

APPLICATION NOTE

Fast Protein Separation on **STYROS™ 1R and 2R.**

STYROS™ 1 R and **2 R/XH** series were designed for fast, high-performance separations of biomolecules.

Both media can typically be run at linear flow rates of 1800 cm/hr and separate mixtures of several proteins.

Chromatograms 1 and 2 provide the separation of 4 proteins: Cytochrome C, Lysozyme, β-Lactoglobulin and Ovalbumin in less than one minute, at room temperature.

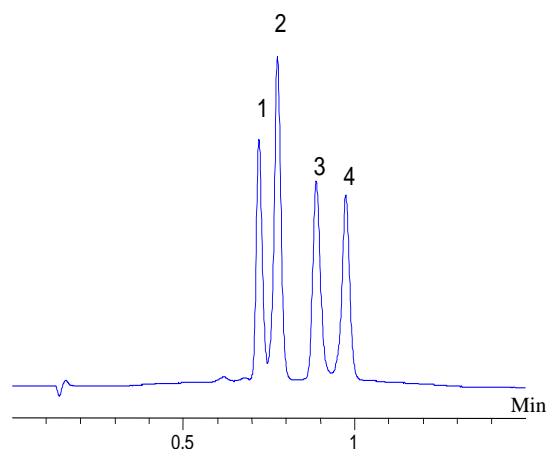
Each of the two generations has a specific retentivity that differentiates it from the other. In addition to high selectivity, each stationary phase offers a characteristic protein capacity that provides the end user with more selection.

The design of an optimized pore structure allows full access for large molecules such as proteins, to the inner matrix, making it possible to run the separations at high flow rates without loss of capacity or resolution.

Table 1. HPLC Operating Parameters for Chromatograms 1 and 2.

HPLC System	Hewlett Packard 1050
Detector	214 nm
Column	STYROS™ 1 R/XH 50x4.6mm (Chromatogram 1) STYROS™ 2 R/XH 50x4.6 mm (Chromatogram 2)
Mobile Phase	A: 0.1 % TFA in water B: 0.1 % TFA in Acetonitrile/water 95/5
Gradient	15-80% B in 1 minutes
Flow rate	5 ml/min (1,807 cm/hr).
Temperature	Ambient
Injection volume	10 µl
Sample	1: Cytochrome C, 2: Lysozyme
1 mg/ml each	3: β-Lactoglobulin, 4: Ovalbumin

Chromatogram 1: Standard Protein Separation on **STYROS™ 1 R/XH**



Chromatogram 2: Standard Protein Separation on **STYROS™ 2 R/XH**

