JAS SimDis-Analysator

Simulated Distillation

jas Analyzer

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Simulated Distillation (Simulated Distillation, SimDis) basierend on gaschromatographischen Analyses is one of the most common verwendeten Analysetechniken in the petrochemischen Industry. A SimDis report provides the user with valuable information about the boiling point distribution of crude oils. These Informationen are for Raffinerien unerlässlich, as they, because of which, the most efficient way therefore operation and control of distillation processes determine. A robust and reliable Simpi unverzichtbares Werkzeug for the optimalen and economic operation of a refinery.

JAS offers a complete solution for simultaneous distillation up to C120. The key components of the JAS SimDis Analyzer are the UNIS HT SimDis inlet system and the unique JAS SimDis software.

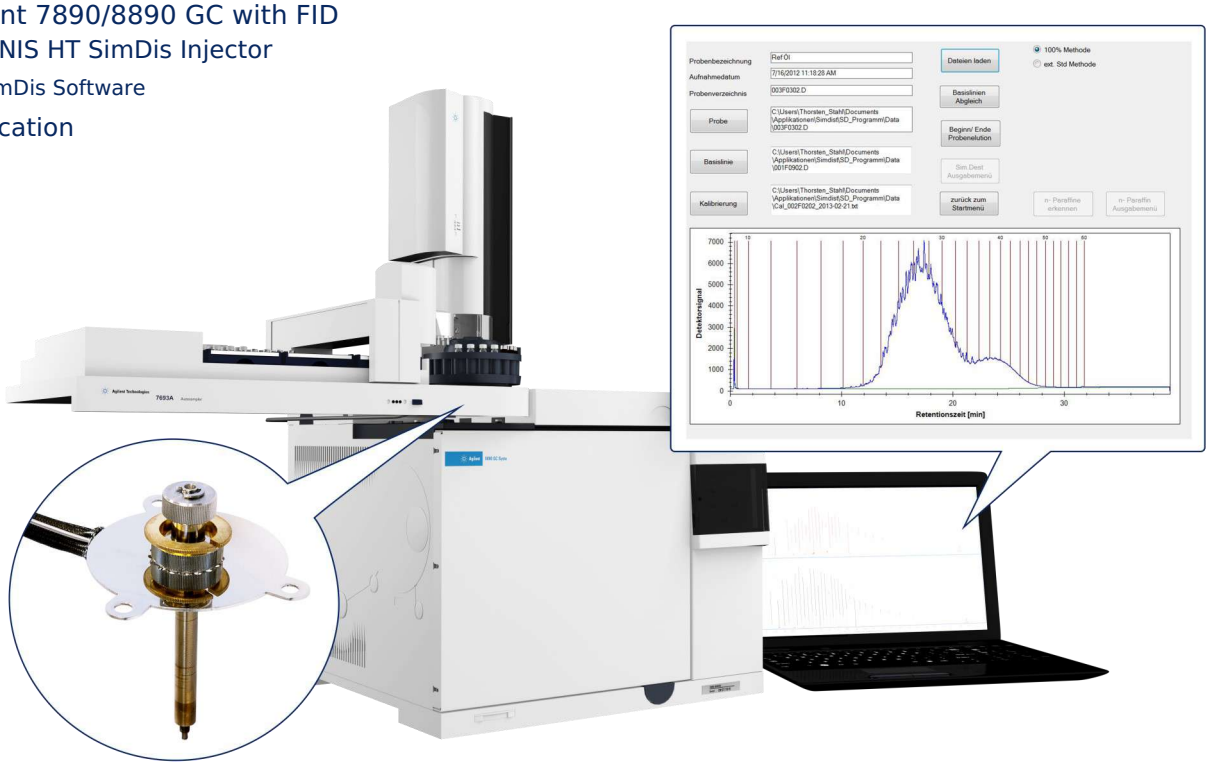
The JAS SimDis-Analysator was entwickelt to the Anforderungen folgenden Methoden to fulfill:
ASTM D2887, D3710, D5399, D6352, D6417, D7096, D7169, D7213, D7398, D7500, DIN EN 15199-1, DIN E 51454, DIN 51435, DIN 51581-2, ISO 3405.

