

Ti Application Note No. T- 70

Title:	Determination of calcium pantothenate
Summary:	Determination of calcium pantothenate by non-aqueous potentiometric titration with perchloric acid using separate electrodes.
Sample:	Calcium pantothenate, raw product
Sample Preparation:	none
Instruments and Accessories:	702, 716, 736, 751 or 785 Titrino or 726 Titroprocessor, 6.0133.100 pH glass electrode, 6.0726.100 Ag/AgCl reference electrode (bridge electrolyte LiCl sat. In ethanol)
Analysis:	Weigh approx. 300 mg sample into the titration vessel, then add 40 mL glacial acetic acid and dissolve the sample under stirring. Titrate with $c(\text{HClO}_4) = 0.1 \text{ mol/L}$ in glacial acetic acid using the MET mode.
Calculation:	$1 \text{ mL } c(\text{HClO}_4) = 0.1 \text{ mol/L}$ corresponds to 23.825 mg Ca pantothenate $\% \text{ Ca pantothenate} = \text{EP1} * \text{C01} * \text{C02} / \text{C00}$ $\text{EP1} = \text{titrant consumption in mL}$ $\text{C00} = \text{approx. 3000 (sample weight in mg)}$ $\text{C01} = 23.825$ $\text{C02} = 100 \text{ (conversion factor for \%)}$
Results:	AVG(5) = $98.01 \pm 0.13 \%$ Ca pantothenate
Remarks:	Prior to the titration the glass electrode is preconditioned in glacial acetic acid for 10 min and stored overnight in dist. water.