

Product Information



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Introduction

Since 2010, Axel Semrau has been supplying complete workstations for the analysis of mineral oil hydrocarbons in food and packaging. During this time, many options for automating and simplifying this complex analysis have been developed by Axel Semrau and made available to the users. The software Chrolibri now complements these options as a simple and user-friendly solution for the evaluation of MOSH/MOAH analyses. It was developed under the direction of Thomas of the most experienced Funke, one MOSH/MOAH experts in Germany. The software package is thus based on the experience gained the evaluation of thousands MOSH/MOAH chromatograms. At the same time, it integrates the latest developments and conventions in the field of MOSH/MOAH analytics.

Challenges of MOSH/MOAH analysis

An integration software for MOSH/MOAH analysis must solve various tasks that go beyond the normal integration of single peaks:

- It must be possible to integrate broad, chromatographically unresolved peak collections, so-called Humps or <u>Unresolved Complex</u> <u>Mixtures (UCMs)</u>.
- Sharp peaks on these humps must be subtracted.
- It must be possible to divide the humps into retention time ranges that correlate with the chain lengths of *n*-alkanes. These individual ranges must be integrated separately.
- MOSH and MOAH chromatograms must be easily superimposed.
- Manual post-integration must be possible at any time.
- The baseline must be flexible and easily adaptable.
- It must be possible to subtract a blank chromatogram.
- All these parameters must be flexibly configurable

The structure of Chrolibri

The main window

After starting Chrolibri, the main window appears that shows the sequence list of the data files to be analyzed in the upper area. Further chromatograms or sequence lists can be opened quickly and easily using a file explorer. In the lower righthand area you can see the chromatogram window, in which the MOSH and MOAH channels of the analysis are displayed in parallel or superimposed. In addition to the chromatogram window, the parameters Analysis Method and Results of Analysis are displayed in various tabs in the lower left window. The results can also be seen in the sequence list. The structure of this window can be freely configured by the user. Modules can be shown or hidden. This allows direct access to all evaluation functions. The results of the analysis are immediately visible. Every user can adapt the system to his preferences: fast, simple, efficient developed by users for users.

The method editor

In the method editor, the basic parameters of the analysis are defined, such as the internal standards for verification and quantitation, the retention time ranges for the various hydrocarbon fractions and the conditions for the automatic check of the verification standards. Chrolibri comes with preconfigured methods that, for example, meet the requirements of DIN EN 16995. If required, however, all parameters can be easily adjusted by the user.



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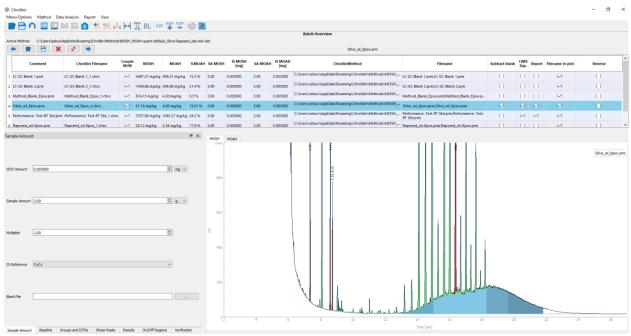


Figure 1: Main window - everything in direct access.

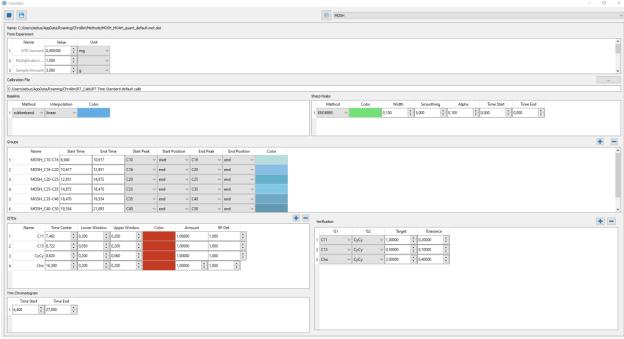


Figure 2: Method Editor - preconfigured methods, easily customizable.



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Data import and documentation of the results

Chrolibri can directly read the files of the data system Clarity used in the CHRONECT LC-GC Workstations. LabSolutions and OpenLab are in development. Data from other data systems can be easily imported using the AIA format. After the evaluation, the results should of course

also be documented. For this purpose, Chrolibri offers adaptable reports that can contain not only the numerical results but, very important for MOSH/MOAH analysis, also the chromatograms. The reports can be printed or saved as pdf file. An interface for transferring the result data to LIMS rounds off the functional range of Chrolibri.

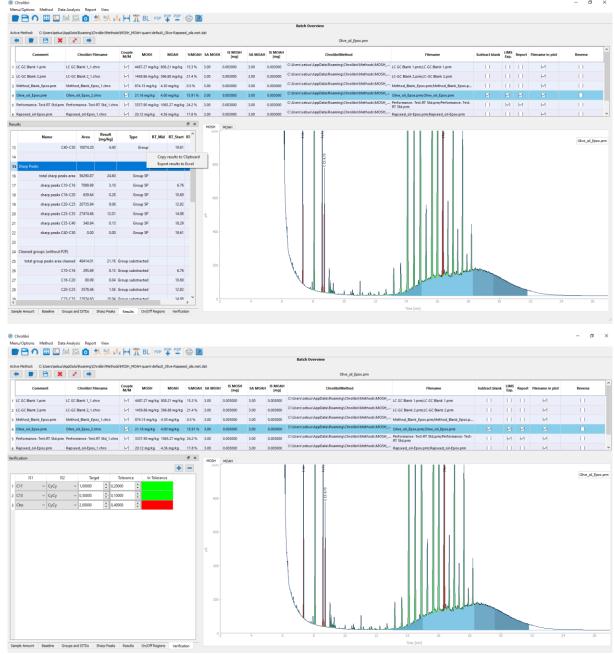


Figure 3 and 4: Direct result display - Excel export of both channels and verification via ISTDs.



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Figure 5: Reports - customizable and saveable as pdf file and LIMS export.

Summary

Chrolibri can be combined with the Hump Inspector software and is the ideal tool for all users of the CHRONECT Workstation MOSH/MOAH. It offers a powerful, yet easy to use, solution for the evaluation of MOSH/MOAH analyses, based on many years of experience with this complex analysis - by users for users.

Subject to technical changes

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