Features & Benefits

- Available with Agilent 7890/8890 GCs and as retrofitting for existing 6890 GCs
- Unique JAS UNIS HT SimDis Injector
  * Maximum temperature: 450 °C
  * Low thermal mass for rapid heating and cooling
- User-friendly JAS SimDis software

The JAS SimDis Analyzer includes:

- Agilent 7890/8890 GC with FID
- JAS UNIS HT SimDis Injector
- JAS SimDis Software
- Application



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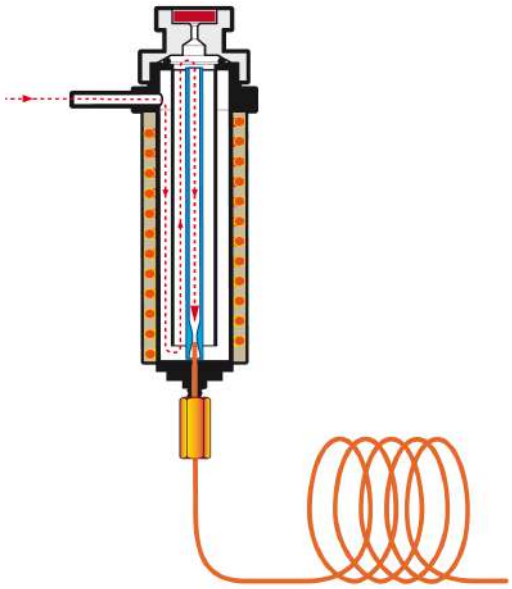
Simulated distillation

JAS UNIS HT SimDis inlet

The JAS UNIS HT SimDis inlet system was developed specifically for SimDis analyses. One of the most important aspects of this type of application is discrimination-free sample injection. The UNIS HT SimDis inlet was designed to enable direct sample transfer from the liner to the analytical column (on-column injection).

The UNIS HT SimDis inlet operates without a split outlet. The low thermal mass of this inlet enables rapid heating and cooling—only by ambient air.

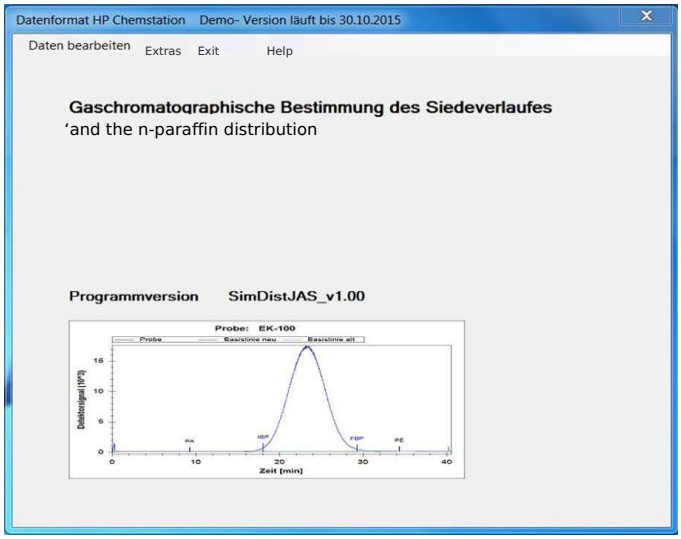


- Splitless and PTV mode
- Max. temperature: 450 °C
- Max. temperature ramp: 720 °C/min
- Special SimDis liner
- SimDis analyses up to C120

JAS SimDis software

The JAS SimDis software includes all functions relevant for comprehensive analyses and has a user-friendly, easy-to-operate graphical user interface.

- Calibration
- Blank run subtraction
- Reference sample
- Chromatogram with IBP and FBP
- Boiling point distribution
- Boiling point % result
- Standard cut-off
- User-defined cut-off
- Conversion from wt% to vol%



