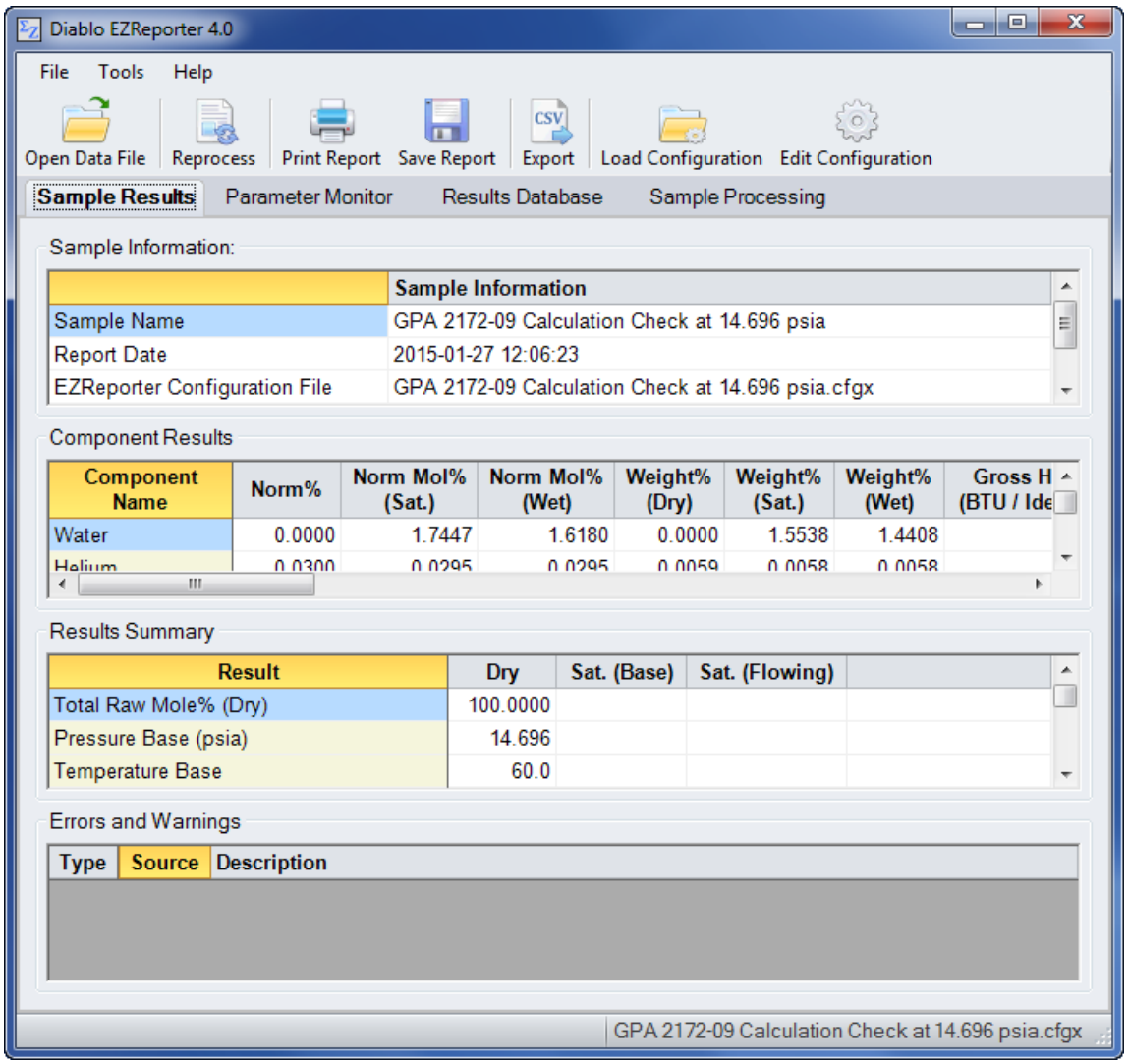
Diablo EZReporter 4.0

Fusion Connector Plugin



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Diablo Analytical EZReporter Software

