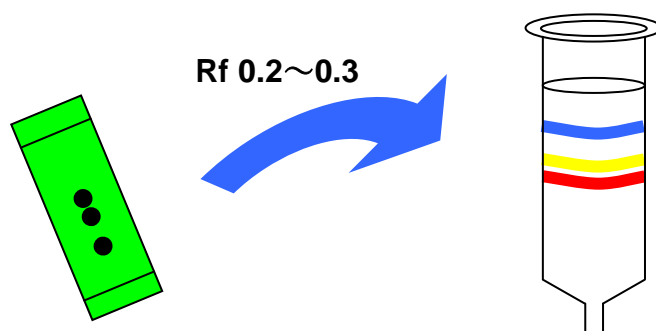


Ideal Method Transfer from TLC to Column Chromatography

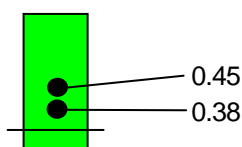
- TRUE THEORY of Chromatography -

■ Conventional chromatography methodology (TLC → Column chromatography)

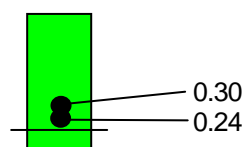


When running samples with the solvent mixture ratio (solvent strength) that moves samples at Rf0.2 - 0.3 (0.25 on average) TLC, it is a proven fact that good separations are achieved in the normal phase silica column chromatography. Rf0.2 - 0.3 is equivalent to 3.3 – 5 CV (4 CV on average). Chemists used to run the TLC several times in conventional chromatography to get the solvent mixture ratio that gives Rf0.2 - 0.3. It was a very time-consuming job.

① Got the following TLC Rf values at first run.



② Run TLC again with a smaller ratio of polar solvent.



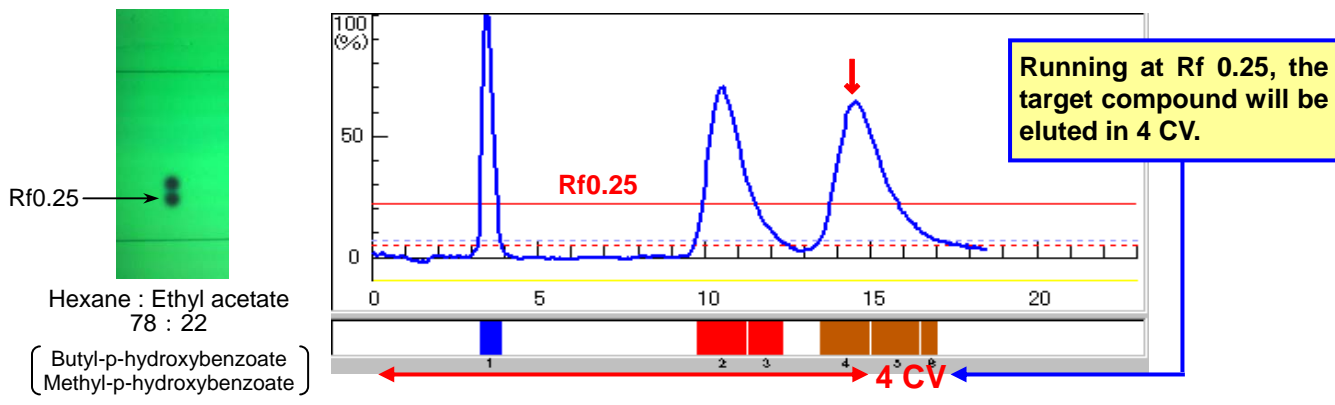
This solvent mixture ratio is applied to run a column chromatography.



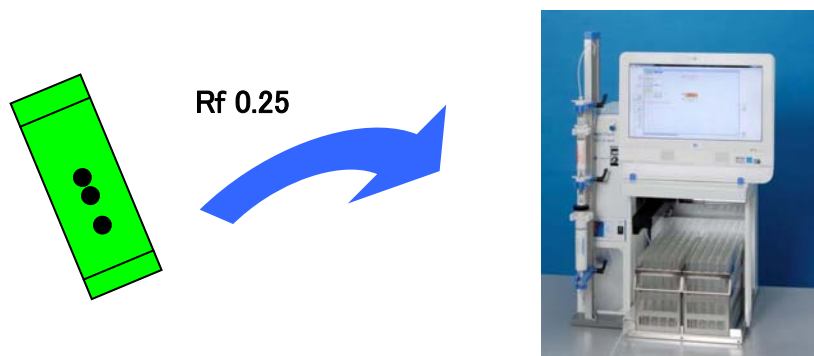
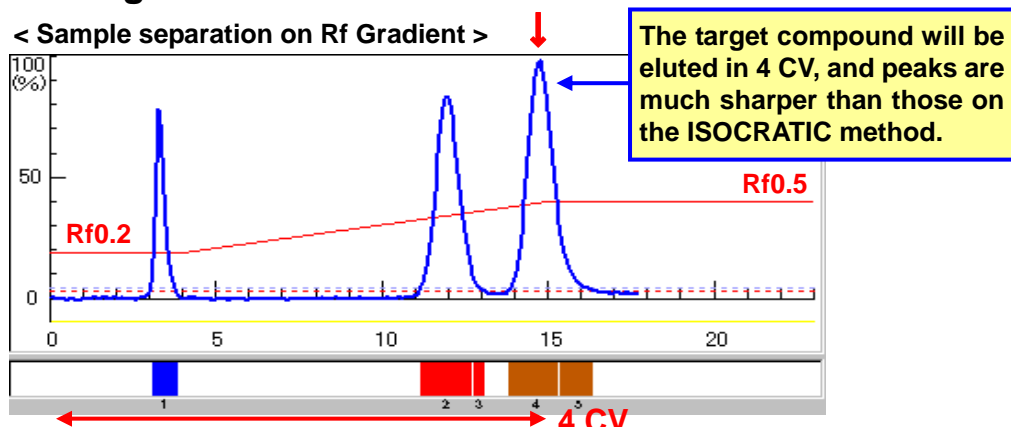
■ The automatic method transfer for the optimum column chromatography can be successfully done through Yamazen's proprietary Smart Flash EPCLC technology (Eluting Position Controllable Liquid Chromatography).

Just enter the Rf value of the target compound and the solvent mixture ratio, and the optimized Gradient method to elute the target compound at 4-CV (or at the eluting speed of Rf0.25) will be automatically developed.

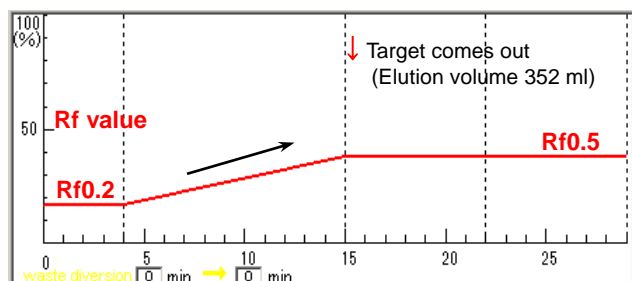
■ Sample separation by Smart Flash EPCLC Isocratic method with Rf 0.25 equivalent solvent strength



■ Sample separation by Smart Flash EPCLC Gradient method with Rf 0.25 equivalent solvent strength



[Rf Gradient]



The Rf Gradient is developed when solvent mixture ratio is converted to Rf value.

Gradient method based on Rf value controls the eluting position of the sample, and elutes the target compounds at 4-column volume position.

Yamazen is the one and only company that has successfully transferred the method from TLC to column chromatography, automatically.



YAMAZEN CORPORATION

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