One software license per workstation

- Up to 4 SimDis GCs can be evaluated
- Offline use on another computer

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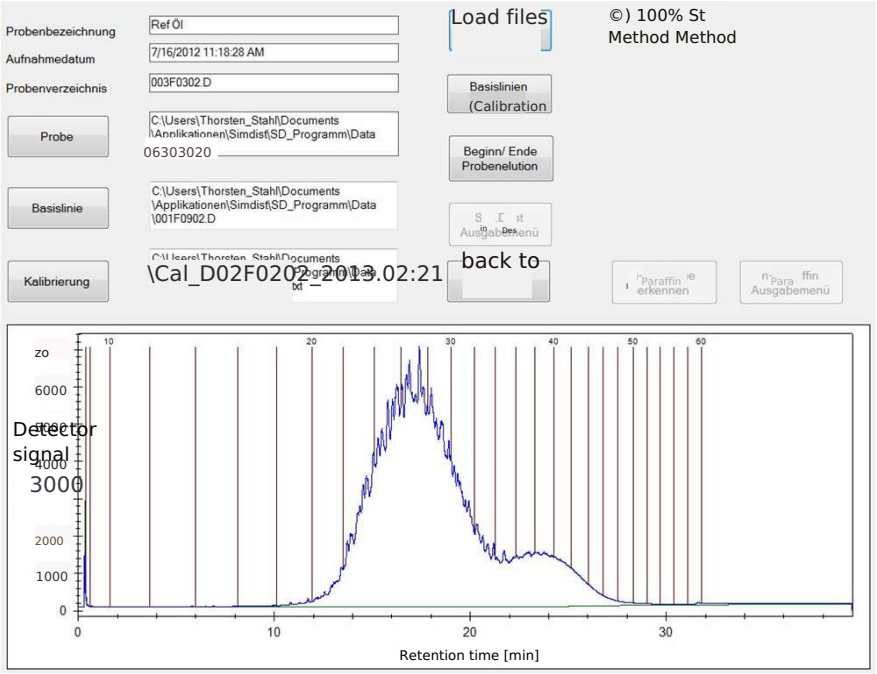
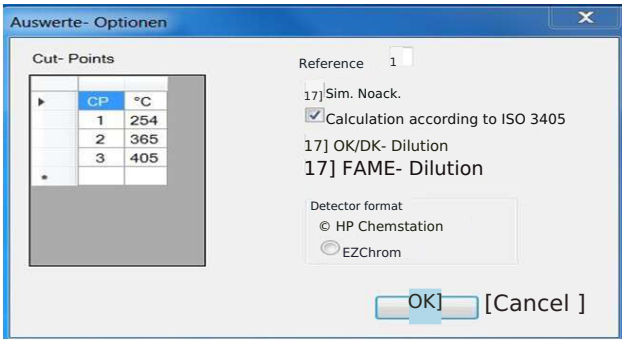
Simulated Distillation