EZReporter 4.0 INFICON Micro GC Fusion Connector Plugin

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Fusion Connector Plugin

Getting Started

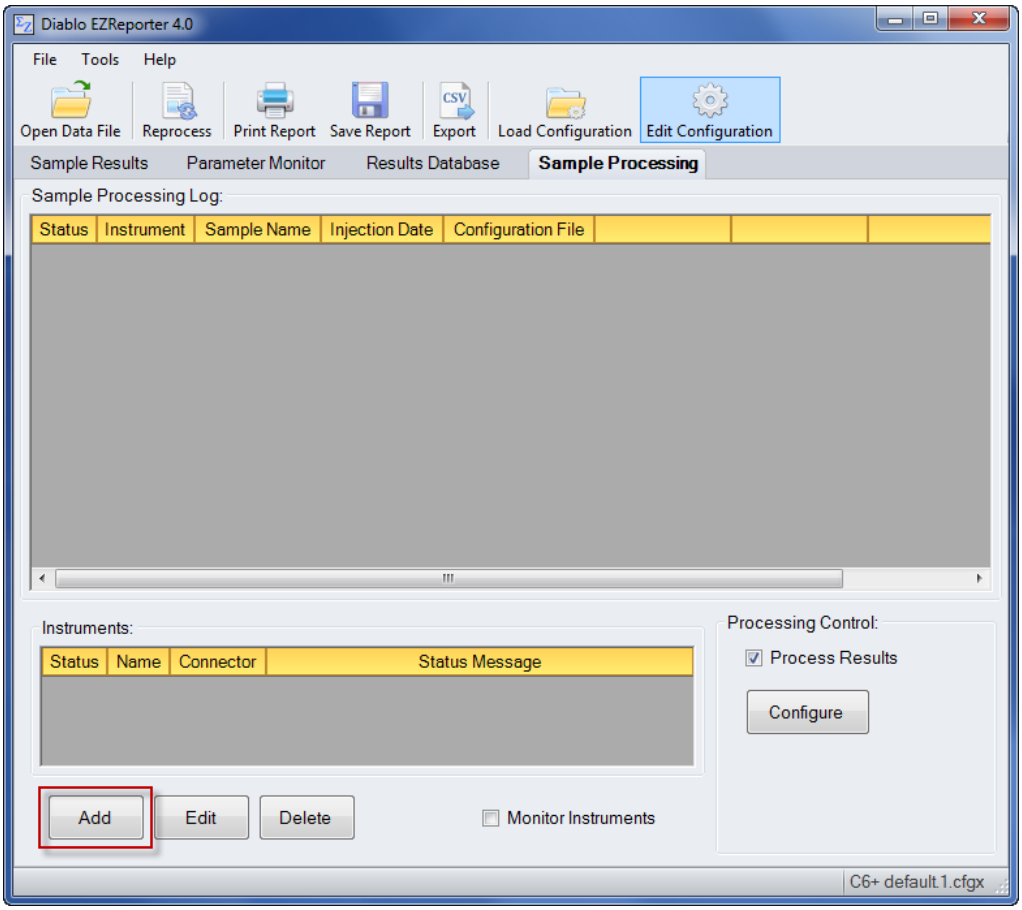
This document describes how to configure the INFICON Micro GC Fusion and the EZReporter 4.0 Fusion Connector Plugin so that results can be processed automatically at the end of each run.

Configure the Instrument

Before you can process results from the Micro GC Fusion instrument, you must add an instrument to the EZReporter Instruments table, Select the INFICON Fusion Connector as the data system connector, and then configure the connector settings.

