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Chromatographic separation of complex samples is a challenging task for every laboratory, particularly when the components span a wide polarity range. The AMD (Automated Multiple Development) offers a convenient and most efficient solution. It employs stepwise elution over increasing solvent migration distances with a gradient that can be designed according to the requirements of the sample.

Typical applications for AMD analysis are lipid analysis [1,2], routine analysis of drinking water [3], pigment formulations with a complex composition [4], and resins as well a heavy petroleum products [5], just to name a few.

News & Events

Pittcon 2018

27 February – 1 March 2018, Orlando, USA

CAMAG will be exhibiting at Pittcon, the world's largest annual conference and exposition for laboratory science. Visit us at booth #2013.
www.pittcon.org

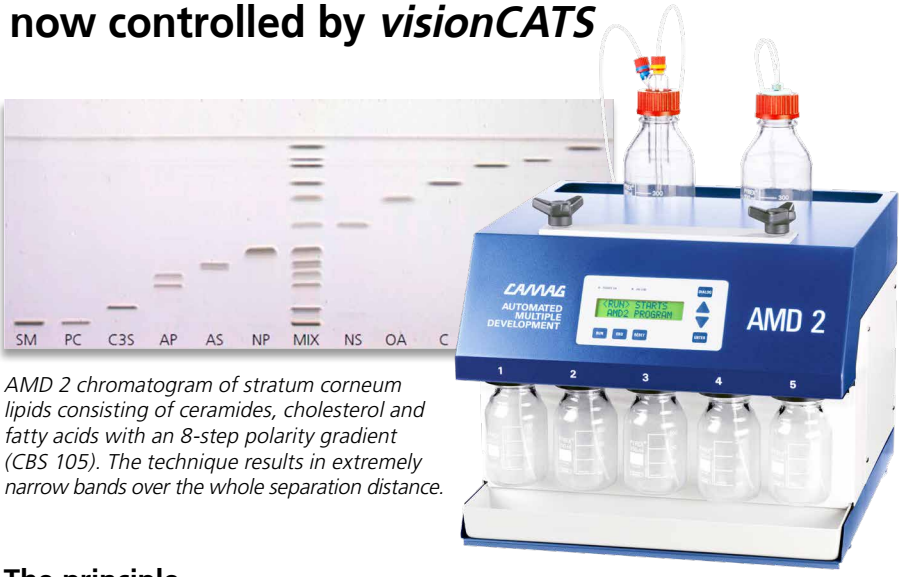
Analytica 2018

10–13 April 2018, Munich, Germany

CAMAG will be exhibiting at the Analytica 2018. Meet our experts at booth #212 in hall A1.
www.analytica.de

CAMAG flash
FEBRUARY 2018

Automated Multiple Development with CAMAG AMD 2 – now controlled by *visionCATS*



AMD 2 chromatogram of stratum corneum lipids consisting of ceramides, cholesterol and fatty acids with an 8-step polarity gradient (CBS 105). The technique results in extremely narrow bands over the whole separation distance.

The principle

- Multiple development over increasing solvent migration distances
- Each successive run uses a solvent of lower elution strength than the previous
- Between runs the layer is dried under vacuum

The result

- Extremely narrow bands due to gradient elution with simultaneous focusing effect
- Enhanced separation capacity with base line separation of up to 40 components over a separation distance of 80 mm
- Highest resolution that can be attained with a planar chromatography system

For better understanding the AMD principle, imagine the following time-lapse sequence: All components of the analyte migrate with the solvent front. One fraction after the other falls out of the solvent front and stays more or less stationary, only focused by the next front passage. Selection of the solvents forming the elution gradient is made according to the composition of the analyte.

[1] M. Reisberg, N. Arnold, D. Bisrat, K. Asres, R. H. H. Neubert, B. Draeger, J. Planar Chromatogr. 30 (2017) 460-466.
[2] V. L. Cebolla, L. Membrado, C. Jarne, M.P. Lapieza, CAMAG Bibliography Service CBS 114 (2015) 5-7.
[3] S. C. Weiss, W.Schulz, A. Müller, W.H. Weber, CAMAG Bibliography Service CBS 113 (2014) 5-7.
[4] C. Stiefel, S. Dietzel M. Endress, G.E. Morlock, J. Chromatogr. A 1462 (2016) 134-145.
[5] M. Matt, E.M. Gálvez, V.L. Cebolla, L. Membrado, R. Bacaud, S. Pessayre, J Sep Sci 26 (2003) 1665–1674.

For further information, go to www.camag.com/AMD2.