

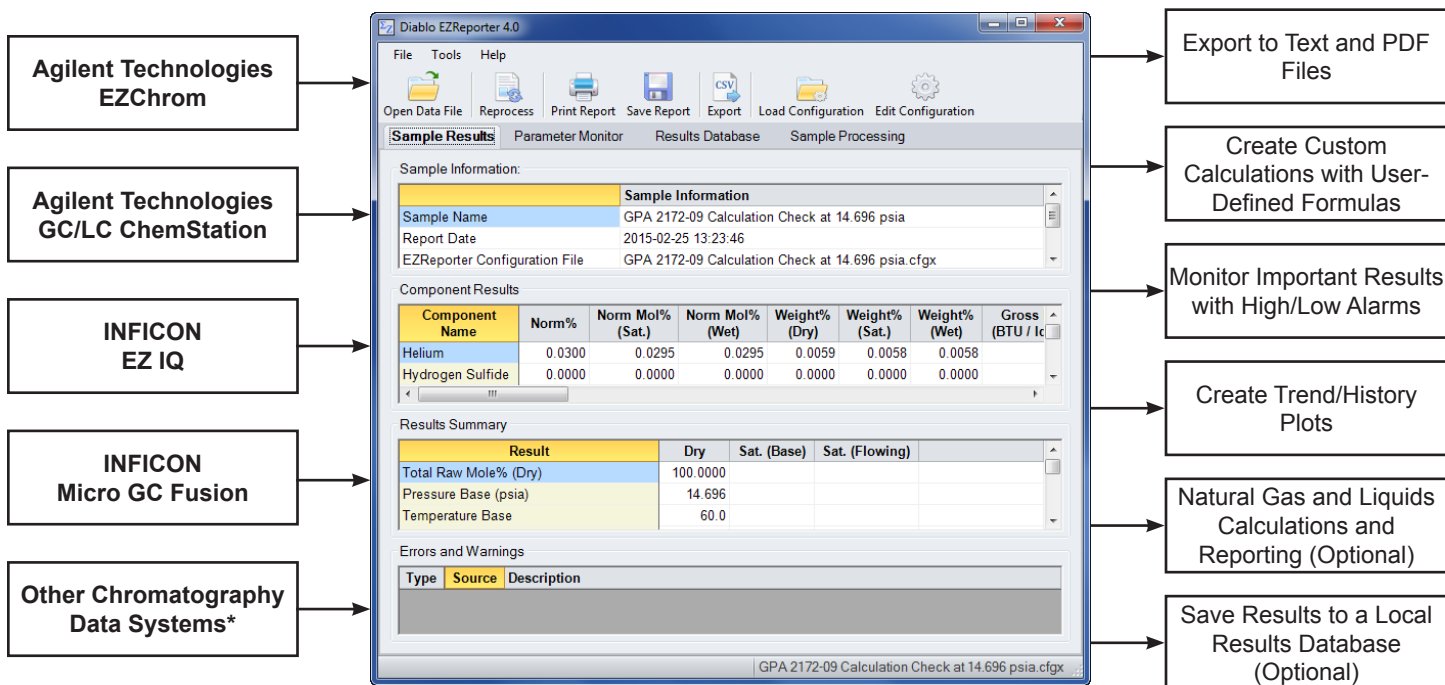


Diablo Analytical, Inc.

A Technology and Development Company

EZReporter 4.0 Software

Flexible, Advanced, Post-run Reporting and Analysis for Chromatography Data Systems



*Contact Diablo Analytical for information other supported chromatography data systems

EZReporter Editions

The following table lists the different editions of EZReporter 4.0 that can be licensed and the modules that are included in each of those editions. Refer to the data sheet for each module for more information on the complete feature set for that module. Part numbers and prices for new licenses and upgrades from earlier versions are provided on the EZReporter 4.0 Price List.

Software Edition	Modules					
	Standard	NGA	NGL	RDB	Processing	Instruments
Data Analysis	X	X	X			
Standard	X				X	1
Results Database (RDB)	X			X	X	1
Natural Gas Analysis (NGA)	X	X			X	1
Natural Gas Liquids (NGL)	X	X	X		X	1
Natural Gas Analysis Database	X	X		X	X	1
Natural Gas Liquids Database	X	X	X	X	X	1



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Standard Edition

The Standard Edition can process calibrated peak results automatically from any supported chromatography data system. It allows for flexible reporting and exporting, parameter alarms, and history/trend plotting among other capabilities.

