

Chromatographic method development & pharmaceutical analysis

Method Lifecycle Management (MLCM)

- ▶ Method development in a QbD framework (Stage 1)
- ▶ Robustness testing (Stage 1&2)
- ▶ Validation studies (Stage 2)
- ▶ Stress, stability and release testing (Stage 3)
- ▶ Troubleshooting of existing methods (in all Stages)
- ▶ Consulting and Training



Analytical capabilities

- ▶ Chromatographic systems controlled by Empower 3 (Waters)
 - ▶ HPLC (Waters Alliance)
 - ▶ UPLC (Waters Acquity)
 - ▶ UHPLC (Waters Acquity ARC), bio-inert
 - ▶ SFC (Waters Acquity UPC²)
 - ▶ IC and GC
- ▶ Comprehensive sample preparation equipment
- ▶ Pharmaceutical Technology equipment
 - ▶ Incl. Dissolution tester
 - ▶ sub-visible particle (SVP) analyzer
- ▶ Stability and Photo-stability chambers

Detection capabilities

- ▶ Photo diode array UV detection (PDA)
- ▶ Fluorescence detection (FLD)
- ▶ Refractive index detection (RID)
- ▶ Evaporative light scattering (ELSD)
- ▶ Single-Mass detection (QDa)
- ▶ Tandem-Mass detection (TQD) with ESI and APCI ion source
- ▶ Charged-Aerosol detection (CAD)
- ▶ Chemiluminescence nitrogen (CLND)
- ▶ Conductivity detection
- ▶ Electrochemical detection (ECD)

Impurity profiling

- ▶ Nitrosamine screening using our validated and published SFC-MS/MS method
- ▶ Nitrosamine detection using LC-MS/MS with APCI ion source
- ▶ Extractables and leachables studies
- ▶ Stress testing with mass balance consideration
- ▶ Photo stability testing
- ▶ ICH short- and long-term stability studies