

ISE Application Note No. I - 5

Title: Fluoride content of a chromium plating bath

Summary: Determination of fluoride in a chromium plating bath by direct potentiometry using the Fluoride ISE

Sample: Chromium plating bath

Sample Preparation: none

Instruments and Accessories: 692 pH/Ion Meter, 725 Dosimat, 728 Magnetic Stirrer, 6.0502.150 F ISE, 6.0726.100 Ag/AgCl reference electrode (electrolyte c(KCl) = 3 mol/L), printer

Reagents:

Fluoride standard:
10 000 mg/L F⁻, prepared from NaF (22.10 g/L NaF)

ISA solution:
150 g/L NaAc (aq.)

Analysis: Pipette 10.0 mL sample into a plastic beaker. Add 10 mL ISA solution and start the automatic determination by three standard additions using a preselected delta U of 15 mV.

Remarks:

Result:
AVG(3) = 296 +/- 7 ppm F⁻