

# Oral Presentation

## Determination of Haloperidol Hydrochloride in Ampoulesandin Urine Samples Using a New Potentiometric Carbon Paste Electrode

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### Abstract

A novel approach for the determination of haloperidol hydrochloride (HDCl) in pharmaceutical formulations and in urine samples is presented. New carbon paste electrode for HDCl based on Haloperidol-phosphomolybdateas (an ion-exchanger) dissolved in plasticizer DBP and their potentiometric characteristics were discussed. The electrode exhibited a good Nernstian slope of  $56.9 \pm 0.3$  mV/decade with a linear concentration range from  $3.5 \times 10^{-6}$  -  $1.0 \times 10^{-2}$  M for the haloperidol ion. The limit of detection was  $1.6 \times 10^{-6}$  M. It had response time of 5-8 sec, useable in pH range of 6.2–8.6 and temperature of 20–60°C. The electrode shows clear discrimination of haloperidol hydrochloride from several inorganic ions, sugars and some common drug excipients. The sensor was applied for determination of haloperidol hydrochloride in urine and in pharmaceutical formulations using potentiometric determination, standard addition and the calibration curve methods. The results are satisfactory with excellent percentage recovery comparable or better than those obtained by other routine methods.

**Keywords:** potentiometric; ephedrine hydrochloride; coated wire electrode; ion-selective electrode.