

# UNIT 3

## WHAT IS A SPECTROPHOTOMETER?

### Spectrophotometers



A spectrophotometer is a **device used to measure light intensity.**

A spectrophotometer **can measure either absorbance or transmittance of light.** A small beam of light is emitted from the spectrophotometer which goes through the sample in a small glass container called a cuvette. The spectrophotometer measures how much light is absorbed by the sample or how much of the light passes through the sample which is transmittance. In this activity, you will be using the spectrophotometer to measure the amount of light that is absorbed when various dilutions of food coloring are used.

The light goes through a slit that sets the wavelength. The small beam of light with a specific wavelength passes through the sample in a cuvette. Some of the light is absorbed and some of the light passes through. The amount of light that passes through is detected and a value is given by the spectrophotometer.

At Grifols, spectrophotometers are used to measure the level of citrate in a paste sample protein that was added in the manufacturing process.