- **Multi-Channel Reporting:** Results from multiple detector channels can be combined into a single report with both raw and normalized amounts (normalized across all channels) displayed.
- **Custom Calculations:** You can create custom formulas using GC component results and other results. The results of the custom calculations can be displayed on the printed report, monitored, trend plotted, and exported to text files.
- **Easily Update the Component List:** The list of components to process and report is completely customizable. Components can be added to or deleted from the component list. Natural Gas Analysis/Liquids calculation constants can be loaded from standard data sources or entered manually.
- **Data Export:** Results can be exported to a text file for transfer to a Laboratory Information Management System (LIMS), Process Control System, or Microsoft Excel. The format of the text file can be customized easily using EZReporter's flexible **Export Templates**.
- **Custom Sample Information:** You can create custom sample information fields to include in the printed report, exported results, and data files.
- **Monitor Important Results:** You can monitor important results and assign high/low visual alarms to notify you when those results exceed the limits.
- **Trend/History Plots:** You can create trend plots of important results to see how they change with time.

Optional Modules

The following optional modules can be added to the Standard Edition to provide additional capability.

- **Natural Gas Analysis Module:** Adds standard GPA 2172, GPA 2177, ASTM D3588, and ISO 6976 natural gas analysis calculations and reporting. The results from these calculations are available for use in custom calculations, reporting, monitoring, trend plotting, and exporting.
- **Natural Gas Liquids Module:** Performs standard Natural Gas Liquids extended analysis and reporting based on the GPA 2186-02 and GPA 2186-14 (and related) standards.
- **Results Database Module:** Allows you to capture all results and save them in a local SQLite database. Results in the database can be searched by sample name and date range and can be batch re-processed for printing, exporting or trend plotting.

Supported Data Systems

EZReporter 4.0 currently supports automatic processing of results from the following chromatography data systems*

- Agilent Technologies EZChrom (Elite, SI, and OpenLab)
- Agilent Technologies GC/LC ChemStation ("Classic" and OpenLab)
- INFICON EZ IQ
- INFICON Micro GC Fusion

*Please contact Diablo Analytical regarding support for other chromatography data systems.

30-Day Trial Download

You can download a fully-functional, 30-day trial version of the EZReporter software from our web site. This allows you to evaluate all of the modules and determine if they meet your specific needs prior to a purchasing a license:

<http://www.diabloanalytical.com/ezr/ezreporter.htm>



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EZReporter 4.0 Price List

The following table lists the different editions of EZReporter 4.0 that can be licensed and the modules that are included in each of those editions. The corresponding part numbers and prices for new licenses, add-on modules, and software upgrades from BTU Calculator or earlier versions of EZReporter are listed in the tables below.

Software Edition	Modules					
	Standard	NGA	NGL	RDB	Processing	Instruments
Data Analysis	X	X	X			0
Standard	X				X	1
Results Database (RDB)	X			X	X	1
Natural Gas Analysis (NGA)	X	X			X	1
Natural Gas Liquids (NGL)	X	X	X		X	1
Natural Gas Analysis Database	X	X		X	X	1
Natural Gas Liquids Database	X	X	X	X	X	1

New Licenses

Edition	Part Number	Price
Data Analysis	D-EZXDA-1	\$500
Standard	D-EZXSTD-1	\$500
Results Database	D-EZXRDB-1	\$1000
Natural Gas Analysis	D-EZXNGA-1	\$1000
Natural Gas Liquids	D-EZXNGL-1	\$1500
Natural Gas Analysis Database	D-EZXNGADB-1	\$1500
Natural Gas Liquids Database	D-EZXNGLDB-1	\$2000

Optional Add-on Modules

Module	Part Number	Price
Add NGA to Standard Ed.	D-EZXNGASTD-1	\$500
Add NGL to Standard Ed.	D-EZXNGLSTD-1	\$1000
Add Results Database	D-EZXRDBMOD-1	\$500
Add NGL to NGA Ed.	D-EZXNGLNGA-1	\$500
Additional Instrument	D-EZXINST-1	\$250
Unlimited Instruments		Quote
Ship Kit on USB Drive	D-EZXKIT-1	\$20

Software Upgrades

Upgrade from EZReporter 1.0, 2.0, 3.0	To EZReporter 4.0	Part Number	Price
BTU Calculator (All Versions)	NGA Edition	D-EZXBTUUPG-1	\$500
Standard Edition	Standard Edition	D-EZXSTDUPG-1	\$250
Results Database Edition	Results Database Edition	D-EZXRDBUPG-1	\$500
Natural Gas Analysis Edition	Natural Gas Analysis Edition	D-EZXNGAUPG-1	\$500
Natural Gas Analysis Edition	Natural Gas Liquids Edition	D-EZXNGLUPG-1	\$750
Natural Gas Analysis Database Edition	Natural Gas Analysis Database Edition	D-EZXNGADBUPG-1	\$750
Natural Gas Analysis Database Edition	Natural Gas Liquids Database Edition	D-EZXNGLDBUPG-1	\$1000

Annual Software Support Subscription

New EZReporter 4.0 licenses (including upgrades from EZReporter 3.0) will include one year of software support. During the support period you will be able to install all upgrades of the EZReporter software (including major upgrades). Once your software support has expired, you will not be able to install any upgrades released after the date your support expired. However, you will be able to continue to use your existing version of the software – you just won't be able to install any later upgrades until you renew support. The price to renew annual software support is 25% of the price of a new license for your edition and options. Support renewal will take effect from the end date of the expired/current subscription, regardless of when the renewal is purchased.