Add an Instrument

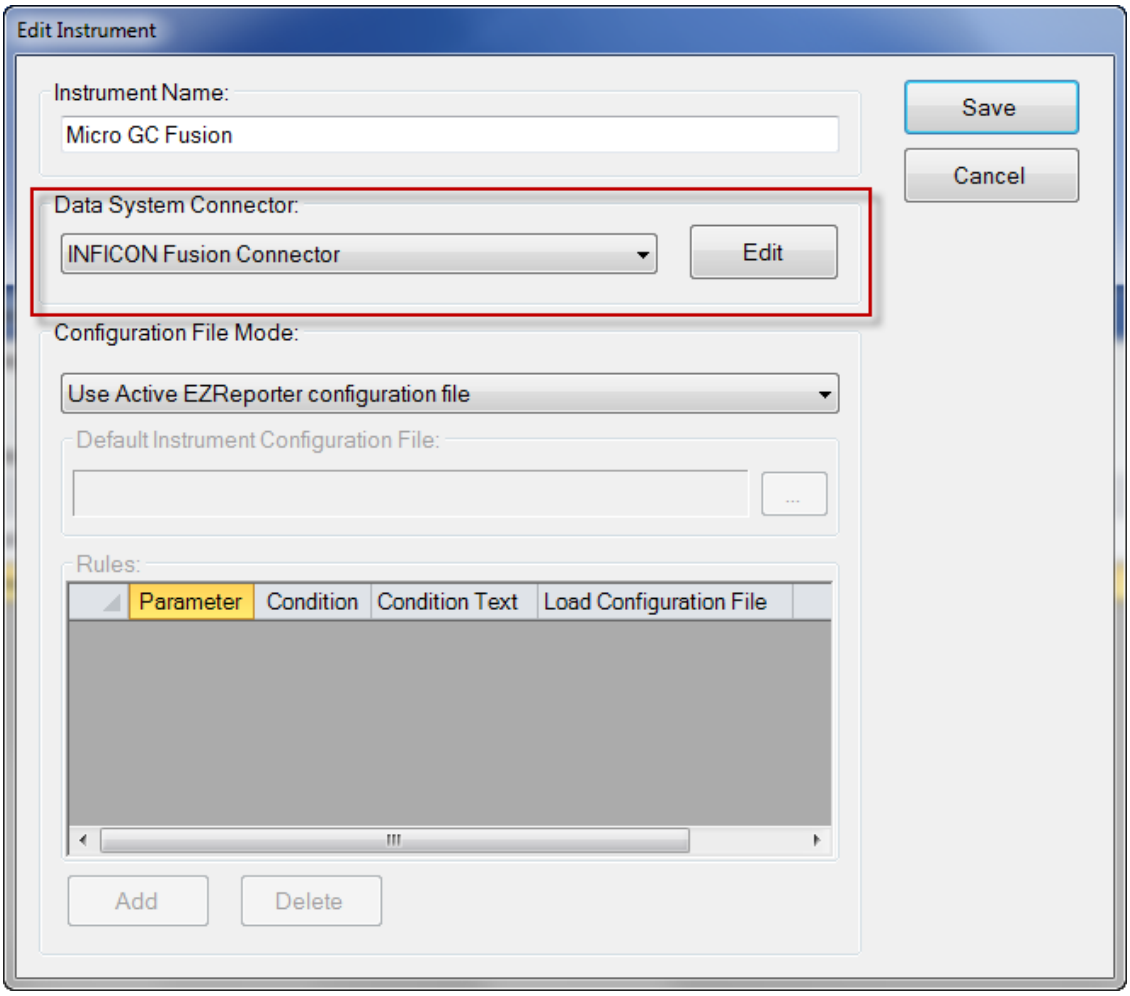
First, you must add and configure an instrument. Switch to the "Sample Processing" tab of the main window, and click the "Add" button below the instruments table.



