

'Printing' for derivatization in HPTLC

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The immense possibilities of post- or pre-chromatographic derivatizations are a great advantage of HPTLC over other chromatographic methods. Post-chromatographically, the respective reagents are applied either by vaporization, manual spraying or (automatic) dipping. Pre-chromatographic in-situ derivatizations are preferably performed by automated overspraying of the starting zones.

A fully automated spraying device was introduced in 2000 by DESAGA (ChromaJet DS20) which is able to apply reagents from different reservoirs to predefined areas (e.g. lanes). It uses a pressurized 'spraying gun' producing aerosols which are removed by ventilation and may lead to contamination of the device.

As latest approach a rather cheap and commercially available equipment for dotting reagents on HPTLC plates or foils was employed (Fig. 1). The device works without aerosol generation and allows an exact and highly resolved reagent application from different reservoirs both pre- and post-chromatographically.

First results will exemplarily be presented for HPTLC determinations of amino acids, carboxylic acids and sterols, as compared to standard procedures of dipping or in-situ derivatizations, respectively.

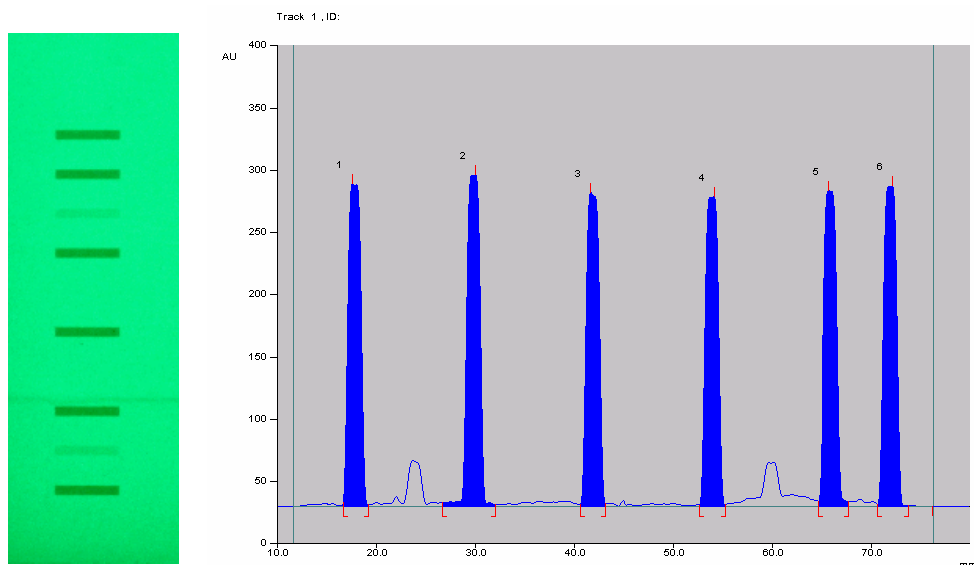


Figure 1 HPTLC plate impregnated with asparagine and 'sprayed' with a ninhydrin solution, showing the high resolution power and reproducibility of the device used