

Measuring instruments

Each of these measuring instruments have a specific role, in order to differentiate them, we will give you a brief description.

Spectrophotometer



Colorimeter



Spectrodensitometer



Densitometer


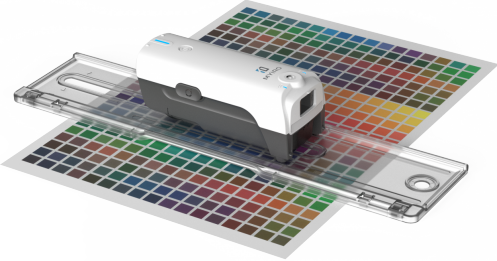


Automatic spectrophotometer

Sphere spectrophotometer



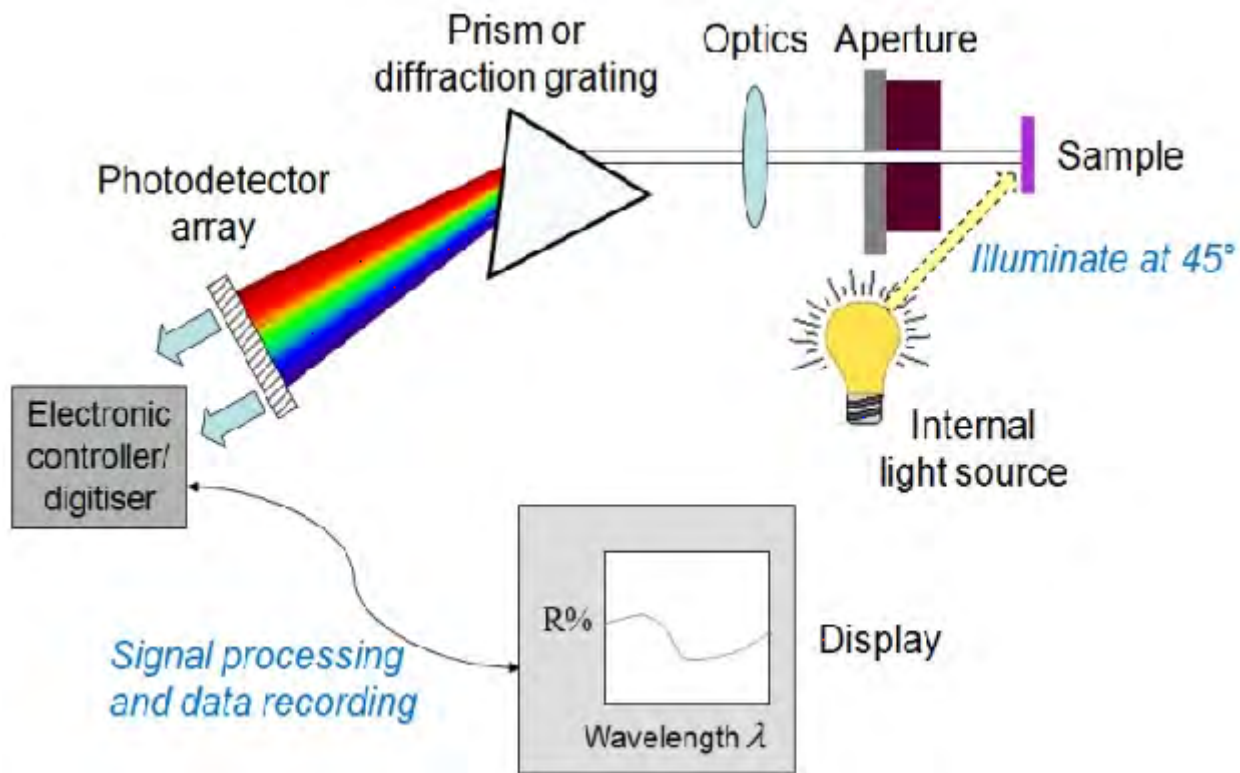
The XRite I1 Pro type spectrophotometer and Konica Minolta Myro

XRite I1 Pro	Konica Minolta Myro
	

Functions:

- Target measurement to calibrate and characterize printers
 - Spot measurement of flat and opaque color samples (spectral measurement)
 - Illuminant measurement (spectral measurement)
 - Screen and video projector calibration
 - Density measurement - Color search
 - Compare colors (Delta E)
 - etc ...
- These spectrophotometers do not have a screen and need to be connected to a computer equipped with software (Coraye for example).
- The spectrophotometer in itself is only a measuring device and the functions depend on the software which controls it.

