission wavelengths in the method the filter characteristics and positions are automatically verified before measurements are made.

The model 6280 is ideal for a broad range of applications in food and beverage analysis, including Histamine, Quinine, Aflatoxins and Vitamins. It also has a broad range of uses in Biochemistry and Life Science analysis with measurement of parameters such as DNA/RNA, Protein, Steroids, Enzymes and Drugs. For water and environmental analysis it has applications for Dye Tracing (Flow Measurement), Cyanobacteria and Ammonium measurement amongst many others.

Order Code:

628 001: Model **6280** supplied with universal 12V power supply with UK, EU and US mains leads, pack 100 disposable cuvettes and operating instructions.

6285 fluorimeter 190-850nm

- Red-enhanced photomultiplier detector
- Wavelength range 190 – 850nm
- Calibration with up to 6 standards
- Method lock with password access



| | |
|--------------|----------|
| EXIT | |
| LOCKED | On |
| LOCKING CODE | 001 |
| LANGUAGE | English |
| TIME | 10:48:08 |
| DATE | 15/03/06 |
| DATE FORMAT | DD/MM/YY |
| OPERATOR ID | 285 |

Locked Setup

| | |
|-------------------|-----------------|
| EXIT | |
| METHOD ID | 16 |
| NAME | CHLOROPHYLL A |
| EXCITATION NM | 435 |
| EMISSION NM | 680 |
| UNITS | $\mu\text{g/l}$ |
| RESOLUTION | 0.1 |
| CALIBRATION SETUP | |

Method Setup Chlorophyll a

| | |
|----------------------|-----------|
| CHLOROPHYLL A | |
| 35.2 $\mu\text{g/l}$ | |
| SYSTEM GAIN: 80% | |
| EXIT | READ SAVE |

Measuring Chlorophyll a



Increasing levels of algae

Where applications generate an Emission wavelength between 650 and 850nm, and the high sensitivity of a photomultiplier is still required, the model 6285 will fit the bill. The measurement of Chlorophyll a, Algal Pigments and Rhodamine B are just three examples of where this enhanced wavelength range will be required, while all the general applications can still be carried out.

Like all models in the 62 Series the 6285 can display concentration values based on a calibration with one to six standards. A simple step-by-step procedure enables a calibration curve to be generated hence the accurate determination of sample concentrations over a wide range.

When working in the simple Raw Fluorescence mode the Auto-Set Gain function ensures the optimum reading resolution is achieved by measuring the fluorescence produced by the highest standard/sample and automatically setting this to 95% of the full range.

On all of the models up to 20 methods can be created, then stored for future use. These methods can be locked so change or modification cannot be made without the entry of a security PIN code. To further conform to GLP an operator ID and calibration reminder can also be set. For temperature sensitive assays the optional electrically heated cuvette holder can be used.

Order Code:

628 501: Model **6285** supplied with universal 12V power supply with UK, EU and US mains leads, pack 100 disposable cuvettes and operating instructions.

6270 fluorimeter 190-1100nm

- Rugged photodiode detector
- Wavelength range 190 – 1100nm
- Time and date stamped results
- High quality, low cost measurement system



| | |
|----------------|---------|
| EXCITATION | 425 |
| METHOD SETTING | 425 |
| FILTER TYPE | BP |
| PART NO | 627-124 |
| EMISSION | 610 |
| METHOD SETTING | 610 |
| FILTER TYPE | COL |
| PART NO | 627-127 |
| EXIT | |

Filter Status

| | |
|-------------------|-----------|
| EXIT | |
| METHOD ID | 12 |
| NAME | HISTAMINE |
| EXCITATION NM | 360 |
| EMISSION NM | 450 |
| UNITS | PPM |
| RESOLUTION | 0.1 |
| CALIBRATION SETUP | |

Method Setup Histamine

| | |
|----------------------------|-----------|
| HISTAMINE | |
| 63.7 ^{PPM} | |
| Results Full... | |
| SYSTEM GAIN: 68% | |
| EXIT | READ SAVE |

Measuring Histamine

The model 6270 is ideal for applications where higher levels of fluorescence are encountered as well as for experiments investigating the principles of fluorimetry and similar projects in education and training.

For field analysis the 62 Series fluorimeters can be powered from a 12V dc supply and can be transported in the optional carry case for improved comfort and protection.

Up to 100 results can be stored for each of the 20 methods, while every result has a permanently fixed time and date stamp to enable full traceability of data. All models can also be used with the optional DataWay PC software to log data and construct graphs, to transfer data to Excel™ or copy to other Windows™ programmes and save data to PC files, while a range of printing options is also available.

