



# Full Range of SIMDIS Solutions

### Simulated Distillation Solutions for True Boiling Point Determination up to C120

- Workflow oriented, user-friendly SIMDIS XLNC<sup>™</sup> software
   Software
- Turn-Key solutions for all sample types
- Includes calibration and system performance check samples and all calculations
- Compliant with global standard test methods.

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## SIMDIS Solutions

# COMPLETE RANGE OF SIMULATED DISTILLATION ANALYSIS SOLUTIONS UPTO C120

Boiling point data is a major specification in characterizing petroleum streams. PAC provides complete, turn-key gas chromatographic solutions for accurate determination of true boiling point data - from naphtha up to crude oil samples. By completely automating every step in the analysis, AC SIMDIS applications provide fast and accurate boiling point results.

PAC adds unique value to the industry by offering a 100% guaranteed solution, delivered fully factory calibrated, tested to certified reference materials, fine-tuned fully dedicated to methods specified by the user. PAC qualified service engineers commission the instrument and provide operator/user training.

#### IN FULL COMPLIANCE WITH WOLRDWIDE STANDARD TEST METHODS

PAC's dedicated involvement in regulatory organizations guarantees that the system and the software calculations are in accordance with with accepted methods (ASTM, IP, ISO, DIN & others) listed in gasoline, jet fuel and diesel specifications.

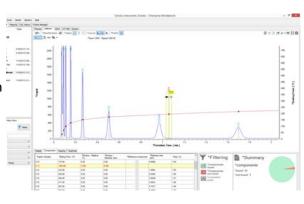
### KEY ADVANTAGES

#### BETTER HARDWARE, SMARTER SOLUTIONS

- Temperature Programmable Inlet. Recognized "Best in Market" inlet for Simulated Distillation. Easy to maintain, with Septum Purge for clean repeatable baselines
- Light Solvent Optimized Automated Liquid Sampler(ALS): Improves injection precision by optimized cooling , optimizes airflows around sample trays in ALS (lowering temperature)
- AC CNS SIMDIS: Dedicated analyzer for simultaneous determination of boiling range distribution of Carbon, Nitrogen, and Sulfur in crudes as such or in final products
- AC 8634<sup>™</sup> Analyzer: For accelerated D86 correlation data of jet fuel and diesel
- AC Crude Oil analyzer: For more accurate data. Combines D7169 High temp SIMDIS results with D7900 DHA FE results, avoiding D7169 CS2 related quenching
- SIMDIS XLNC Software:
  - Compatible with major Chromatography Data Systems (tested with Openlab, EZChrom, Chemstation, ChromPerfect, Chromeleon, Galaxie, CompassCDS, Atlas.
  - Supports Spanish, Chinese, Portuguese, Russian, Korean and French languages.

#### EASY OPERATION FOR ACCURATE ANALYSIS

- Fast, Work-flow, oriented intuitive interface (one-click access, drag-and-drop, smart filter)
- Configurable import, processing, reporting and LIMS transfer of results.
- Automated Blank subtraction, calibration and system validation
- Define Different Test Methods and Product Definitions
- Start and End elution algorithm, Solvent Detection&Exclusion
  Customizable QC and Calibration Definitions, graphical QC
- results (instant pass/fail view)
- Drag&Drop DHA Crude Merge function
- Audit Trail and tracking of linked data files.



#### NEW - AUTOMATE YOUR LAB WITH SUPPORT FOR NETWORKED CHROMATOGRAPHY **DATA SYSTEMS**

AC SimDis XLNC software now includes a highly advanced architecture to seamlessly integrate the application into your networked CDS environment.

AC SimDis XLNC helps you to optimize your laboratory workflow by easily accessing data from different workstations, and reduce transcription errors with advanced LIMS and CDS integration. Reduce cost and improve quality by using the advanced automation capabilities embedded in the software.

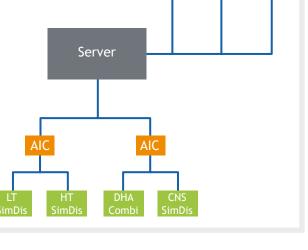
AC DHA XLNC is built on the same platform and can be easily installed alongside SimDis software. A similar look and feel guarantees operator training requirements are kept to a minimum. Additionally, this ensures merging SimDis and DHA data for crude oil analysis is highly intuitive.

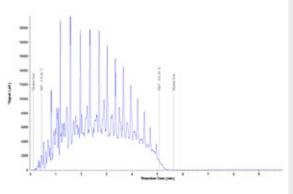
#### DEDICATED CORRELATIONS AND CALCULATIONS

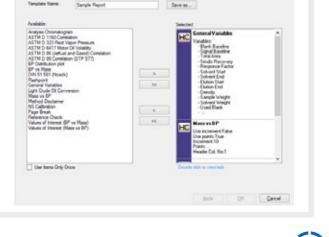
- Correlation to D86 (Physical Distillation) for Jet Fuel and Diesel
- Correlation to D86 according STP-577
- Correlation to D1160
- NOACK according DIN 51581-2
- Motor Oil Volatility (MOV) according ASTM D6417
- Reid Vapor Pressure (RVP) according ASTM 323
- Light Crude Oil Volume conversion
- Customizable Cut points (temperature and %OFF)
- Flashpoint according ASTM D7215
- Volume Average Boiling Point (VABP)
- Bureau of Mines Correlation Index (BMCI)
- Average Molar Mass
- Specific reports for CNS (Sulfur and Nitrogen SIMDIS

