Ti Application Note No. T- 62

Title:	**Analysis of nitrite solutions**

***Summary*:**	Determination of nitrite in aqueous solutions by potentiometric back-titration of the added permanganate excess with ammonium iron(II) sulphate using the Pt Titrode.

Sample:	E.g. solution of ammonium nitrite

Sample Preparation:	none

Instruments and Accessories:	702, 716, 736, 751 or 785 Titrino or 726 Titroprocessor, 6.0431.100 Pt Titrode

Analysis:	**Blank:** Pipette 30.0 mL c(1/5 $KMnO_4$) = 0.2 mol/L into a beaker. Add 20 mL w(H_2SO_4) = 25% and titrate with c[$(NH_4)_2Fe(SO_4)_2$] = 0.2 mol/L. **Sample:** Pipette 30.0 mL c(1/5 $KMnO_4$) = 0.2 mol/L and 20 mL w(H_2SO_4) = 25% into a beaker. Add, e.g., 7.50 mL sample while stirring for 5 min, then titrate with c[$(NH_4)_2Fe(SO_4)_2$] = 0.2 mol/L.

Calculation:	1 mL c[$(NH_4)_2Fe(SO_4)_2$] = 0.2 mol/L corresponds to 6.404 mg NH_4NO_2 4.601 mg NO_2^- g/L NH_4NO_2 = (C01 – EP1) * C02 / C00 EP1 = titrant consumption for the sample in mL C00 = 7.50 (sample volume in mL) C01 = titrant consumption for the blank in mL C02 = 6.404

Results:	AVG(7) = 136.95 ± 0.71 g/L NH_4NO_2