



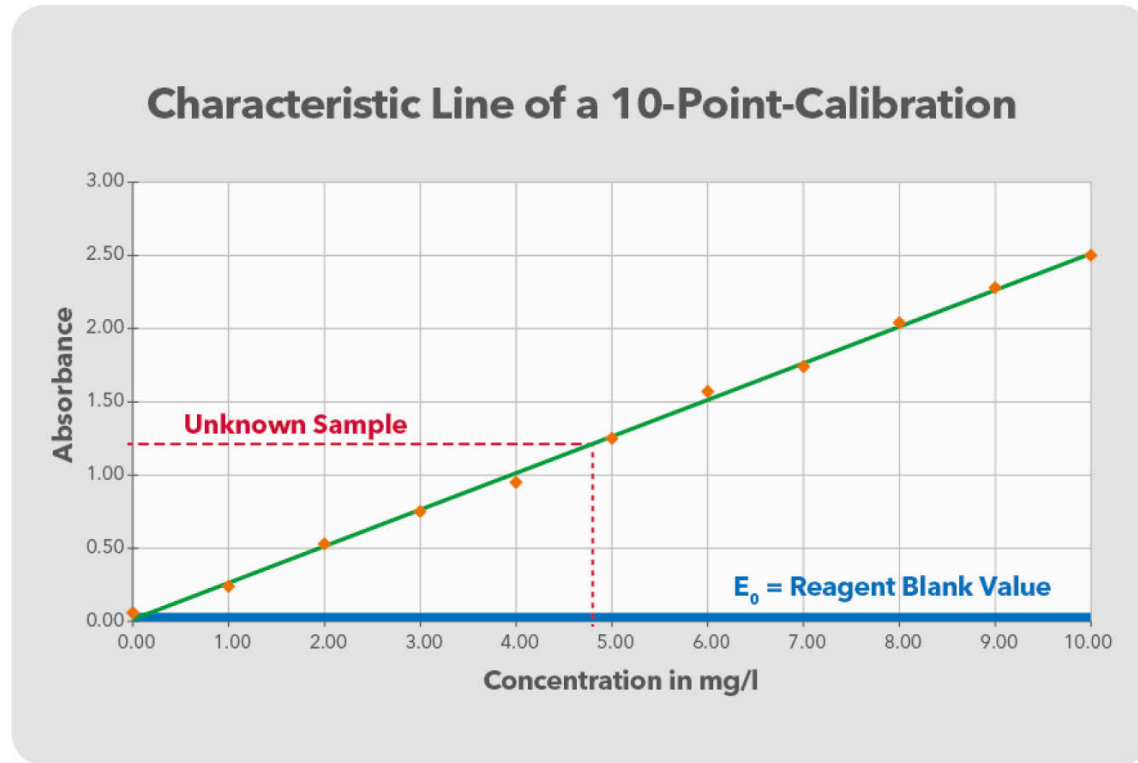
Photometry Compendium



From calibration curve to
photometric method data

Basic steps to establish a calibration curve:

- The chemical reaction for the determination of the substance must be known.
- The optimal wavelength for the measurement must be known, otherwise a spectrum must be recorded to indicate maximum peak or suitable λ .
- Setting up a dilution series for e.g. a 10-point calibration: A dilution series in duplicate achieves a higher accuracy
- After reaction and reading, the absorbance values are plotted against the concentration values.



In the past, the plotting has been done on scale paper: The unknown sample concentration has been appraised directly from the curve by calculation with slope factor.

Today, photometers offer user-guided functions to set-up user-defined or pre-programmed calibration

- General settings for cuvette size, measurement range, wavelengths etc.
- Reading of dilution solutions including calculation of the mean values of duplicates
- Alternatively, entering simply the slope factor.
- Blank values (E_0) can be stored.
- Calibration characteristics are stored with a method (program) identification (number or name)

- Automatic setting of wavelength and measuring range during method selection via list or Barcode.
- Switching citations and units
- Setting for AQA default values for standard solutions and checking intervals

Concentration	📄	📄	📄	05/28/15 22:01
[ZERO 03/14/12 9:56]				
<h1>32.8 mg/l</h1> <h2>Absorbance 0.600</h2>				
31: 14560 (340 nm) 16 mm		COD 4.0 - 40.0 mg/l		
Setup	Method list	Citation form	Unit	

Method number: 31
Test name: 14560
Wavelength: 340 nm
Cuvette size: 16 mm

Citation: CSB
Range: 4-40
Unit: mg/l