How a spectrophotometer works



XRite eXact type spectrodensitometers



This instrument is generally used in offset printing, flexography, gravure printing workshops, etc. It is used to:

- Measure densities, fattening.
- Measure color samples
- Carry out color research - Check the whiteness of a paper

- Compare colors, densities
- etc ...

It is an autonomous spectrophotometer with a screen and on-board software.

This spectrophotometer can also be connected to software to extend its possibilities.

Automatic spectrophotometers



These spectrophotometers are generally used to calibrate printers.
They require software to drive them.

Sphere spectrophotometer

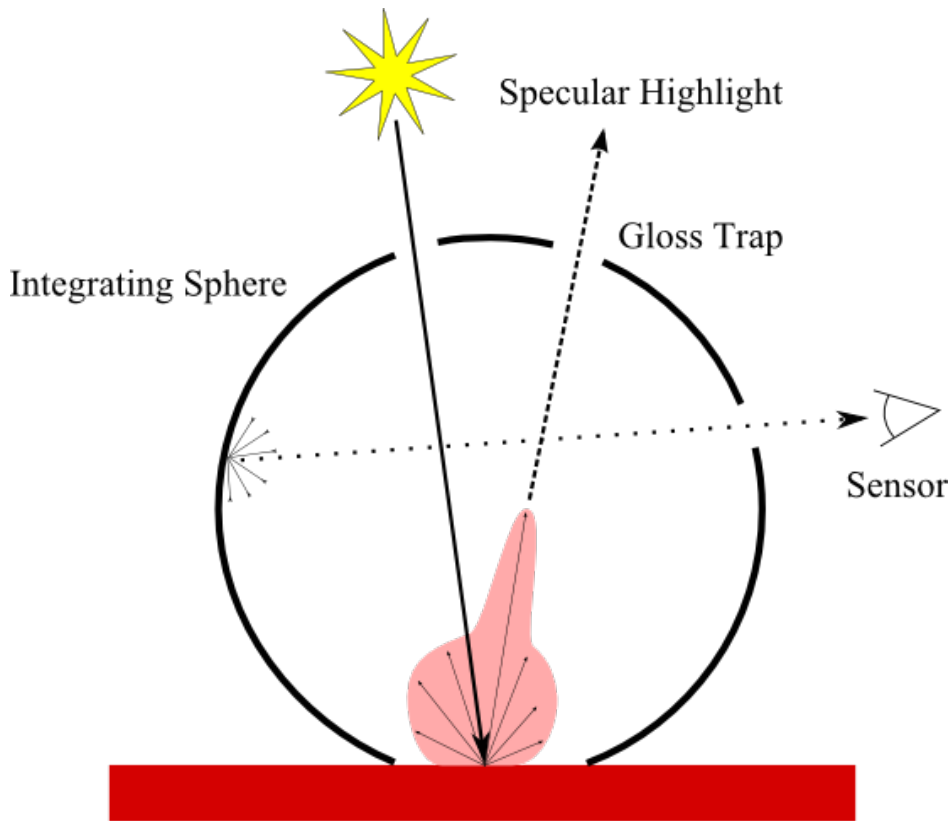


These spectrophotometers make it possible to measure complicated materials such as the sheet metal of cars, fabrics or reflective materials.

It makes it possible to dissociate the specular reflection (shiny surface) and the diffuse reflection (rough surface)

It is an autonomous spectrophotometer with a screen and an on-board software.

This spectrophotometer can also be connected to software to extend its possibilities.



8/d Geometry
Specular Excluded

Colorimeter or calibration probe



This colorimeter is used to calibrate screens and video projectors only.

Densitometer



Densitometers are workshop instruments that only measure densities, in other words, the opacity of an ink or a medium.

It does not provide a color value like spectrophotometers or spectrodensitometers do.

Densitometers have been replaced by manufacturers by spectrodensitometers.

For more information, see the chapter: [Displaying the density](#)

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