Timed measurements can be made for enzyme kinetics studies or for the monitoring of changes in static or flowing samples. Results can be displayed as data or in graphical form. The optional programmable sipper pump can be used to inject operator-set aliquots of sample into the chamber of a flow cell or to feed a continuous stream from a bulk or flowing sample for timed analysis.

Order Codes:

627 001: Model **6270** supplied with universal 12V power supply with UK, EU and US mains leads, pack 100 disposable cuvettes and operating instructions.

DataWay PC software & accessories

Software

DataWay gives you unlimited storage of results and graphs in files on your PC – by far the best and most secure way to store your personal data when working on a multi-user instrument.



Because DataWay is so easy to use you won't hesitate to choose it for even the simplest tasks. Just press the Print key on the instrument or click the 'Take reading' button to transfer your data to the PC. Work with your data off-line with instant access to your nominated DataWay files through a single click on the Load icon.

If you want your data in an Excel™ spreadsheet click the copy option and select Excel™, to automatically open it with your data pasted in the cells; if you are working with another programme you can still copy to the clipboard and then paste the data where you want it.

DataWay has its own powerful graphing function that enables multiple overlays of comparative data as well as the live up-date of data when continuous sampling is enabled (from the PC or instrument). High and low alarm levels can also be displayed with incident reports when the graph crosses these thresholds.

With its flexible print-out options DataWay will often be the only tool you need to record and present your results from the 62 Series Fluorimeters, and many other Jenway instruments too.

Specifications

Operating System: Windows®, 2000, ME and XP

System Requirements:

RAM: 64MB (minimum)
Hard Drive: 20MB available (minimum)
Processor: 333MHz
Hardware: CD ROM drive, mouse and keyboard

Order Code:

050 501: DataWay software on CD-Rom includes spectrophotometer/fluorimeter interface cable (013 210) and electrochemistry interface cable (013 203)

Accessories



Where portability or field analysis is important all models in the 62 Series can be fitted in a tough carry case, enabling the instrument and a range of accessories to be carried easily and securely with a reduced risk of losing or misplacing items when working in awkward or in-hospitable situations.

All models can be powered from any mains supply (100 to 230Vac) as well as a 12 Vdc supply. When being used in a vehicle an optional supply cable with a vehicle auxiliary socket (cigarette lighter type) can be used, a number of independent battery packs are also available.

Order Codes:

033 290 Carry case
021 057 12V connection lead
630 028 Dust cover

sampling options & accessories

The programmable peristaltic sipper pump can be adjusted by the operator to inject a repeatable volume of sample/standard into the chamber of a flow-through cuvette. An air gap to separate samples may be selected as well as a wash cycle and the option to pump through the cuvette to waste or return the sample to its original container after measurement. The programme can also be overridden to pump sample continuously through the cuvette for monitoring a bulk or flowing sample over a period of time.

Fluorescence intensity is inversely proportional to temperature so care must be taken when comparing samples measured at different ambient temperatures. Temperature can also affect other properties of the samples to be measured; this may further influence the accuracy or reproducibility of results, just one example being the rate of enzyme kinetic reactions. The electrically heated cell holder with its digital control unit ensures samples are always at the same temperature when measured, removing this potential variability.

Order codes:

632 001 Sipper Pump supplied with inlet and outlet tubing, mains cable and instruction manual. 230V/50Hz

632 031 Sipper Pump supplied with inlet and outlet tubing, mains cable and instruction manual. 110V/60Hz

628 200 Heated Cell System comprising heated cell holder (628 202), controller (633 004), interconnection leads, mains cables and instruction manual. 100 to 240V 50/60Hz.

The 62 Series Fluorimeters require both an excitation and emission filter which are not supplied with the product and should be selected from the list below for your application. Should you require alternative filters, information is available on request.



Sipper Pump



Heated Cell System
(heated cell holder not shown)

Bandpass Filters

| | | |
|---------|------|-----------|
| 627 126 | UG1 | 320-380nm |
| 627 124 | BG28 | 380-500nm |
| 627 125 | VG9 | 480-580nm |

Cut-off Filters (low cut, transmission blocked below stated wavelength)

| | | |
|---------|------------|-------|
| 627 127 | Kodak 29 | 610nm |
| 627 128 | Ilford 201 | 545nm |
| 627 129 | Kodak 8 | 475nm |
| 627 130 | Kodak 2B | 395nm |
| 627 131 | Glass | 305nm |

