# COMPARISON OF CHROMATOGRAPHY SEPARATION MODELS AND THEIR APPLICATION TO SEC

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Describe Chromatography models can be divided into stochastic ones [1] and those based on the theoretical-plate concept. It was demonstrated that their result, band-broadening function (BBF) is basically equivalent [2]. (In the theory of chromatographic separation and band broadening, BBF is called the elution curve of an analyte uniform in molecular weight and chemical composition.) However, the different mathematical treatments of the models make possible to express different aspects of the separation process. The modified plate model predicts the BBF statistical properties. For the low molecular-weight analytes, the model was proven satisfactorily. For polymers, the capacity factor [3] in SEC is low and the analyzed polymer samples are almost always disperse in molecular weight. However, the BBF statistical properties for polymers start to emerge [4] by enhancing the separation power of the system by decreasing the flow-rate and thus increasing the transversal diffusion [5].

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