#### EXTENSIVE SIMDIS REPORT OPTIONS, FULLY CONFIGURABLE PER PRODUCT/TEST

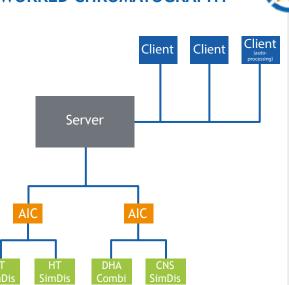
- · Chromatogram and boiling point distribution plot
- BP vs %OFF, Recovery for non-eluting samples
- Retention Time or Boiling point x-axis, Temperature in °C/F
- Overlays of (corrected) Sample, Blank, Calibration chromatogram, BP plot, Cut points, Carbon number
- All Correlations and Specific Calculations
- QC Reference check-report
- DHA Crude Merge Report
- Specific CNS reporting
- Peak skew and column resolution parameters
- Output of report to several formats, such as CSV/Excel, PDF file, or copy-to-clipboard for reviewing the results outside the SIMDIS software







Report Layout Configuration Fo



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#### SPECIFICATIONS

ORDERING INFORMATION										
SINGLE CHANNEL SYSTEMS	GCG2123.894A/C SIMDIS D2887 SYSTEM ON 120V/230V 8890 GC, INCLUDES AC FAST SIMDIS AND AC8634									
	GCG2123.886A/C SIMDIS HT 750 SYSTEM ON 120V/230V 8890 GC									
	GCG2123.891A/C SIMDIS D7096 SYSTEM ON 120V/230V 8890 GC									
	GCG2123.892A/C SIMDIS D7213 SYSTEM ON 120V/230V 8890 GC									
DUAL CHANNEL SYSTEMS	GCG2125.886A/C DC SIMDIS HT 750 SYSTEM ON 120V/230V 8890 GC									
	GCG2125.	.891A/C	DC SIMDIS D7096 SYSTEM ON 120V/230V 8890 GC							
	GCG2125.	892A/C	DC SIMDIS D7213 SYSTEM ON 120V/230V 8890 GC							
	GCG2125.894A/C DC SIMDIS D2887 SYSTEM ON 120V/230V 8890 GC, INCLUDES AC FAST SIMDIS AND AC8634									
*Additional SIMDIS Channels are available upon request (other channel must also be SIMDIS)										
ANALYSIS PERFORMA	NCE									
Precision	According specific method or better									
Sensitivity	According specific method or better									
Accessories included	Operating manual; Calibration samples; Reference samples; Startup kit; Carrier gas filters; Oven exhaust deflector; Column									
UTILITIES & REQUIRE	MENTS			μ.		-	ш. 			
Carrier gas	Helium or Nitrogen									
FID Fuel	Hydrogen (99.999%) Nitrogen (99.999%) Compressed air (99.999%)									
Cooling	Liquid nitrogen, or $CO_{2}$ (depending on method) for fast cooling									
System power	110-230V									
METHOD OVERVIEW										
ASTM	D3710	D7096	D2887	D5307	D5442	D7213	D7398	D6352	D7169	D7500
Max. Carbon number	C <sub>15</sub>	C <sub>16</sub>	C <sub>44</sub>	C <sub>44</sub>	C <sub>44</sub>	C <sub>60</sub>	C <sub>60</sub>	C <sub>90</sub>	C <sub>100</sub>	C <sub>110</sub>
Sample Range	Gasoline Naphta	Gasoline Naphta	Jet Fuel Diesel	Crude Oil	Petroleum derived waxes	Lube oil base stocks	FAMEs Biodiesel blends	Lube oil base stocks	Residue Crude oil	Distillates Base Oils Lubricating Base Stocks
Boiling range sample	FBP <260°C (500F)	FBP <280°C (536F)	FBP <538℃ (1000F)	n.a	FBP <538°C (1000F)	IBP >100°C (212F) FBP >615°C (1138F)	IBP >538°C (1000F) FBP >700°C (1292F)	IBP >174°C (345F) FBP >700°C (1292F)	FBP <720℃ (1328F)	IBP >100°C (212F) FBP >735°C (1355F)
OTHER METHODS	ISO 3924	/ IP 406	IP 480 / E	N 15199-1	/ DIN 51.435	IP 507 / EN	15199-2	IP 545 / EN	15199-3	
Max. Carbon number	C <sub>44</sub>		C <sub>120</sub>			C <sub>120</sub>		C <sub>120</sub>		
Sample Range	Jet Fuel, Diesel		Lube oil base stocks (totally eluting)			Residue		Crude oil		
Boiling range sample	FBP <538%	C (1000F)	IBP >100°C (212F) FBP >750°C (1382F)			IBP >100°C (212F) FBP >750°C (1382F)		IBP >174°C (345F) FBP >750°C (1382F)		

#### **ABOUT PAC**

PAC develops advanced instrumentation for lab and process applications based on strong **Analytical Expertise** that ensures **Optimal Performance** for our clients. Our analyzers help our clients meet complex industry challenges by providing a low cost of ownership, safe operation, high performance with fast, accurate, and actionable results, high uptime through reliable instrumentation, and compliance with standard methods.

#### **HEADQUARTERS**

PAC LP | 8824 Fallbrook Drive | Houston, Texas 77064 | USA T: +1 800.444.8378 | F: +1 281.580.0719 Our solutions are from industry-leading brands: AC Analytical Controls, Advanced Sensors, Alcor, Antek, Herzog, ISL, Cambridge Viscosity, PSPI, and PetroSpec. We are committed to delivering superior and local customer service worldwide with 16 office locations and a network of over 50 distributors. PAC operates as a unit of Roper Technologies, Inc., a diversified technology company and a constituent of S&P 500, Fortune 1000, and Russell 1000 indices.



Contact us for more details.

Visit our website to find the PAC representative closest to you.