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EZReporter 4.0 Enhancements

EZReporter 4.0 was completely re-written to take advantage of the latest software development technologies. While the overall “look and feel” of EZReporter 4.0 should be familiar to EZReporter 3.0 users, there are a large number of enhancements that have been made to the user interface and program functionality. Some of the more significant enhancements are described below.

New Editions and Modules

- A new “Data Analysis” Edition is being introduced with EZReporter 4.0. The Data Analysis Edition allows you to edit configuration files and reprocess EZReporter data files without requiring you to pay for an instrument processing license.
- The Natural Gas Liquids/Extended calculations and reporting have been moved to a separate Natural Gas Liquids Module that is licensed separately from the Natural Gas Analysis Module.

Data and Configuration Files Enhancements

- The format of EZReporter data files and configuration files has been changed from a Windows “INI” file format to an “XML” file format. This change removes limitations on the types of settings and data that can be stored in the files and will allow better support for languages other than English.
- EZReporter 4.0 data files can contain the original configuration file that was used to generate the report. This can make it easier to reproduce a report on a different computer.
- EZReporter 4.0 configuration files now contain the export and import templates that were previously saved in separate files. This makes it easier to back up complete configurations and transfer them to different computers.

Report Enhancements

- The fonts for virtually all text fields in EZReporter printed reports and corresponding PDF files can be now customized by the end user.

Text File Export Enhancements

- The export template that defines the format of the exported text file is now saved in the configuration file rather than being located in a separate export template file. This simplifies backup and transferring your configuration to a different computer.
- Export variables in the export template are now color-coded so that they can be easily identified when editing the template.
- A new tool allows you to select from a categorized list of export variables and insert the selected variable into the export template.

Results Processing Enhancements

- Sample processing from chromatography data systems is now integrated into EZReporter through the new “Sample Processing” tab and the use of a “plug-in” connector architecture to add support for different data systems.
- A sample processing log table displays recent samples that

have been processed by EZReporter. You can review the raw data from each sample in the table and re-submit the sample for processing.

- Processing of results from multiple instruments is now supported.
- You can now define “rules” to determine which configuration file is loaded when processing results. Rules can be based on the Sample Name, Method Filename, Sample Comments, or User name. Each instrument can have its own set of rules.

License Activation Enhancements

- License activation can now be done automatically if your computer has an Internet connection. However, for computers without an Internet connection, manual activation is still an option.

Miscellaneous Enhancements

- The size and location of the main EZReporter program window and the configuration editor window are saved and restored upon startup.
- New user-interface elements like toolbars and navigation bars improve ease of use.
- You can now copy and paste results from the EZReporter result tables directly into Excel, Word, or other programs without having to export to a text file first.

Enhancements to Water Content Calculations (NGA Edition)

- A new Water Calculations page has been added to the configuration editor to help create reports requiring results to be calculated under different water content conditions.
- In addition to reporting “Dry” results, you can report “Saturated” results (results for a water-saturated gas at the base temperature and pressure), “Flowing” results (results for a water-saturated gas at a user-specified flowing temperature and pressure), and “As measured” results (results for a partially water-saturated gas as measured by an external water analyzer).
- You can enter the water amount for the “As Measured” calculation using units of either “Mole%” or “Pounds/MMCF”

Added GPA 2261-13 Reproducibility and Repeatability (NGA Edition)

- Support for the GPA 2261-13 reproducibility and repeatability criteria have been added. You can compare two results from the results database or compare a single result with a check standard using either the GPA 2261-00 or 2261-13 reproducibility or repeatability criteria.
- You can enter component amounts for a check standard to use in making reproducibility and repeatability comparisons with sample results.

Added GPA 2186-14 Support (NGL Edition)

- The GPA 2186-14 “Bridging” and “Allocation” calculation methods are now supported in addition to the GPA 2186-02, “Separate” and “Combined” calculation methods supported by EZReporter 3.0.



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EZReporter 4.0 Natural Gas Analysis Module

The EZReporter Natural Gas Analysis (NGA) Module is designed to perform standard Natural Gas and Refinery Gas Analysis heating value and related calculations. The results from these calculations are available for reporting, monitoring, trend plotting, and exporting.

Standard Calculations

The EZReporter 4.0 NGA Module can be configured to calculate and report results based on the following industry standards:

- GPA 2172
- ASTM D3588
- ASTM D2598
- GPA 2177
- ISO 6976
- ISO 8973
- GPA 2261-03 and 2261-13 Repeatability and Reproducibility*

*Requires Results Database license

With the optional Natural Gas Liquids module you can also calculate NGL / extended analysis reports based on the GPA 2186-02 and 2186-14 standards.

