

## 662 Photometer



**Insert the photometer into the sample,  
not vice versa!**

- Glass fiber light guide probe can be used in any vessel
- Measures absorption or transmission, calculates the concentration
- Supplies the signal for photometric titrations

## Convincing features

### 662 Photometer

The 662 Photometer is a compact, microprocessor-controlled instrument that is very versatile and has many applications. It has been developed for direct photometric measurements and the photometric endpoint determination of titrations. It presents the following advantages:

- Glass fiber light guide

Measurements can be performed in any sample container, be it a beaker, a test tube, a titrating vessel, etc. The long, flexible light guide is just as convenient to use as a pH electrode; its resistance to solvents is excellent.

- Wide wavelength range

The whole visible region (including white light) is available without any gaps; there is no restriction to just a few spectral regions.

- Gradual filter

Thanks to the continuous wavelength scale with stepless adjustment, measurements can always be performed at the point of maximum absorption. Accordingly, there is no loss of sensitivity due to non-optimal selection of the wavelength.

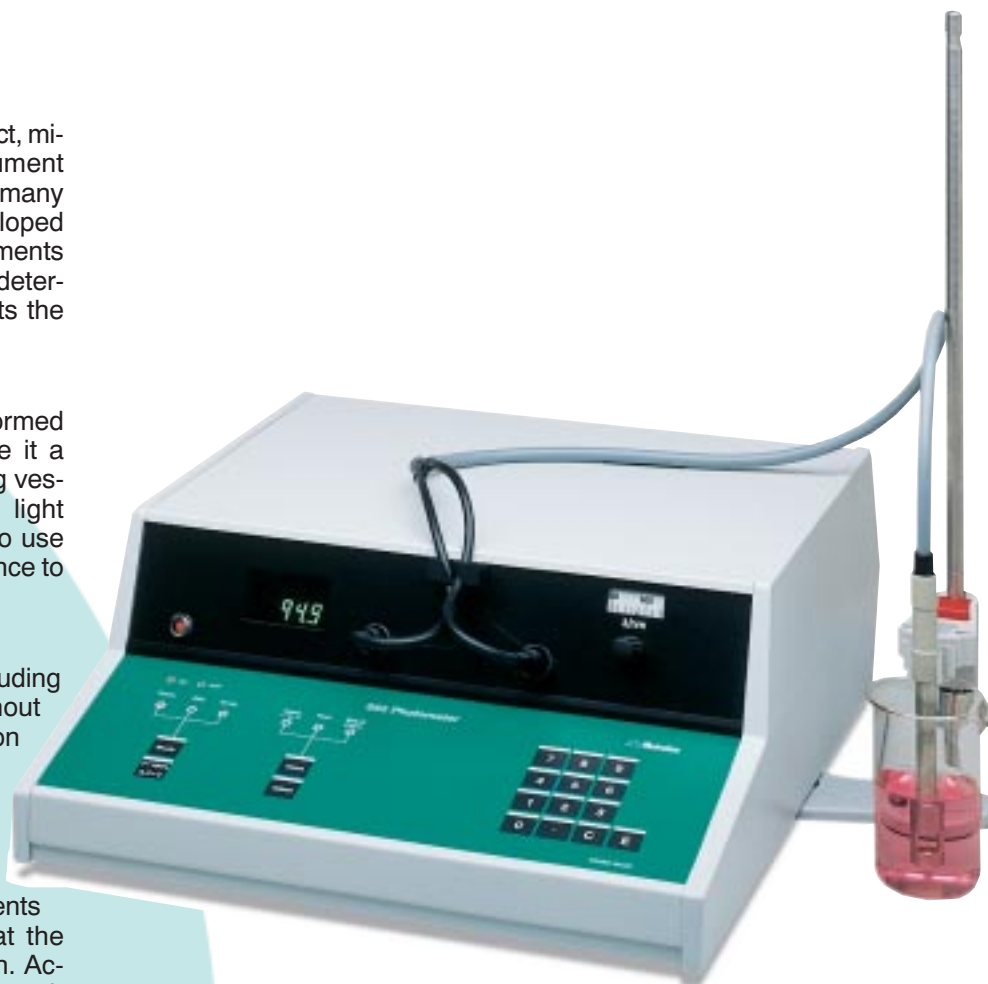
- Display of transmission, absorption and concentration

Transmission and absorption are the traditional measured quantities. The 662 Photometer offers the additional possibility to determine the concentration of sample solutions after previous calibration.

