

# VA Application Note No. V- 61

**Title:** Speciation of Fe(III) and Fe(II) in standard

**Summary:** Determination of the ferric and ferrous ratio of ferric and ferrous ions simultaneously in the ppm range

**Sample:** Standard

**Sample Preparation:** none

## Fe(II) and Fe(III):

**Electrolyte:** Sodium pyrophosphate ( $\text{Na}_4\text{P}_2\text{O}_7 \times 10 \text{ H}_2\text{O}$ )  
pH = 10.3

**AE:** Pt

**RE:** Ag/AgCl/KCl 3M

**Parameters:** DPPOL (-20 mV), DME  
 $U_{\text{start}} = -50 \text{ mV}$ ,  $U_{\text{end}} = -1300 \text{ mV}$   
 $E_p [\text{Fe(II)}] = -320 \text{ mV}$ ,  $E_p [\text{Fe(III)}] = -850 \text{ mV}$

| Results: | Fe(II)<br>mg/L | Fe(III)<br>mg/L |
|----------|----------------|-----------------|
|          | 208.6          | 931.6           |

## Determination of Fe(II) and Fe(III)

