

SPECIMEN FORMAT FOR THESES OF MONTH

Faculty : Science

Department : Chemistry

Branch/ Area: : Physical Chemistry/ Electrochemistry

Sub Subject Heading: : Ion Selective Electrodes

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Title of the thesis : Potentiometric Determination of Calcium Ion using
some newly prepared Calcium Ion Selective
Electrodes and its Analytical Application

(i) In Roman Script -
(ii) In roman Script -

Nomenclature of Degree: : Ph.D

Month & Year of Enrolment: : June & 2011

Month & Year of Registration: : June & 2011

Month & Year of Submission: : June & 2014

Month & Year of Award : February & 2016

Name of Supervisor : Dr. J. Thamaraiselvi

Designation of Supervisor : Associate Professor

Centre/department/school in which research was conducted : Department

University's Name & Address : Avinashilingam Institute for Home Science and Higher Education for Women, Coimbatore

Abstract within 300 words:

- i) **Major objectives** : *The main objective of this study is to fabricate new ionophore based calcium ion selective electrode.*
- ii) *Characterization of the prepared ionophores was done by UV,IR, SEM and XRD. Electrochemical impedance study was also carried out to know about the charge transfer process occur in electrode/substrate interface.*
- iii) *For all these sensors, the principal analytical parameters such as the linear response range, calibration slope, detection limit, effect of pH, non aqueous media and selectivity have been studied.*

iv) Findings:

The prepared electrodes were successfully prepared and used to determine the determination of calcium ion by direct potentiometric measurements and used as an indicator electrode in potentiometric titrations.

Examiners

Internal Examiner : **Dr. Susheel Mittal**
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