SHIMADZU
Excellence in Science

Software for PONA/DHA Analysis

PONAsolution
for LabSolutions

ASTM Standards: D5134, D6729, D6730, D6733.

PONA/DHA analysis determines the individual chemical components in petroleum products and groups them into PONA types based on chemical structure. Understanding these compositions is essential for process control and quality management in refineries. The PONAsolution is an analytical software for LabSolutions that effectively supports PONA/DHA analysis.
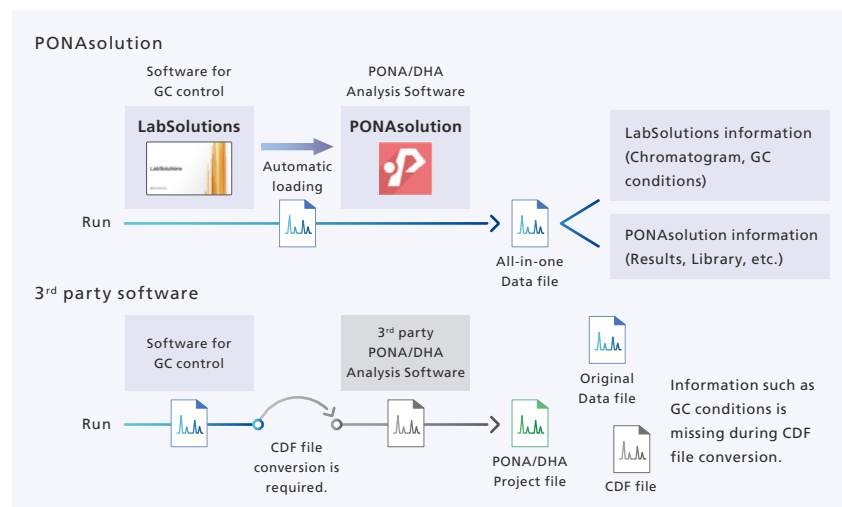
PONA: Paraffins, Olefins, Naphthenes, and Aromatics
DHA: Detailed Hydrocarbon Analysis

Simple Data Management and Workflow

PONAsolution does not require data file conversion. After analysis, the software can automatically read and analyze data. All settings and results information are stored in a single data file, simplifying data management.

Workflow for PONA/DHA analysis

PONAsolution

Software for GC control

PONA/DHA Analysis Software

LabSolutions → Automatic loading → **PONAsolution**

Run

All-in-one Data file

LabSolutions information (Chromatogram, GC conditions)

PONAsolution information (Results, Library, etc.)

3rd party software

Software for GC control

3rd party PONA/DHA Analysis Software

Run → CDF file conversion is required. → PONA/DHA Project file

Original Data file

CDF file

Information such as GC conditions is missing during CDF file conversion.

- Support for dual line analysis
- Simultaneous connection of 4 GCs and automatic data analysis on a single PC
- Simple Results View
- PDF Report Output/Print Function

Results View

Report

Rich Identification Support Functions

AART for DHA |
Automatic library correction using retention index

The libraries used for each ASTM standards are fully registered with retention index. With the help of n-alkanes for multiple point correction, high-precision retention time correction can be achieved, allowing for accommodation in the following situations:
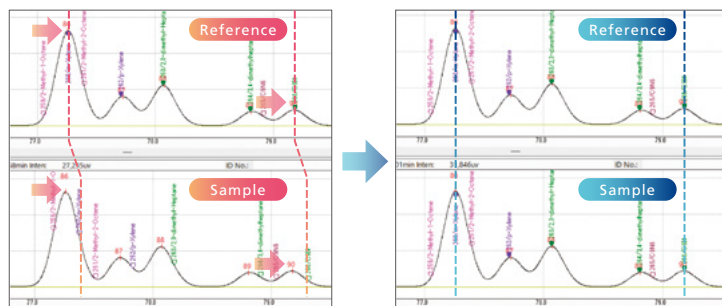
- When the column is trimmed or changed
- When the library is installed to a new instrument

AART: Automatic Adjustment of Retention Time

Manual identification of n-alkanes.

Automatic correction of retention times for each component based on retention index.
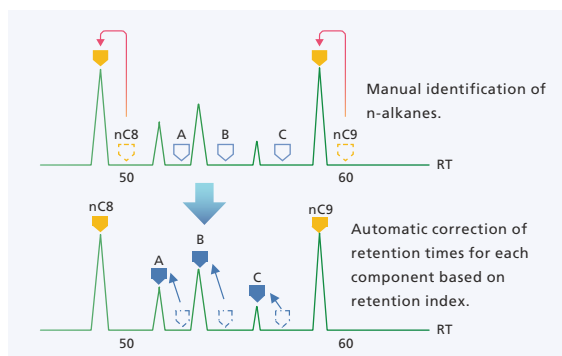
Two Point Identification | Partial Library Correction

If you want to modify only a specific interval, PONAsolution can automatically modify the retention time of components by specifying a range.
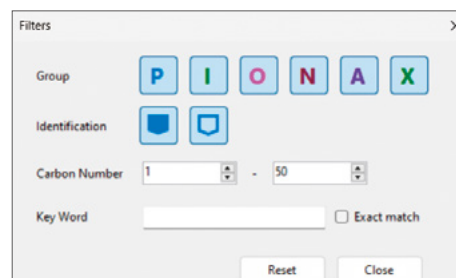

PIONA Filter

If you only want to check the position of olefin (O), switch the marker display on the chromatogram for each PIONA type.

"Two point identification" and "PIONA filter" can be used in combination.
For example, you can modify the retention time of the library with two-point identification, focusing only on the aromatic components (A).

Reliable quality and total support

Application | Detailed Hydrocarbon Analysis (DHA)

Controlling the concentration of components in petroleum products is extremely important for process control and quality control at refineries. Gasoline contains hundreds of components, and DHA/PONA analysis requires high column separation performance. By using the GC-2030 and SH-PONA columns, optimal separation and reliable results can be achieved. For more details, please refer to the application notes.

Application

System Configuration

GC	GC-2030 (SPL,FID)
Cooling System	CRG-2030 (LN$_2$/CO$_2$)
Auto Injector	AOC-30i/AOC-20i Series

Software requirements

GC Control software	LabSolutions LC/GC after Ver. 5.96 SP3
Software for PONA/DHA analysis	PONAsolution Ver.6
OS	Windows 10, 11
PC	Please check the PC requirements for LabSolutions LC/GC.

Comprehensive support system

Shimadzu offers high-quality analysis systems combining GC equipment, software and consumables. Leave installation, inspection and after-sales support to us.

SHIMADZU

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