

Detailed Hydrocarbon Analyzer – Model 4050

The Model 4050 Detailed Hydrocarbon Analyzer provides a complete analysis of petroleum products in the range of gasoline through high-efficiency gas chromatography. Using a convenient graphical interface, the software provides a one-screen display to visually observe the chromatogram and manipulate the data calculation in order to obtain the optimum results for analysis and data presentation.

The Detailed Hydrocarbon Analyzer software uses integrated chromatographic data from PerkinElmer's TotalChrom® Workstation.

Detailed Hydrocarbon Analysis Summary Report - Report Date: 1/4/2006 12:56:12 PM					
RawFile: C:\Program Files\DHA Application Software\Sample Files\D98041701 pna-vi.cdf		Acquired: 04/17/98 08:40:52			
Sample: PONA-VI Mixture (04/16/98)		Analyzed: 1/4/2006 12:56:12 PM			
Processed 489 Peaks					
Reference File: C:\Program Files\DHA Application Software\References\D98041701 PONA-VI Mixture (04 16 98).DHA					
Comments: Normalized to 100.0000%					
SUMMARY REPORT					
Group Type	Total (Mass%)	Total (Vol%)	Total (Mol%)		
Paraffins:	13.6890	14.9517	11.9663		
I-Paraffins:	22.0155	23.5131	17.5828		
Olefins:	13.6515	14.6925	13.8663		
Napthenes:	10.6165	10.2881	8.8479		
Aromatics:	17.4581	14.9060	13.3920		
Total C14+:	1.2247	1.1999	0.5506		
Total Unknowns:	1.8505	1.9758	1.1996		
Oxygenates:					
Total:	19.4942 (Mass%)	18.4730 (Vol%)			
Total Oxygen Content:	5.8471 (Mass%)				
Multisubstituted Aromatics:					
Average Molecular Weight	71.8024	11.0262 (Vol%)			
Relative Density:	0.6017				
Vapor Pressure:	2.9085				
Calculated Octane Number:	83.3091				
	IBP	T10	T50	T90	FBP
Boiling Point (Deg F)	31.10	133.16	228.97	345.47	488.66
Percent Carbon:	80.5542	Percent Hydrogen:		13.5987	
Bromine Number (Calc):	24.1896				

Summary report of detailed hydrocarbon analysis.

Key Benefits

- Meets methodology requirements as described in ASTM Methods D5134, D6729, D6730 and D6733
- Quick database creation
- Fast peak identification and results processing
- “Unknowns” tab lists unidentified peaks in order of concentration
- “Unknowns” indexer takes the user directly to the unknown peak for manual identification
- Unique dashboard feature continuously presents the user with all calculated results; results are instantly recalculated when changes are made
- Hydrocarbon group-type filtering
- Full preview/printing of reports
- Results are ‘bound’ with the chromatographic data for instant retrieval/archiving
- Original files and data are never affected (21 CFR Part 11/ISO 17025)
- Result files are saved as CDF (AIA) format files and can be accessed by any third-party application that supports reading the AIA file format
- Result files work as fully-functional reference databases
- Full reports are stored with results for easy retrieval without reprocessing
- Support for component databases to C₂₆ and beyond (extended and biodiesel analyses)
- Support for automated post-acquisition reporting and transfer to LIMS
- Formula creation for expanded reporting
- Post-run application links to extend functionality
- Built-in chemical and physical property calculations:
 - Vapor pressure
 - Oxygenate content
 - Relative density
 - Average molecular weight
 - Calculated research octane number
 - % carbon, % hydrogen
 - Calculated bromine number
 - Mass% and Vol% multisubstituted ring aromatics
 - TBP boiling-point distribution
 - Wt%, Vol%, Mole% of types by carbon number
 - Wt%, Vol%, Mole% of individual components

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