Select the Data System Connector

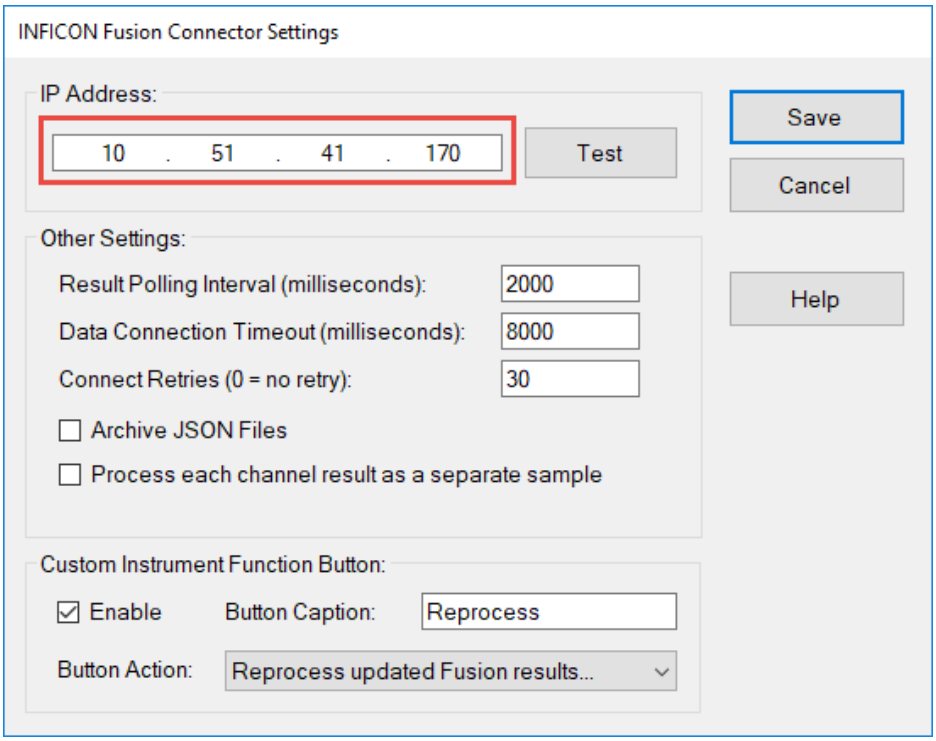
In order to process results from your chromatography data system, you must select the Data System Connector for the data system you are using, and then "Edit" the connector to select and apply any connector-specific settings. In this case, select the INFICON Fusion Connector, and then click the "Edit" button.

Important: The data system connectors available for you to select will be dependent on which version of the installation program you used to install the EZReporter 4.0 software. Make sure that you download the installer version for the manufacturer of the chromatography data system you are using to control your gas chromatograph.

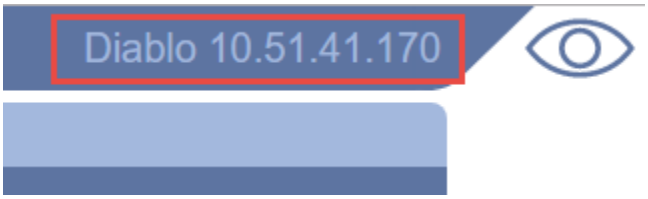


Configure the Connector

The only setting you typically need to set for the Fusion Connector is the IP Address of the Fusion instrument.



To determine the IP address of the Fusion, make sure that the Fusion is running, and then connect using a web browser as you would to start a run. The IP address assigned to the Fusion is displayed in the upper right corner of the browser window:

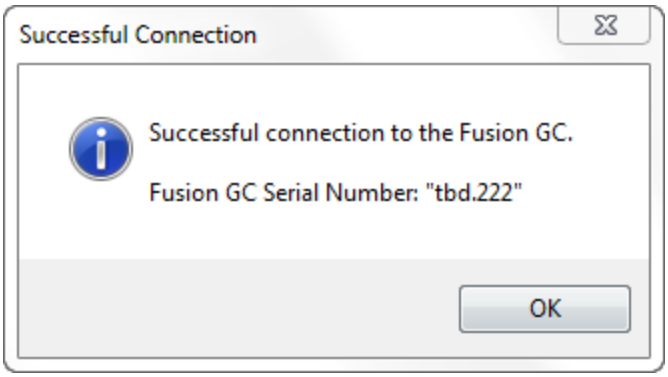


Test the Connection to the Fusion

After entering the IP address, you can click the "**Test**" button to confirm that the IP address is correct, and the Fusion is responding.