Summary of Component Results Calculated

- Normalized Mole%
- Normalized Weight%
- Normalized Liquid Volume%
- Gross Heating Value (BTU / ideal cu. Ft.) or Superior Calorific Value (MJ / m³) on a volumetric basis
- Gross Heating Value (BTU/lbm) or Superior Calorific Value (MJ / kg) on a mass basis
- Gross Heating Value (BTU/gal.)
- Superior Calorific Value (kJ / mol) on a molar basis (ISO only)
- Net Heating Value (BTU/ideal cu. ft.) or Inferior Calorific Value (MJ / m³) on a volumetric basis
- Net Heating Value (BTU/lbm) or Inferior Calorific Value (MJ / kg) on a mass basis
- Inferior Calorific Value (kJ / mol) on a molar basis (ISO only)
- Relative Gas Density (Specific Gravity)
- Gas Density (lbm / cu.ft. or kg/m³)
- GPM (Gal. / 1000 cu.ft.)
- Compressibility
- Molecular Weight
- Vapor Pressure (psia and psig)
- Relative Liquid Density (Specific Gravity)
- Liquid Density (lbm / gal.)
- Molecular Weight
- Volume (cu.ft. / gal)
- D2598 Vapor Pressure (psia and psig)
- D2598 Relative Density
- ISO 8973 Vapor Pressure (kPa)

Standard Component Data Sources

EZReporter 4.0 includes component physical property constants from the following standard data sources that can be used in the NGA calculations:

- GPA 2145-09
- GPA 2145-03
- GPSA Engineering Data Book
- GPA TP-17
- ASTM D3588-98 (2003)
- ASTM D2598-02 (2007)
- ISO 6976
- ISO 8973 (1977)

In addition, the component constants can be edited manually to use constants from other data sources.

Summary of Total Results Calculated

- Total Raw (unnormalized) Amount
- Water Mole Fraction and Mole% (Saturated, Flowing , or As Measured)
- Gross Heating Value (BTU / cu. ft.) or Superior Calorific Value (MJ / m³) on a volumetric basis (ideal and real)
- Gross Heating Value (BTU / lbm) or Superior Calorific Value (MJ / kg) on a mass basis
- Gross Heating Value (BTU / gal.)
- Superior Calorific Value (kJ / mol) on a molar basis (ISO only)
- Net Heating Value (BTU / cu. Ft.) or Inferior Calorific Value (MJ / m³) on a volumetric basis (ideal and real)
- Net Heating Value (BTU / lbm) or Inferior Calorific Value (MJ / kg) on a mass basis
- Net Heating Value (BTU / gal.)
- Inferior Calorific Value (kJ / mol) on a molar basis (ISO only)
- Relative Gas Density (ideal and real)
- Gas Density (lbm / ideal and real cu.ft. or kg / m³)
- Compressibility (Z) factor
- GPM
- Total Molecular Weight
- Wobbe Index
- Vapor Pressure (psia and psig)
- Liquid Density (lbm / gal. and lbm / bbl)
- Relative Liquid Density (Specific Gravity)
- Volume (cu.ft. / gal.)
- API Gravity
- D2598 Vapor Pressure (psia and psig)
- D2598 Relative Density
- ISO 8973 Vapor Pressure (kPa)



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Example NGA Report

The NGA report can be easily customized to add or remove results from the report, change the titles, captions, labels, and fonts.

Natural Gas Analysis Report						
Sample Information						
Sample Information						
Sample Name	GPA 2172-09 Calculation Check at 14.696 psia					
Report Date	2015-04-28 15:34:33					
EZReporter Configuration File	C6+ default.11.cfgx					
EZReporter Data File	GPA 2172-09 Example Data at 14.696 psia.ezrx					
NGA Phys. Property Data Source	GPA Standard 2145-09 (FPS)					
Data Source	Manually entered data					
Component Results						
Component Name	Ret. Time	Peak Area	Norm%	Gross HV (Dry) (BTU / Ideal cu.ft.)	Relative Gas Density (Dry)	GPM (Dry) (Gal. / 1000 cu.ft.)
Helium	0.000	0.0	0.0300	0.0	0.00004	0.003
Hydrogen	0.000	0.0	0.0000	0.0	0.00000	0.000
Nitrogen	0.000	0.0	0.3200	0.0	0.00310	0.035
Oxygen	0.000	0.0	0.0000	0.0	0.00000	0.000
Methane	0.000	0.0	83.0200	838.5	0.45985	14.084
Carbon Dioxide	0.000	0.0	2.0200	0.0	0.03069	0.345
Ethane	0.000	0.0	7.4500	131.8	0.07735	1.994
Propane	0.000	0.0	4.3900	110.5	0.06684	1.210
i-Butane	0.000	0.0	0.8300	27.0	0.01666	0.272
n-Butane	0.000	0.0	1.0800	35.2	0.02167	0.341
i-Pentane	0.000	0.0	0.3100	12.4	0.00772	0.113
n-Pentane	0.000	0.0	0.2500	10.0	0.00623	0.091
Hexanes Plus	0.000	0.0	0.3000	15.4	0.00965	0.130
Water	0.000	0.0	0.0000	0.0	0.00000	0.000
Total:			100.0000	1180.8	0.69979	18.618
Results Summary						
Result	Dry	Sat. (Base)				
Total Raw Mole% (Dry)	100.0000					
Pressure Base (psia)	14.696					
Temperature Base	60.0					
Water Mole%	-	1.7447				
Gross Heating Value (BTU / Ideal cu.ft.)	1180.8	1160.2				
Gross Heating Value (BTU / Real cu.ft.)	1184.6	1164.4				
Relative Density (G), Real	0.7018	0.7007				
Compressibility (Z) Factor	0.9968	0.9964				
Wobbe Index	1414.2	1391.1				

