The solution for all turbidimetric and color-indicated titrations

DP5 Phototrode™

The DP5 Phototrode™ is the latest advancement of the well-established Phototrodes from METTLER TOLEDO. For the first time, the unique features of the DP5 allow the switching between 5 different wavelengths for the indication of various titrations.

For many titration tasks, such as the automated determination of metal ions with EDTA, photometric indication using a color indicator is the best solution. In addition, the detection of turbidity changes is frequently used for titrations, e.g., for the automated determination of surfactant content. METTLER TOLEDO offers a multitude of methods for various applications using the DP5 Phototrode™.

Innovative development on a well-proven basis
An optimized outer casing guarantees better use of the DP5, independent of the selected titration stand or sample changer. The main innovation, however, is hidden inside and allows the use of one DP5 for all turbidimetric and color-indicated titrations.

A small rainbow
Dark green, green, orange, light red, red – in addition to the wavelengths 555nm and 660nm, the DP5 Phototrode™ covers the wavelengths 520nm, 590nm and 620nm. Now when selecting a suitable color indicator for your sample, a multitude of new possibilities arises, all using a single sensor.

In agreement with existing standards
According to EN 196-2 (1994), some cement components such as Fe(III), Al(III) or Ca(II) must be analyzed by titration with EDTA or EGTA. The wavelengths specified by the standard are 520nm and 620nm, respectively. The DP5 Phototrode™ together with METTLER TOLEDO titrators now easily fulfills all requirements.

Your investment is protected
The classical two-phase titration is sometimes the only possible solution for the analysis of various surfactants. Existing accessories like the two-phase titration beaker, as well as methods developed by METTLER TOLEDO for this purpose, can continue to be used with the DP5 Phototrode™.
<table>
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<tr>
<th>Wavelength</th>
<th>Compound to be determined</th>
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<td>Fe(III) als Fe₂O₃</td>
<td>EDTA</td>
<td>Sulfosalicylic acid</td>
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<td>EDTA</td>
<td>o-PAN</td>
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<td>Ca(II) als CaO</td>
<td>EGTA or EDTA (alternatively)</td>
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<td>pH 1 for Calcium and Magnesium; pH 12 for Calcium</td>
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<td>Nickel in electroless nickel bath</td>
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<td>Xylenol orange</td>
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<td>Carboxyl groups in PET</td>
<td>KOH (in benzyl alcohol)</td>
<td>Bromophenol blue</td>
<td>Solvent: Chloroform: phenol 3:2</td>
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<td>Lead nitrate in aqueous solution</td>
<td>EDTA</td>
<td>Xylenol orange</td>
<td>20% Urotropine buffer</td>
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<td>Barium perchlorate</td>
<td>Dimethylsulphon-azo III</td>
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* Electronic copies of the methods can be found in LabX titration or on the internet (http://www.mt.com)