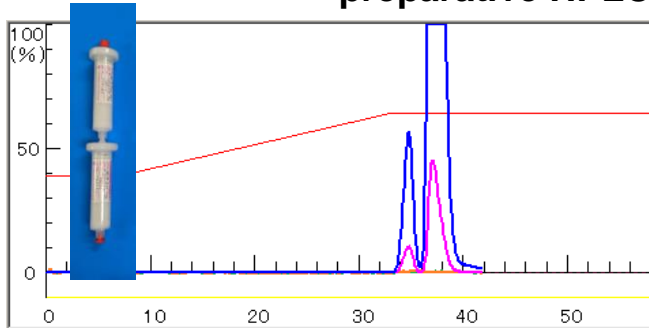
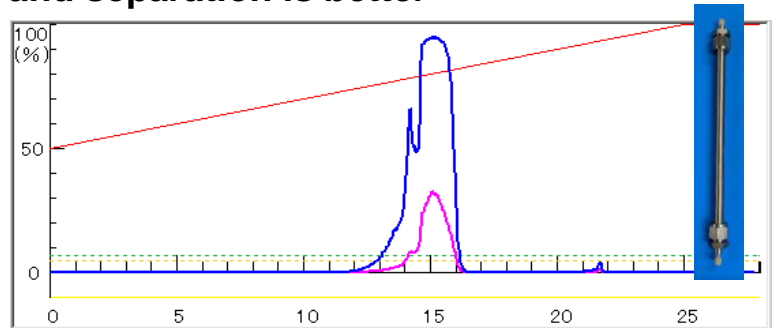


Medium pressure flash chromatography achieves a better separation than HPLC in reverse phase preparative chromatography

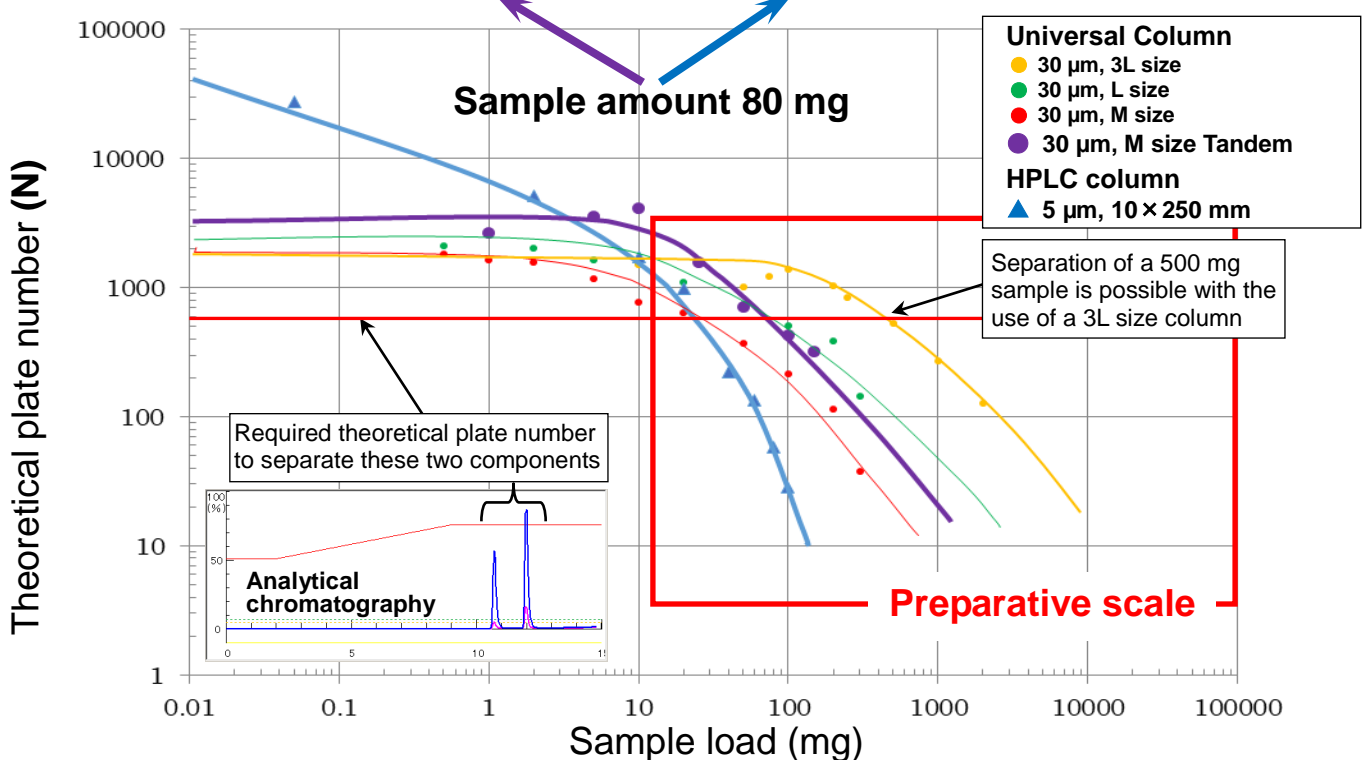
In the preparative scale, the number of theoretical plates is higher than in preparative HPLC, and separation is better



Sample run with a medium pressure flash column



Sample run with a HPLC column



Decrease of theoretical plate number by load weight of sample

The above figure shows the decrease in the number of theoretical plates due to the load weight of the sample (= peak broadening). As the sample volume is increased with respect to the column, the resolution (= the number of theoretical plates) decreases, and the degree of the decrease is affected by the particle size and other factors. As can be seen from the above figure, the degree of the decrease in the number of theoretical plates is greatly increased by the loading volume on the HPLC (5 μ m) column. On the other hand, with the 30 μ m column used in flash chromatography, the decrease in the number of theoretical plates with respect to the loading amount is gradual, and it is possible to secure the number of theoretical plates required for separation at the preparative level. In the area of the sample volume in the preparative scale, the flash column is more advantageous for separation, and it is possible to perform the preparative chromatography with the required degree of separation by calculating the appropriate retention and loading amount.