Diablo EZReporter Natural Gas Analysis

Optional Modules

The following optional modules can be added to the Natural Gas Analysis Edition to provide additional capability.

- **Natural Gas Liquids Module:** Performs standard Natural Gas Liquids extended analysis and reporting based on the GPA 2186-02 and GPA 2186-14 (and related) standards.
- **Results Database Module:** Allows you to capture all results and save them in a local SQLite database. Results in the database can be searched by sample name and date range and can be batch re-processed for printing, exporting or trend plotting.

Water Content Calculations

Natural Gas Analysis calculations are initially performed on a "Dry" basis. Results are then corrected and reported for the water content of the sample. EZReporter 4.0 supports the following water content calculations:

- **Saturated:** Results are calculated for a water-saturated gas at the base temperature and pressure.
- **Flowing:** Results are calculated for a water-saturated gas at a user-specified flowing temperature and pressure. EZReporter uses the "Water Content Correlation" calculation described in the GPA 2172-09 Standard.
- **As Measured:** Results are calculated for a partially water-saturated gas as measured by an external water analyzer. You can enter the water amount for the "As Measured" calculation using units of either "Mole%" or "Pounds/MMCF".

Export to Flow Calculators

EZReporter's flexible Export Template technology allows you to create templates to export results to flow calculators like Flow-Cal and PGAS and most any other flow calculator or database that can import data from text files.

Monitor Important Results

You can set high/low alarm limits for important results like the Total Un-normalized Amount to monitor the quality of your data.

Supported Data Systems

EZReporter 4.0 currently supports automatic processing of results from the following chromatography data systems*

- Agilent Technologies EZChrom (Elite, SI, and OpenLab)
- Agilent Technologies GC/LC ChemStation ("Classic" and OpenLab)
- INFICON EZ IQ
- INFICON Micro GC Fusion

*Please contact Diablo Analytical regarding support for other chromatography data systems.



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EZReporter 4.0 Natural Gas Liquids Module

The EZReporter Natural Gas Liquids (NGL) Module is designed to perform standard Natural Gas Liquids extended analysis and reporting based on the GPA 2186-02 and GPA 2186-14 (and related) standards. The results from these calculations are available for reporting, monitoring, trend plotting, and exporting.

Extended Analysis Calculation Methods

There are several different methods defined in the GPA 2186-02 and GPA 2186-14 methods to calculate extended (Hexanes Plus) analysis results. EZReporter 4.0 supports the following calculation methods:

Separate: The TCD and FID extended analysis results are each calculated and reported separately. The TCD results, including C6+, are used to generate the total sample results, while the FID results are used to generate the average extended fraction results.

Combined/Bridging: The TCD and FID extended analysis results are combined into a common report with the option of applying "bridge" factors to normalize the relative response from each detector. The C6+ results in the total sample report are derived from the individual combined FID extended component calculated results.

Allocation: The individual FID extended component amounts are first adjusted so that the total FID C6+ amount is equal to the total TCD C6+ amount. The C6+ results in the total sample report are then derived from the individual combined FID extended component calculated results.

Additional Extended Fractions

Typically the extended fraction is based on C6+ components. However, with EZReporter's flexible configuration editor you can define the extended fraction to include whatever component range is needed. In addition, you can also define additional extended fractions to report along side the C6+.

#	Include	Component
19	<input type="checkbox"/>	3-Methylpentane
20	<input type="checkbox"/>	n-Hexane
21	<input checked="" type="checkbox"/>	2,2-Dimethylpentane
22	<input type="checkbox"/>	Methylcyclopentane
23	<input checked="" type="checkbox"/>	2,4-Dimethylpentane
24	<input checked="" type="checkbox"/>	2,2,3-Trimethylbutane
25	<input type="checkbox"/>	Benzene
26	<input checked="" type="checkbox"/>	3,3-Dimethylpentane
27	<input type="checkbox"/>	Cyclohexane
28	<input checked="" type="checkbox"/>	2-Methylhexane
29	<input checked="" type="checkbox"/>	2,3-Dimethylpentane
30	<input checked="" type="checkbox"/>	1,1-Dimethylcyclopentane

