

# HPTLC (High Performance Thin Layer Chromatography)

HPTLC gives even greater resolution and separation of components than normal TLC. It uses chromatographic stationary phases of even better separation efficiency and employs state of the art instrumentation for all steps in the procedure from precise sample application, standardized reproducible chromatogram development and software-controlled evaluation. HPTLC shows visually at a glance the similarities and differences between samples and references. Therefore, it can be used for analysis of raw materials & finished products, for the determination of purity (adulteration/fraud) and stability studies (shelf life). It can also be used for process development i.e. samples can be analysed at different stages of a process. By using reference standards, compounds can be quantified precisely.

## Example of uses:

- Pharmaceutical - Quality Control; Content Uniformity Test; Identity and purity checks; stability tests
- Herbals – Identification; Stability tests; Detection of adulteration; Assay of marker compounds
- Clinical - Lipids; metabolism studies; drug screening; doping control
- Food and Feed - Quality Control; Analysis of additives e.g. vitamins; pesticides; stability tests
- Cosmetics - Identity of raw material; Analysis of preservatives, colouring materials etc; screening of illegal ingredients
- Biotechnology - Characterization of enzymes (product profiles); Proteomics (coupling HPTLC to Mass Spectrometry); Process development and optimization;
- Process monitoring - Cleaning validation,
- Environment - Water; soil; residue analysis
- Forensics - Molecule investigation; dyestuff analyses

