

<b>Thesis Title</b>	Development of Flow Injection System for Determination of Chromium (III) and On-line Preconcentration
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### Abstract

A spectrophotometric flow injection (FI) system with on-line preconcentration for the determination of chromium (III) using ethylenediaminetetraacetic acid (EDTA) was developed. A preconcentration column packed with Amberlite IR-120 (H) was employed. Conditions for the preconcentration and color development for continuous monitoring were investigated. A single standard calibration was possible. A linear calibration in a range of 10.5 – 27.0  $\mu\text{g}$  chromium (III) was obtained with a detection limit of 1.4  $\mu\text{g}$  chromium (III) and relative standard deviation of 2% (13.0  $\mu\text{g}$  chromium (III), n=11). The proposed procedure was applied for the determination of chromium (III) in leachate and dietary supplement samples. The standard methods were used for validation of FI system. The results are not significant difference at 95% interval level.