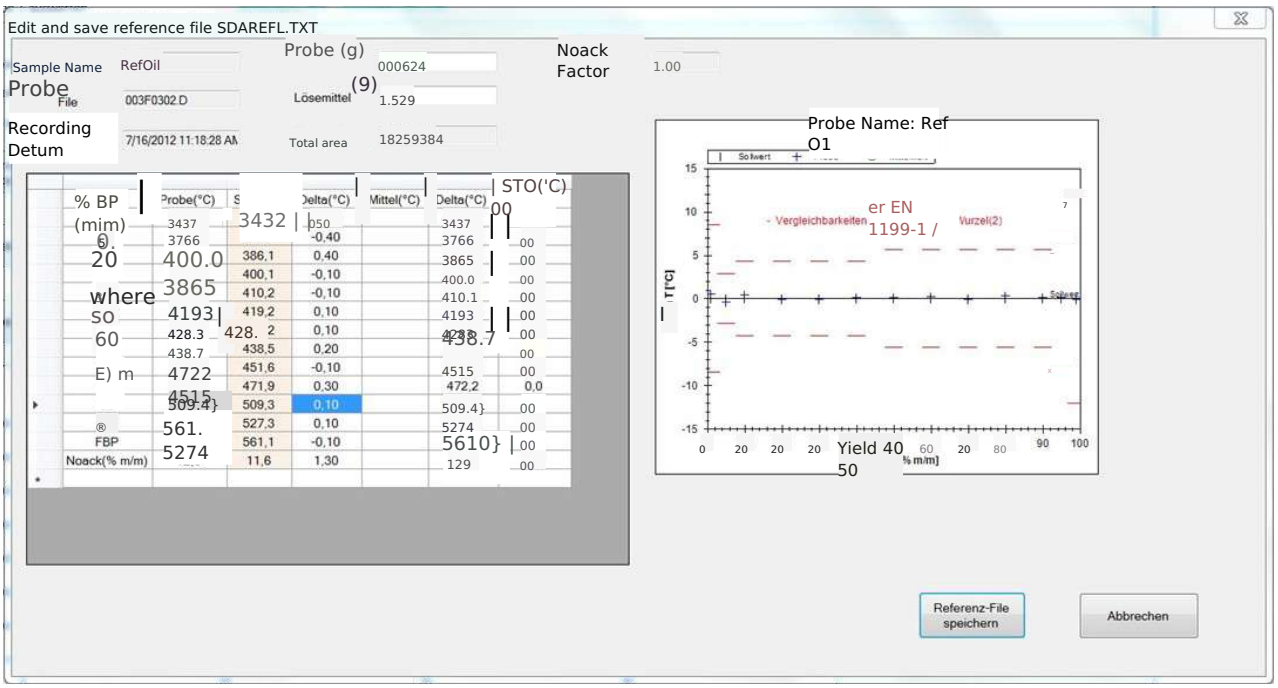
100% and external

Standard Evaluation

Evaluation options freely selectable



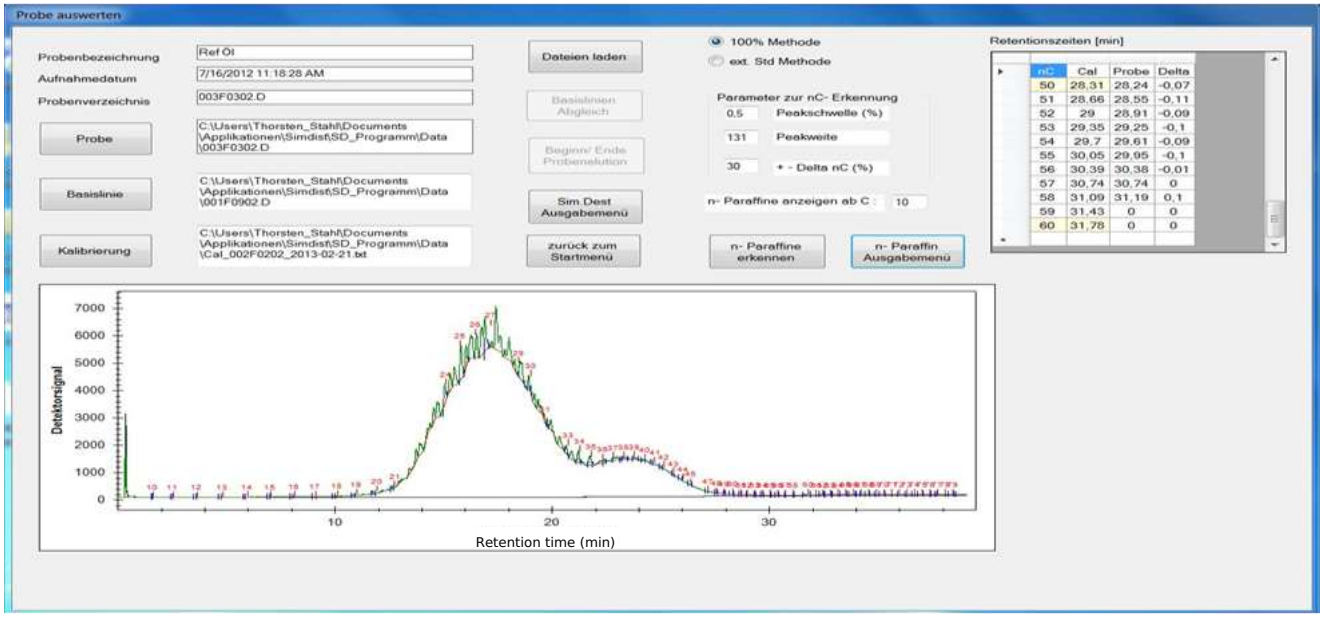
Statistical Reference Oil Reporting