- Optical, electronic and mechanical quality

The optical and electronic stability as well as the noise characteristics are excellent; even difficult measuring problems pose no major difficulties.

The measured value can be compensated such that also titrations with very small signal changes can be safely evaluated.



## Direct measurements, photometric titrations

### Strong in communication

The 662 Photometer can be connected directly to all Metrohm titrators without the use of interfaces; this allows easy access to the wide field of photometric titrations.

Standardized analog and digital outputs make it possible to transmit the measured data and process them externally, should this be desired.

### Outstanding price-performance ratio

The 662 Photometer has been designed with analytical practice in mind. It possesses no superfluous features and is economically priced.

### Direct photometric measurements

Photometric measurements can be performed in sample vessels ranging from open beakers to reaction vessels. After previous calibration, the concentration of sample solutions can be obtained by just pressing a key.

### Photometric titrations

In complexometric and many other titrations, photometric detection of the equivalence point is often the best method available. Also in solutions having an extremely high impedance, photometry offers an alternative to the electrochemical methods.

In combination with any Metrohm titrator, the 662 Photometer acts as the signal source; its analog output is connected to the titrator's electrode input.

## Technical specifications

### Light source

Tungsten lamp, 3.9 W

### Measuring cell

|                          |                                |
|--------------------------|--------------------------------|
| Type                     | Fiber-optic light guide        |
| Total length             | 1 m                            |
| Diameter                 | 12 mm                          |
| Min. immersion depth     | 20 mm                          |
| Light path               | 2 x 10 mm; 2 x 5 mm as option  |
| Ground joint             | Flexible SGJ sleeve            |
| Immersed materials       | Glass, V4A steel, epoxy cement |
| Sample temperature range | 0...100 °C                     |

### Wavelength setting (stepless)

|                          |  |
|--------------------------|--|
| Range                    | 400...700 nm; additional white-light setting |
| Resolution               | 10 nm  |
| Repeatability of setting | ±1 nm  |

### Measuring modes

Concentration  
Absorption  
Transmission

### Display

|               |   |
|---------------|---|
| Type          | Vacuum fluorescence display (VFD); 4 digits |
| Ranges        |   |
| Transmission  | 0.0...105.0                                 |
| Absorption    | 0.000...1.499, 1.50...1.99                  |
| Concentration | 0.000...9999                                |

### Analog output

|              |  |
|--------------|--|
| Resolution   | 1 mV   |
| Absorption   | 0...1 V corresponds to 0.000...1.99 absorption |
| Transmission | 0...1 V corresponds to 0.0...100% transmission |

### Digital output (option)

|        |   |
|--------|---|
| Type   | RS 232C                                 |
| Values | Concentration, absorption, transmission |

### Environmental conditions

|                                   |                                |
|-----------------------------------|--------------------------------|
| Ambient temperature               | +5...40 °C; no direct sunlight |
| Humidity                          | max. 95%                       |
| Storage and transport temperature | -40...70 °C                    |

### Power supply

|             |                           |
|-------------|---------------------------|
| Voltage     | 100, 120, 220, 240 V ±10% |
| Frequency   | 50...60 Hz                |
| Consumption | 20 VA                     |

## Ordering information, options

### 662 Photometer

Spectral range  $\lambda = 400...700$  nm with continuously variable filter; for direct measurements of absorption, transmission, concentration as well as for titrations; automated calibration with standards; microprocessor-controlled; with analog output; incl. 6.1108.010 light guide with 3.616.2390 mirror with 2 x 10 = 20 mm light path, support rod and holder.

**2.662.0010** 662 Photometer

### Optional accessories

|            |  |
|------------|--|
| 6.1250.000 | Mirror with 2 x 5 mm = 10 mm light path, to be attached onto probe |
| 6.2116.000 | Cable for Titrimos   |
| 3.540.2290 | RS 232C data output  |
| On request | Connecting cable for 662 Photometer data output                    |



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