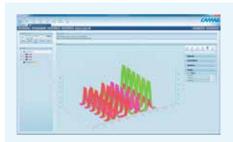# CAMAG
TLC SCANNER 4

The CAMAG TLC Scanner 4 is the most advanced workstation for densitometric evaluation of TLC/HPTLC chromatograms and other planar objects. Controlled by visionCATS software the TLC Scanner 4 enables quantitative evaluation of the generated densitometric data. The spectral range of light from 190 to 900 nm is available for selecting single wavelengths for scanning densitometry. Detection can thus be fine-tuned to match the spectral properties of the analyte to its optimized specificity and sensitivity of the detection.

Key features

- Measurement of reflected light, either in absorbance or fluorescence mode
- Object formats up to 20 x 20 cm
- Spectral range from 190 to 900 nm
- Automatic selection and start of all lamps: deuterium, halogen-tungsten, and high pressure mercury lamp
- Data step resolution 25–200 µm
- Scanning speed 1–100 mm/s
- Spectrum recording up to 100 nm/s
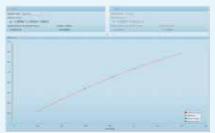- Automatic selection of electronic amplification
- Rapid data transfer

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PLANAR CHROMATOGRAPHY

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CHROMATOGRAM EVALUATION WITH CLASSICAL DENSITOMETRY

Single and multi-wavelength scan: the densitograms are displayed in 3D, top or front view. Several peak integration and baseline correction settings can be selected.

The separated compounds are assigned. For quantitation, data from the multi-wavelength scan at the optimum wavelength for each compound is used.

For evaluation the best fitting calibration model is used. Quantitation can be done via peak height or area.

For almost unlimited flexibility, several scanning steps, e.g. before and after derivatization, can be selected. Each scanning step may also include up to 31 individual multi wavelength scans using different light sources (deuterium lamp, mercury lamp, tungsten lamp). The detection modes *absorbance* or *fluorescence* can be combined. The generated data can then be evaluated.

Integration of peaks and assignment to separated substances is a matter of a few mouse clicks. Quantification of substances can be performed via peak height or peak area. The best fitting calibration model with single-level calibration or multilevel calibration via linear, polynomial or Michaelis-Menten regression is selected.

With visionCATS and the CAMAG TLC Scanner 4, UV spectra can be measured as well. The selected peak positions, which are detected from a previous densitogram are automatically scanned at the defined wavelengths. Spectra can be measured from 190 to 900 nm and displayed individually or overlaid in one diagram.

The following visionCATS packages are available:

■ The Scanner Multi Wavelength Package offers the possibility to evaluate up to five scanning steps in one analytical file. A scanning step may contain a single wavelength, multiple wavelengths with up to 31 selected wavelengths or a combination of measurements in absorption and fluorescence detection mode.

■ The Scanner Quantification Package allows to quantify each individual substance on the plate. Five different quantification functions are available for evaluation to determine the concentration of the substance in a sample. Up to five different evaluation steps in multiple plate states (*e.g.* plate after development and same plate after derivatization) can be performed.

■ The Spectrum Scanning Package includes the measurement of the spectrum of each individual substance on the plate including the evaluation of the substance purity by comparison with reference standard.

Ordering Information

022.9780	**CAMAG® TLC Scanner 4**; for the densitometric evaluation of TLC/HPTLC plates, spectral range 190 to 900 nm, plate sizes up to 20 x 20 cm, absorbence and fluorescence mode, CAMAG software controlled
028.0000	**CAMAG® HPTLC Software visionCATS: Basic Version;** including access and control of all instruments - one server, one client; Instrument Diagnostics (xQ); analytical reports and access to HPTLC Method Library. Basic Version is not included in any Ultimate Package and needs to be purchased separately.
028.3000	**CAMAG® HPTLC Software visionCATS: Scanner Ultimate Package,** combining all CAMAG TLC Scanner Packages, incl. 028.3100 Scanner Multi Wavelength Package 028.3200 Spectrum Scanning Package (available 2016) 028.3300 Scanner Quantification Package Basic Version 028.0000 needs to be purchased separately.

Before installing visionCATS, please visit www.camag.com/visionCATS for recommended system requirements and further information.