

ChromSword® stands for the **AUTOMATION** of the chromatographic method development and robustness testing process

ChromSword® is a powerful, specialized HPLC method development software capable of developing new methods or improving existing methods fully automatically. Easy to use, you can begin with only structural information, input your solvent, select a column from a column database. You can set optimization criteria such as resolution and run time. With the power to select from a column database, statistical optimization, pH, temperature, even separation of unknowns, ChromSword® Auto will definitely take the chore out of HPLC.

how to develop a method with ChromSword® Auto?

The analytical scientist's burden of profiling main compounds, **impurities and/or degradation products** can be quite challenging. Consequently, developing chromatographic methods to separate impurities requires substantial time and effort. Thus, there is a tremendous need to employ a comprehensive method development strategy to meet the challenges of high throughput and rapid turn-round time.

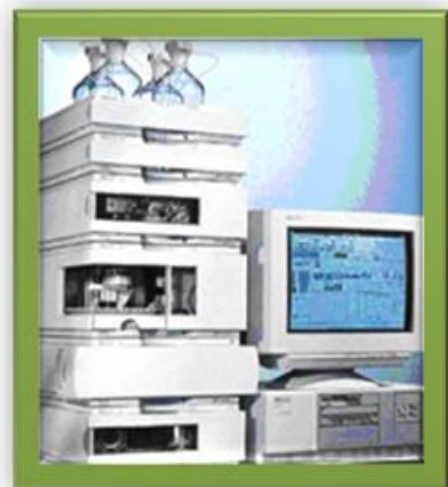
With ChromSword®Auto it is possible to apply a streamlined strategy for method development in which all the **column and solvent screening, optimization, and documentation steps** in the method development process are automated and performed under one software platform.

development of related substances/impurities methods with < 0.05 area%

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ChromSword® Auto 3.5



**support of
chiral method
development**



1. SCREENING of initial conditions

(ChromSword® Auto supports column and solvent switching valves)

- **RAPID (intelligent)** method development or **USER defined** method development are usually used for SCREENING of initial conditions (e.g. column, organic solvent, aqueous solvent).
- The RAPID and USER defined method development options offer a crude method that may still be acceptable (sample profiling).
- The **RAPID** method development performs three gradient attempts at separating all the components in the given sample using a ChromSword® algorithm. The advantage of the rapid method development mode is that it is conducted in a **2 to 3 hour** timeframe.
- The chromatographer determines specific screening conditions in the USER defined mode depending on experience. The user sets up a sequence of actions for the software to complete. The software controls the hardware to execute simple defined instructions.
- Selection of the best column/mobile phase system for a sample is subjective, but **straightforward**. The best column/mobile phase combination is based on the number of peaks generated, their peak shape, and total run time.

1. FINE (FULL) method optimization

- The best column, buffer, and organic solvent combination derived from the initial screening can be used in the **FINE optimization**, and **the software takes over the rest of the experiment**. The full optimization mode provides the best method of separation for a sample.
- The fully optimized method development option studies the elution of sample components in increments of percent organic and ascertains the total number of component peaks. The system either elects the best percent organic for an isocratic separation; or, it performs various gradient runs before finding one or possibly more finalized gradient methods for the scientist to choose from.
- The final optimized method is **documented** in a MSWord® document containing all of the method development history performed by ChromSword® Auto.
- Additionally, the software automatically equilibrates columns prior to sample injection and washes columns after use.

what sets

ChromSword® Auto apart?

- Ability to optimize the separation of a sample mixture with **no user information provided regarding the number of components or structure of components** in the sample.
- Mixtures with **unknown amounts of impurities and/or degradation products** can be fully separated with **little prior work done by the chromatographer**. ChromSword® Auto is a software package of choice for conducting automated HPLC-methods development particularly with the burden of the quite challenging impurity identification and quantitation.
- ChromSword® Auto, paired with the column/solvent screen, offers a **consistently faster and more efficient method development option** than traditional manual method development.
- ChromSword® Auto allows for **step-by-step documentation** of the method development process that is reliable, thorough, and critical for regulatory review.

hard and software support

Agilent 1100/1200/1200RR

ChemStation® 16 bit versions A 09.01 and A 09.03 or higher

ChemStation® 32 bit versions B.01 and higher

ChemStationPlus/Security pack compatible

EZChrom Elite® HPLC software

Hitachi LaChromElite®

HSM , EZChromElite software

Waters Alliance

Millennium 32, versions 3.2. and 4

Empower and Empower 2 Workstation

Knauer SmartLine LC

ChromGate software

further information from

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