Results Calculated for Extended Fractions

The following "average" results are calculated for the extended fraction:

- Gross Heating Value (BTU / ideal cu. ft.)
- Gross Heating Value (BTU / lbm)
- Gross Heating Value (BTU / gal.)
- Average Molecular Weight
- Vapor Pressure (psia or psig)
- Liquid Density (lbm / gal. and lbm / bbl)
- Relative Liquid Density
- Gas Density (lbm / cu.ft.)
- Volume (cu.ft. / gal.)
- API Gravity

Extended Calculation Configuration

NGL C6+/Extended Configuration

Report Control | Calculations | Report Format | Additional Fractions

Define Extended Fraction Components:

Last Component in TCD/Total Report: Hexanes Plus

First Component in FID/Extended Report: 2,2-Dimethylbutane

C6+ Combined Component: Hexanes Plus

Extended Report Calculation Method: Combined/Bridging

Enable bridging

Raw Amount Correction (Bridging Factors):

Apply Correction To:

FID/Extended Components

TCD/Total Components (GPA 2186-14)

Bridge Factor 1:

TCD/Total Component #1: i-Pentane

FID/Extended Component #1: i-Pentane*

Bridge Factor 2:

TCD/Total Component #2: n-Pentane

FID/Extended Component #2: n-Pentane*



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Example NGL C6+ Extended Report

The NGL report can be easily customized to add or remove results from the report, change the titles, captions, labels, and fonts.

Diablo EZReporter NGL/Extended Report GPA 2186-14 Allocation Method			
Sample Information			
Sample Information			
Sample Name	GPA 2186-14 Table 5D Example Calculation		
Report Date	2015-02-27 14:19:05		
EZReporter Configuration File	NGL Default (WIPct-Extended-Allocation).cfgx		
NGA Phys. Property Data Source	GPA Standard 2145-09 (FPS)		
Component Results			
Component Name	Norm Mole%	Norm Weight%	Norm Volume%
Nitrogen	0.0780	0.0500	0.0300
Methane	3.2209	1.1830	1.9091
Carbon Dioxide	0.1102	0.1102	0.0657
Ethane	36.6242	25.2130	34.2441
Propane	34.5903	34.9209	33.3179
i-Butane	8.3588	11.1230	9.5631
n-Butane	8.6602	11.5240	9.5455
2,2-Dimethylpropane	0.7180	1.1860	0.9615
i-Pentane	0.4438	0.7330	0.5674
n-Pentane	0.7416	1.2250	0.9399
Hexanes Plus	6.4540	12.7311	8.8558
Total:	100.0000	100.0000	100.0000
Results Summary			
Result	Dry	C6+	
Total Normalized Mole%	100.0000		
Total Normalized Weight%	100.0000		
Total Normalized Liquid Volume%	100.0000		
Gross Heating Value (BTU / lbm)	21565	20517	
Gross Heating Value (BTU / gal.)	87000	118998	
Total Molecular Weight	43.678	86.159	
Total Vapor Pressure (psia)	535.89	5.35	
Total Relative Liquid Density	0.4839	0.6957	
Total Liquid Density (lbm / gal.)	4.034	5.900	
Total Volume (cu.ft. / gal.)	35.0515	25.5466	
API Gravity	160.9	71.9	
C6+ Fraction: Total Raw Amount		12.7310	

Diablo EZReporter NGL/Extended Report

Optional Modules

The following optional modules can be added to the Natural Gas Liquids Edition to provide additional capability.

- **Results Database Module:** Allows you to capture all results and save them in a local SQLite database. Results in the database can be searched by sample name and date range and can be batch re-processed for printing, exporting or trend plotting.

Total Components Report

You can choose to print a Total Component Results report in addition to the standard report.

Total Component Results			
Component	Weight%	Mole%	Volume%
Nitrogen	0.0500	0.0780	0.0300
Methane	1.1830	3.2209	1.9091
Carbon Dioxide	0.1110	0.1102	0.0657
Ethane	25.2130	36.6242	34.2441
Propane	34.9209	34.5903	33.3179
i-Butane	11.1230	8.3588	9.5631
n-Butane	11.5240	8.6602	9.5455
2,2-Dimethylpropane	1.1860	0.7180	0.9615
i-Pentane	0.7330	0.4438	0.5674
n-Pentane	1.2250	0.7416	0.9399
2,2-Dimethylbutane	0.6605	0.3348	0.4886
2,3-Dimethylbutane	0.6689	0.3390	0.4856
Cyclopentane	0.9256	0.5764	0.5969
2-Methylpentane	1.1891	0.6027	0.6739
3-Methylpentane	1.0220	0.5180	0.7387
n-Hexane	5.4075	2.7408	3.9405
Benzene	0.9188	0.5138	0.5023
n-Heptane	0.4852	0.2115	0.3412
Toluene	0.7936	0.3762	0.4402
n-Octane	0.3844	0.1470	0.2633
n-Nonane	0.2755	0.0938	0.1846
Total:	100.0000	100.0000	100.0000

Export to Flow Calculators

EZReporter's flexible Export Template technology allows you to create templates to export results to flow calculators like Flow-Cal and PGAS and most any other flow calculator or database that can import data from text files.