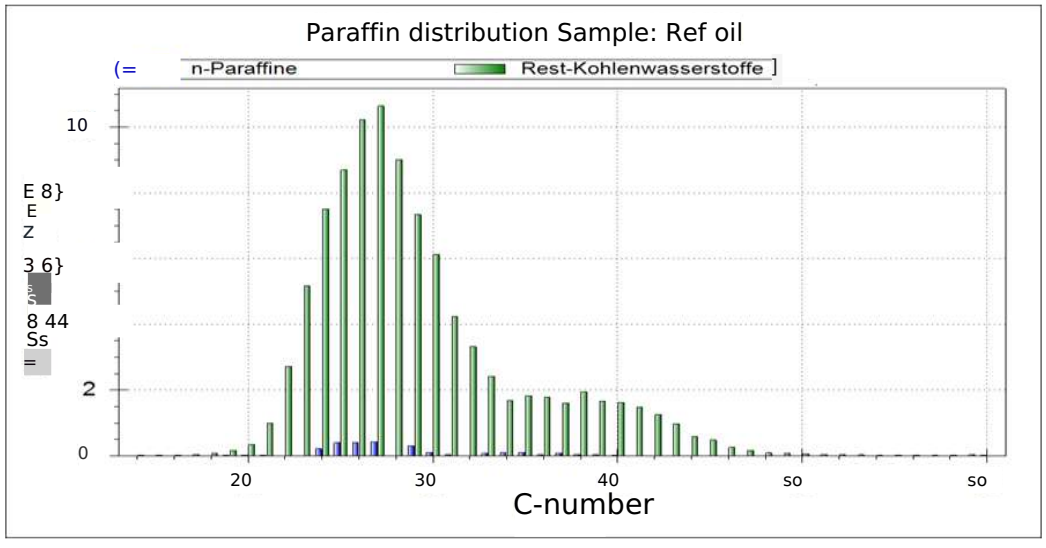


JAS SimDis-A nalysator

Simulated distillation

n-paraffin determination





Available software modules for automotive applications DIN E 51454

Accepts data format:

