



# Scale-up from analytical HPLC to prep HPLC column on Spot Prep II System

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## Introduction

A simple mixture of 4 compounds is used to evaluate the capacity of Spot Prep II system to scale-up a separation from analytical to preparative HPLC column.

The method is first developed on a LaChrom Elite analytical HPLC system, transferred to Armen Spot Prep II system and scale-up on the same system with semi prep HPLC column.

## Apparatus

### HPLC systems

**Spot prep II system** equipped with 50 ml/mn, 300 bars quaternary gradient pump, UV/Vis DAD detector and Armen Glider Prep Software was used along with analytical and semi prep injection valves.



Analytical HPLC was performed on **LaChrom Elite HPLC system** (VWR) equipped with Photodiode Array Detector (PDA) (200-800 nm).

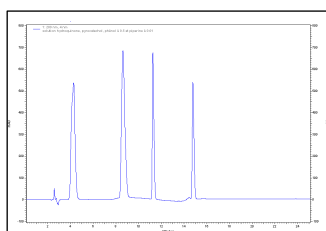


## Method

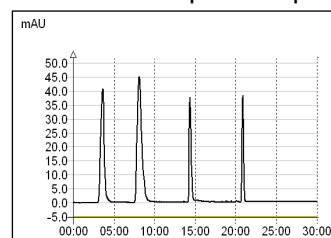
- Mixture of hydroquinone, pyrocatechol and phenol at 0.5g/L and piperine at 0.01g/L.
- Eluant A : phosphate buffer (0.02M, pH = 5.5 adjusted with NaOH 6N), Eluant B : Methanol.
- Method : 20% Eluant B, 3min; from 20% to 90% of B, 7min; 90% of B, 20min.
- Detection : UV/Vis detector at 280nm.

## Results and discussion

**Analytical 20µL injection** : Merck Purosphere RP18e 250 mm x 4.6 mm I.D. 5µm with pre column

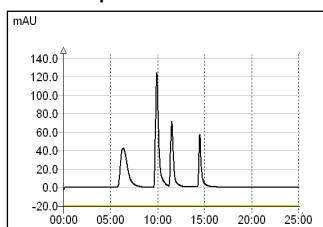


HPLC LaChrom Elite



Armen Spot prep II

**Preparative 1mL Injection** : Merck Lichrospher 100 RP-18 250mm x 25 mm I.D. 5µm



Armen Spot prep II

## Conclusion

Spot Prep II system allows reproducible analytical injections on 4.6 mm ID columns with high efficiency in the aim to perform scale-up on the same equipment with semi-prep or prep column up to 100 mm ID.

Notes : This application note has been produced and edited using information that was available when the data was acquired for each article. This application note is subject to revision without prior notice

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