Interference Filters

| | |
|---------|------------------|
| 627 132 | Wavelength 254nm |
| 627 133 | Wavelength 340nm |
| 627 134 | Wavelength 380nm |
| 627 135 | Wavelength 400nm |
| 627 136 | Wavelength 470nm |
| 627 137 | Wavelength 514nm |
| 627 138 | Wavelength 365nm |
| 627 139 | Wavelength 450nm |

Serial Printer

A 40 column serial printer is available for use with the 62 Series Fluorimeters

| | |
|---------|--|
| 037 701 | Serial printer supplied with roll of thermal paper, protective pouch, serial connection lead, power supply and three power connection leads. |
| 037 702 | Paper roll, thermal |
| 037 801 | Interface cable kit |



Serial Printer

technical specifications

| Model | 6270 | 6280 | 6285 |
|---------------------------------------|---|---|---|
| Light Source | Pulsed xenon lamp with press-to-read operation | Pulsed xenon lamp with press-to-read operation | Pulsed xenon lamp with press-to-read operation |
| Expected Lifetime | No replacement required in normal operation | No replacement required in normal operation | No replacement required in normal operation |
| Sensitivity (Quinine Sulphate) | 1µg/ml | <1ng/ml | <1ng/ml |
| Dynamic Range | 5.2 x 10 ⁴ | 5.2 x 10 ⁶ | 5.2 x 10 ⁶ |
| Detector | Photodiode | Photomultiplier | Photomultiplier |
| Wavelength Range | 190 to 1100nm | 190 to 650nm | 190 to 850nm |
| Wavelength Selection | Intelligent Filter Modules (IFM) | Intelligent Filter Modules (IFM) | Intelligent Filter Modules (IFM) |
| Raw Fluorescence | Yes | Yes | Yes |
| Concentration | Yes | Yes | Yes |
| Calibration | Blank + up to 6 standards | Blank + up to 6 standards | Blank + up to 6 standards |
| Kinetics | | | |
| (Timed Readings) | In both above modes | In both above modes | In both above modes |
| Time Limits | 1 reading every 3 to 999 seconds | 1 reading every 3 to 999 seconds | 1 reading every 3 to 999 seconds |
| Methods Stored | 20 | 20 | 20 |
| Results Stored | 100/method | 100/method | 100/method |
| GLP | Method lock with password access Time and date stamped results Last calibration date and time stored Calibration interval set Calibration due reminder User ID | Method lock with password access Time and date stamped results Last calibration date and time stored Calibration interval set Calibration due reminder User ID | Method lock with password access Time and date stamped results Last calibration date and time stored Calibration interval set Calibration due reminder User ID |
| Outputs | RS232 Serial Port | RS232 Serial Port | RS232 Serial Port |
| PC Software | Compatible with DataWay (option) | Compatible with DataWay (option) | Compatible with DataWay (option) |
| Sample Handling | 10mm square cuvette holder (standard) | 10mm square cuvette holder (standard) | 10mm square cuvette holder (standard) |
| Heated Sample Holder (Option) | Yes | Yes | Yes |
| Sipper Pump (Option) | Yes | Yes | Yes |
| Power Supply | 100 to 240Vac universal mains adapter 12Vdc input (cigarette lighter cable and battery pack options) | 100 to 240Vac universal mains adapter 12Vdc input (cigarette lighter cable and battery pack options) | 100 to 240Vac universal mains adapter 12Vdc input (cigarette lighter cable and battery pack options) |
| Size | 365 (w) x 272 (d) x 160 (h) mm | 365 (w) x 272 (d) x 160 (h) mm | 365 (w) x 272 (d) x 160 (h) mm |
| Weight | 6Kgs | 6Kgs | 6Kgs |

Sipper Pump

| | |
|------------------------------|--|
| Modes: | |
| Continuous Aspiration | Flow rate dependent on tube ID. 12ml/min with supplied tube |
| Timed aspiration | sample/air-gap/wash. |
| sample volumes | 75µl min / 9.5ml max |
| segment run time | 48 secs max |
| Memory | Non-volatile |
| Power Supply | 115 or 230V |
| Size | 205 (w) x 190 (d) x 160 (h) mm |
| Weight | 1.5Kgs |

Heated Cell Block / Controller

| | |
|-----------------------|--------------------------------|
| Temperature: | |
| Range | Ambient +2°C to 60°C |
| Resolution | 0.1°C |
| Regulation | ±0.1°C |
| Accuracy | ±0.5°C |
| Control System | PID |
| Power Supply | 100 – 230Vac |
| Size | 205 (w) x 165 (d) x 85 (h) mm |
| Weight | 870g (Controller) 405g (Block) |

JENWAY

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