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- Agilent Technologies EZChrom (Elite, SI, and OpenLab)
- Agilent Technologies GC/LC ChemStation ("Classic" and OpenLab)
- INFICON EZ IQ
- INFICON Micro GC Fusion

*Please contact Diablo Analytical regarding support for other chromatography data systems.



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EZReporter 4.0 Results Database Module

The optional Results Database Module allows you to capture results and save them in a local SQLite database. Results in the database can be searched by sample name and date range and can be batch re-processed for printing, exporting or trend plotting.

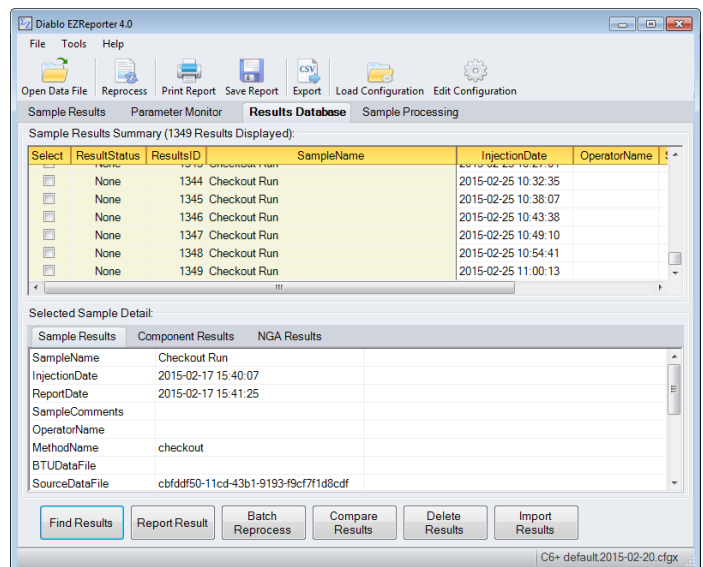
Results Database Features

- **Local “Zero Configuration” Database:** Sample results including sample information, individual component results, and calculated natural gas analysis (NGA) and natural gas liquids (NGL) results can be added automatically to a results database located on the local computer’s hard drive. Unlike traditional client-server databases, the results database requires no complex configuration by the end user.
- **Search for Results:** You can search the results database for historical results by Sample Name or Results ID. Results can be filtered further by Injection or Report Date and Results or Export Status.
- **Batch Processing:** You can batch reprocess multiple results from the database. Reprocessing options include printing reports, exporting results, and trend plotting results.
- **Statistical Analysis:** Statistics including average, standard deviation, %RSD, maximum, and minimum are calculated and displayed when performing sample name searches.
- **Compare Results:** A results comparison window can be used to compare the component normalized mole% values between two samples using either the GPA 2261 repeatability or reproducibility limits (or any other limits entered by the user).
- **Sample History Alarms:** You can create history alarms for important results based on the historical average and standard deviation of that result in a particular sample.
- **Track Result Status:** Each result in the database has a “Status” field that can be set to “None”, “Accept”, or “Reject” status. The status field can then be used in searches or batch reprocessing to filter which results are selected.
- **Import Results:** In addition to adding results to the database automatically when processed from one of the supported chromatography data systems, you can also import results into the database from a delimited text file.

Licensing

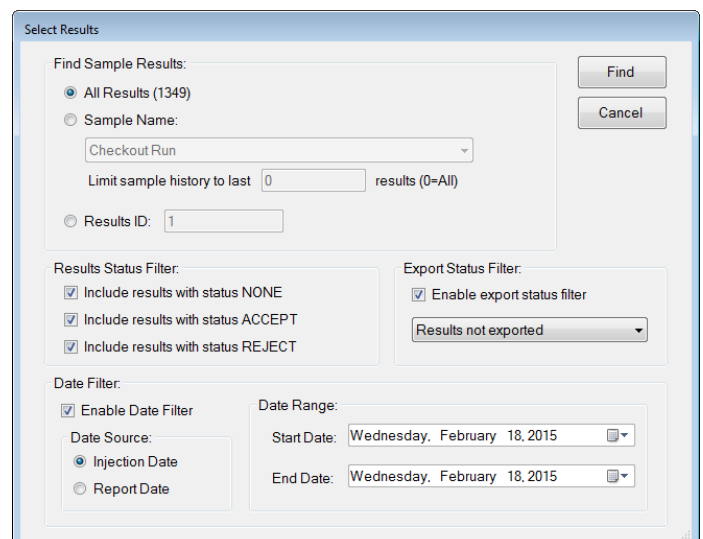
A license for the Results Database module can be added to any other EZReporter 4.0 software edition, including the Data Analysis Edition.