+ OpenLAB CDS ChemStation / EZChrom

- ChemStation version N B.403 SP1

+ EZchrom Ver. 3.3.2 SP1

Automatic data transfer from chromatography software to SimDis

Joint analytical systems GmbH

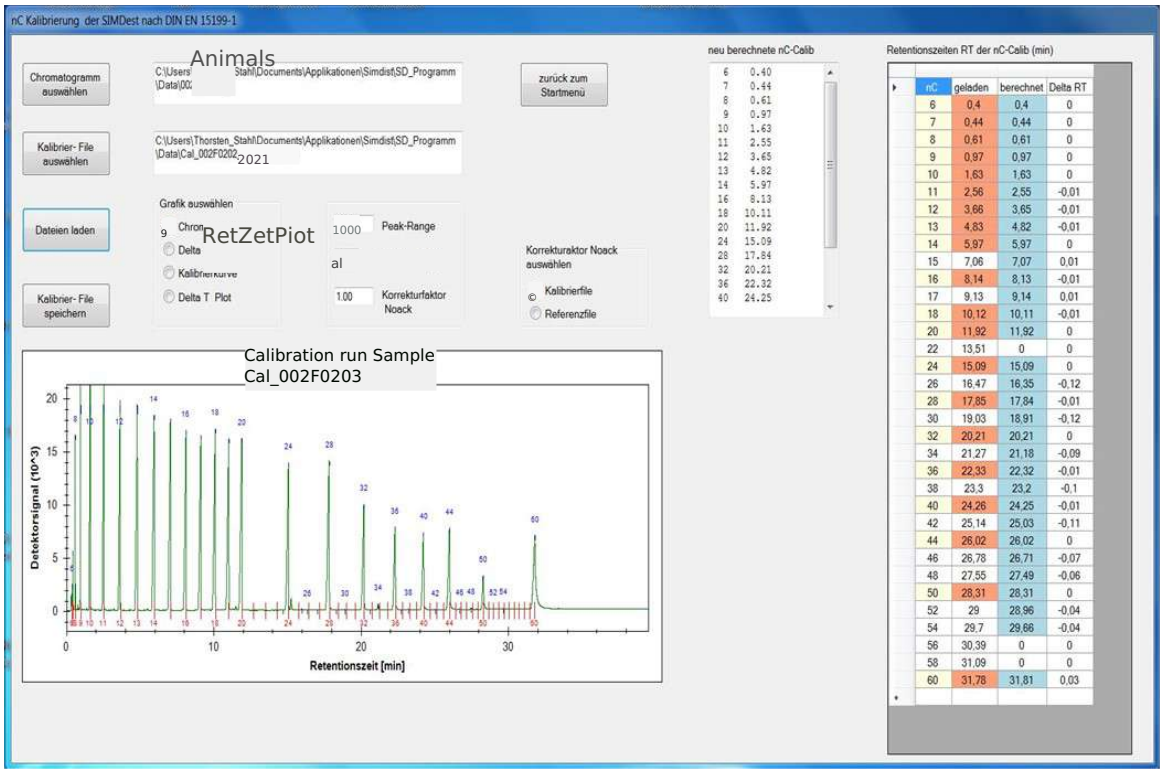
Available software modules

Datenformat	: HP and EZ
n-paraffin distribution x	: yes
Batchauswertung	
Kraftstoffverdünnung Motorenöl	: yes
FAME in engine oil	: yes
External standard	: yes

JAS SimDis Analyzer

Simulated Distillation

Reading the C-number in the calibration file with graphical assistance



Overview of supported ASTM / DIN / EN / ISO standards

ASTM D2887	Mineral oils and fractions with an end boiling point of 538 °C or lower and an boiling range of greater 55,5 °C
ASTM D3710	Mineral oils and fractions with an end boiling point of 260 °C or lower (packed column)
ASTM D5399	Hydrocarbon solvents with a boiling start of 37 °C, a maximum end boiling point of 285 °C and a boiling range of 5-150 °C
ASTM D6352	Erdöldestillatfraktionen with a Siedebeginn of over 174 °C and an end boiling point below 700 °C (C90)
ASTM D6417	Machine oils with a boiling start above 126 °C and samples, which lubricating base oils with end boiling points include from 615 °C contained
ASTM D7096	Gasoline and liquid Benzin-Mischkomponenten with a Siedeende of 280 °C or lower (capillary column)
ASTM D7169	Crudes, atmosphärische and Vakuumrückstände with a Siedepunktverteilung above 720 °C (C100)
ASTM D7213	Petroleum distillates with a boiling onset above 100 °C and a boiling end below 615 °C (C60)
ASTM D7398	Mixtures of diesel fuel and biodiesel (B1 to B100) with a boiling onset above 100 °C and a boiling end below 615 °C
ASTM D7500	Distillates and lubricating oils with a boiling onset above 100 °C and a boiling end below 735 °C
DIN EN 15199-1	Medium distillates and base oils with a boiling onset above 100 °C and a boiling end below 750 °C
DIN E 51454	Bestimmung of Kraftstoffanteilen in gebrauchten Motorenölen by means of Gaschromatographie
DIN 51435	Mineralölfraktionen with a Siedebeginn of mindestens 160 °C and a boiling end below 615 °C
DIN 51581-2	Gaschromatographische Bestimmung of the Verdampfungsverlustes of Mineralölerzeugnissen
ISO 3405	Light and middle distillates from petroleum with a boiling onset above 0 °C and a boiling end below 400 °C

About Joint Analytical Systems

Since 1995 JAS has been a Premier Solution Partner and Value Added Reseller of Agilent Technologies. We are an innovative-driven organization that offers customized solutions for GC, GCxGC, UGC, GC-AED, GC-MS, GC-QQEQ, LC, LC-MS, LC-QQ@Q and @Q-TOF LC-MS applications.

JAS serves key industries such as

* Chemical
* Petrochemical/HPI
* Environmental
* Food & Flavor
* Forensic

JAS Products for GC

* Atomic Emission Detector
+ UNIS Inlet Systems
* CryoTrap
* EzPrep - Preparative Fraction Collector
+ Olfactometer
* Customized Valving Systems
* GICU - Gas Injection Control Unit

Joint Analytical Systems GmbH

Carl-Zeiss-Straße 49
47445 Moers
Germany

Phone: +49 2841 9871 100
Fax: +49 2841 9871 222
e-Mail: info@jas.de
Internet: www.jas.de