Ti Application Note No. T- 57

Title:	**Calcium in aqueous solutions by photometric titration**

***Summary*:**	Determination of calcium in aqueous solutions by photometric titration with EDTA using the 610 nm Spectrode.

Sample:	Aqueous solutions containing Ca^{2+}, e.g. tap water or digestion solutions of cement

Sample Preparation:	none

Instruments and Accessories:	702, 716, 736, 751 or 785 Titrino, 703 Titration Stand, 6.5501.01X Spectrode 610 nm, Metrodata TiNet 2

Analysis:	Pipette a suitable volume of sample solution into a beaker, add 2.5 mL murexide colour indicator (50 mg / 100 mL dist. water), make up to about 100 mL with dist. water and adjust the pH value to 12 by adding w(NaOH) = 50%. Titrate with c(EDTA) = 0.1 mol/L using the DET or MET mode.

Calculation:	1 mL c(EDTA) = 0.1 mol/L corresponds to 0.1 mmol or 4.008 mg Ca^{2+} mmol/L Ca^{2+} = EPx * C01 * C02 / C00 EPx = titrant consumption in mL EP1: evaluation Titrino EP2: intersection point TiNet C00 = sample volume in mL C01 = 0.1 C02 = 1000 (conversion factor in mL/L)

Remarks:	This method can also be used for the determination of calcium in cement and other digestion solutions.

Results:

Date	26.08.1998		Time 16:46:41
User	JS		
Method	Ca in cement		
Id1	Murexide		
SmplSize	20 ml		
Endpoints:			
MET U.EP1	3.826 ml		474 mV
MET U.Intersection1	3.895 ml		332 mV
Results:			
Calcium1	19.131 mmol/l		
Calcium2	19.294 mmol/l		