Results Database Window



Search for Results

You can search for results by Sample Name, Results ID, injection date or report date range, and other attributes.





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Compare Results

With the results database you can compare results with a known check standard or with another sample using the GPA2261-00, GPA 2261-13, or your own Repeatability and Reproducibility limits.

Compare Results						
Sample Information	Result 1	Result 2				
Results ID			1349			
Sample name	Check Standard	Checkout Run				
Injection Date	2015-02-25 11:00:13					
Component	Result 1 Amount	Result 2 Amount	Repeatability	Lower Limit	Upper Limit	Status
Helium	0	0	0.00	0.00	0.00	-
Hydrogen	0	0	0.00	0.00	0.00	-
Nitrogen	0	0	0.00	0.00	0.00	-
Oxygen	0	0	0.00	0.00	0.00	-
Methane	82.25	82.2054	0.03	82.22	82.28	Fail
Carbon Dioxide	0	0	0.00	0.00	0.00	-
Ethane	10	10.0251	0.03	9.97	10.03	Pass
Propane	4	4.01	0.01	3.99	4.01	Pass
i-Butane	1.5	1.5038	0.01	1.49	1.51	Pass
n-Butane	1.5	1.5038	0.01	1.49	1.51	Pass
i-Pentane	0.25	0.2506	0.01	0.24	0.26	Pass
n-Pentane	0.25	0.2506	0.01	0.24	0.26	Pass
Hexanes Plus	0.25	0.2507	0.01	0.24	0.26	Pass

Comparison Method: GPA 2261-00 GPA 2261-13
 Comparison Type: Repeatability (r) Reproducibility (R)

Set Standard Amounts

You can enter amounts for a calibration or check standard to use in the comparison with your sample results.

Standard Amounts	
Standard Description:	Check Standard
Standard Amounts:	
Component	Amount
Nitrogen	0
Oxygen	0
Methane	82.25
Carbon Dioxide	0
Ethane	10.0
Propane	4.0
i-Butane	1.5
n-Butane	1.5
i-Pentane	25
n-Pentane	25
Hexanes Plus	25
Total Amount: 100	

Comparison Report

You can print result comparison reports to document the sample comparisons.

Sample History Alarms

You can create history alarms for important results based on the historical average and standard deviation of that result in a particular sample.

Edit Parameter	
Select Parameter to Monitor:	Parameter: ComponentRaw (unnormalized) Amount
Component:	Methane
Options Alarms	
Alarm Control:	Alarm Type: Sample History Alarm Limits
<input checked="" type="checkbox"/> Enable High Alarm	<input checked="" type="checkbox"/> Enable Low Alarm
Average +/- Limit: 0	Limit to last 'n' results (0=All): 0
Limit Mode:	Result Status Filter:
<input type="radio"/> % Relative (Avg. +/- %Limit of Avg.)	<input checked="" type="checkbox"/> Status = 'None'
<input type="radio"/> Absolute (Avg. +/- Limit)	<input checked="" type="checkbox"/> Status = 'Accept'
<input checked="" type="radio"/> Std. Dev. (Avg. +/- Limit * Std. Dev.)	<input type="checkbox"/> Status = 'Reject'
<input type="radio"/> GPA 2261-00 Repeatability	
<input type="radio"/> GPA 2261-00 Reproducibility	
<input type="radio"/> GPA 2261-13 Repeatability	
<input type="radio"/> GPA 2261-13 Reproducibility	

Result Comparison Report

Sample Information

Sample Information	Result 1	Result 2
Results ID	1349	
Sample name	Check Standard	Checkout Run
Injection Date	2015-02-25 11:00:13	

Component Result Comparison

Component	Result 1 Amount	Result 2 Amount	Repeatability	Lower Limit	Upper Limit	Status
Helium	0	0	0.00	0.00	0.00	-
Hydrogen	0	0	0.00	0.00	0.00	-
Nitrogen	0	0	0.00	0.00	0.00	-
Oxygen	0	0	0.00	0.00	0.00	-
Methane	82.25	82.2054	0.03	82.22	82.28	Fail
Carbon Dioxide	0	0	0.00	0.00	0.00	-
Ethane	10	10.0251	0.03	9.97	10.03	Pass
Propane	4	4.01	0.01	3.99	4.01	Pass
i-Butane	1.5	1.5038	0.01	1.49	1.51	Pass
n-Butane	1.5	1.5038	0.01	1.49	1.51	Pass
i-Pentane	0.25	0.2506	0.01	0.24	0.26	Pass
n-Pentane	0.25	0.2506	0.01	0.24	0.26	Pass
Hexanes Plus	0.25	0.2507	0.01	0.24	0.26	Pass

Comparison Summary

Report Date	2015-03-02 11:03:03
Comparison Status	Fail
Comparison Method	GPA 2261-13
Comparison Type	Repeatability



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