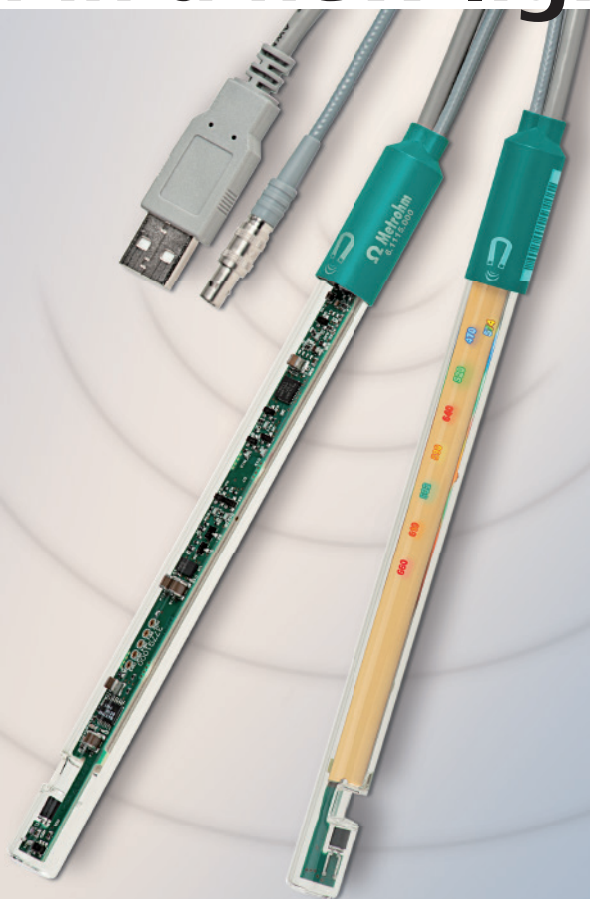


Optrode – Titration in a new light



Photometric sensor

- Eight wavelengths: 470, 502, 520, 574, 590, 610, 640 and 660 nm
- 100% solvent resistant
- Compact and space-saving

Photometric titration: benefits and applications

02

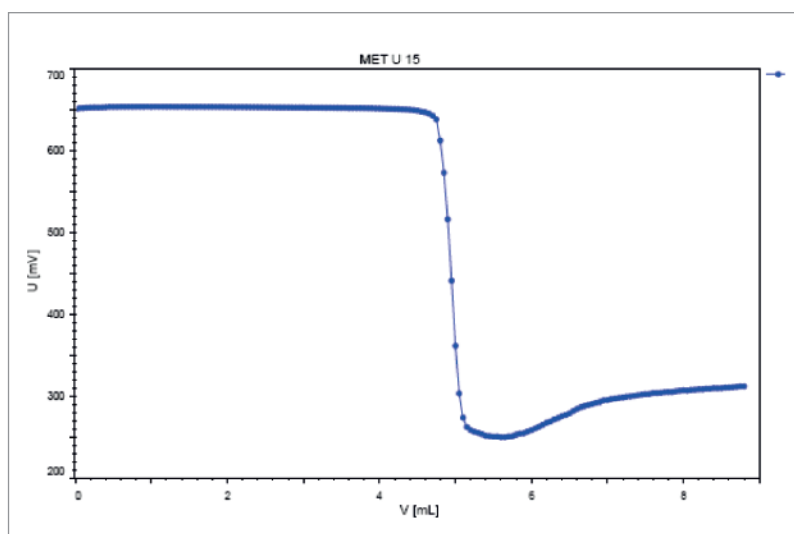
Titration with a photometric sensor is a widely used method of titration. It is based on color changes at the equivalence point and is used primarily when

- potentiometric determination of the equivalence point is not possible
- a standard method specifies photometric indication
- the lower costs of titration compared with more expensive methods (e.g. AAS, ICP-AES) matter

- simple and fast performance of measurements is important
- the end point of manual titration still has to be determined visually

Application examples

- Photometric titrations according to USP and EP (non-aqueous)
- Determination of the carboxyl end groups (non-aqueous)
- TAN/TBN according to ASTM D974 (non-aqueous)
- Chloride in silicone products (non-aqueous)
- Sulfate determination
- Fe, Al, Ca in cement
- Water hardness (total hardness and Ca/Mg)
- Chondroitin sulfate according to USP



Titration of chondroitin (USP) at 660 nm



Advantages of the Optrode

- Eight wavelengths: 470, 502, 520, 574, 590, 610, 640 and 660 nm
- 100% solvent resistant
- Compact and space-saving
- Very easy cleaning
- Easy change of wavelength (either manually or when used with *tiamo* 2.5 software)
- Can be used with Titrino, Titrino plus, Ti-Touch and Titrand

03

Straightforward setting of the wavelength



a) Straightforward switching between eight wavelengths.



b) Simply touch the magnet symbol on the head of the electrode with the supplied magnetic stirring bar ...



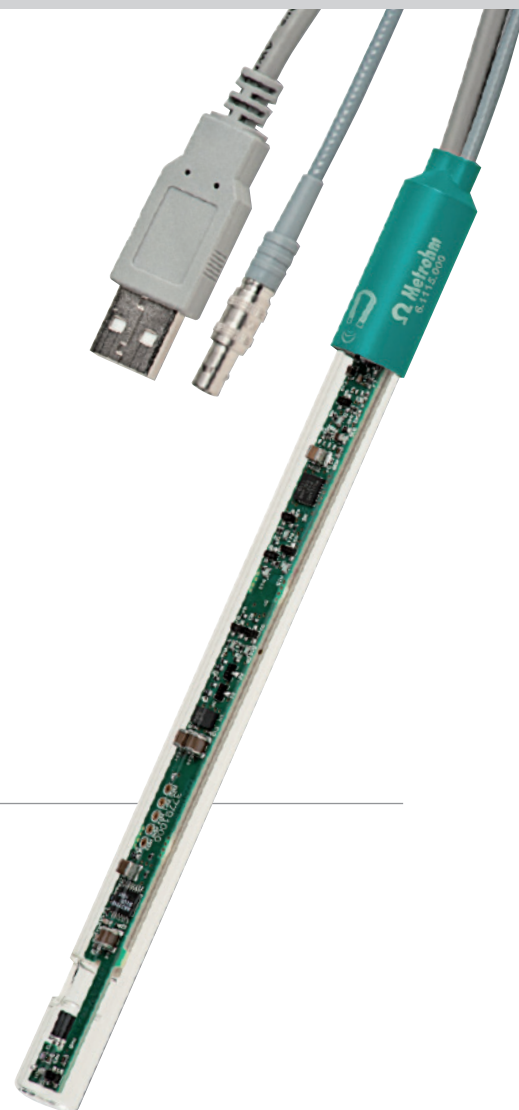
c) ... and the next wavelength is set already!

Highly compatible due to the USB interface

Both new and existing titration systems can be used with the Optrode. Power is supplied directly via the USB port of a Metrohm instrument (Titrino plus, Ti-Touch, Titrande, USB sample changer). In the case of older models without a USB port, power can also be supplied via an optional USB power adapter.

Fully traceable measurements with *tiamo* 2.5

With *tiamo* 2.5, the wavelength can be set as a titration parameter, which means there is no more risk of using the wrong wavelength or changing it inadvertently.



Ordering information

6.1115.000 Optrode

Optional

6.2166.000 USB power adapter 5V 1A
(for power supply with older Metrohm instruments)



www.metrohm.com

 **Metrohm**