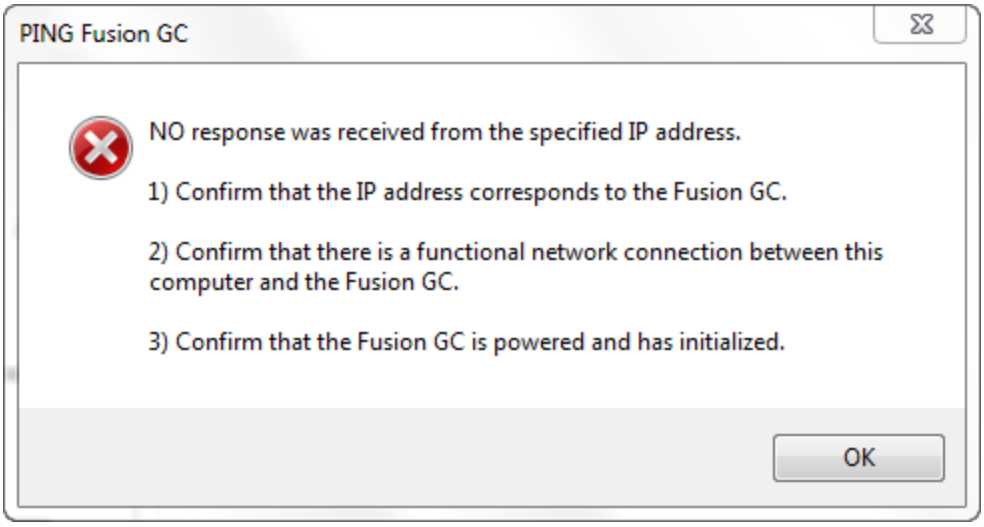
Successful Connection

If the IP address is set correctly, a "Successful Connection" window will be displayed with the serial number of the Fusion at the specified IP address:

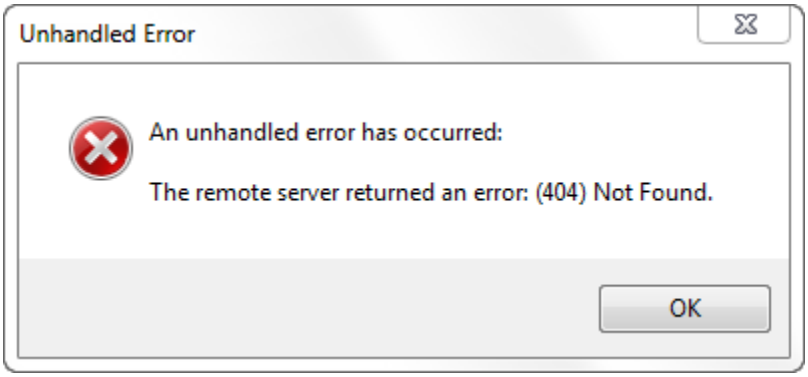


Connection Error

If the IP address is not set correctly, or if the GC is not powered on and initialized, then a warning will be displayed indicating that Fusion is not responding at the specified IP address:



If the Test responds with a "(404) Not Found" error, then the specified IP address is being used by a device other than a Micro GC Fusion, or the instrument has not completely booted up:



Other Settings

These settings should not need to be changed in a typical installation.

Result Polling Interval: This is the interval in milliseconds at which the connector will check the Fusion for new results and also the interval for connection retries (see below). The default value of 2000 milliseconds should be correct for most situations.

Data Connection Timeout: This is the period of time the connector will wait for a response from the Fusion when requesting data. If the timeout period is exceeded without receiving a response from the instrument, an error will be generated. The default value of 8000 milliseconds (8 seconds) is adequate for most instruments. However if you are experiencing errors when trying to process or re-process results, you can try increasing this value and restarting EZReporter.

Connect Retries: If the connection to the Micro GC Fusion is lost for some reason, the connector will attempt to reconnect to the instrument automatically for the number of retries specified in this setting. The retries are attempted at the Result Polling Interval. The default number of retries is 30, and at the default Result Polling Interval of 2000 milliseconds, the connector will retry every 2 seconds for 1 minute. If the connection is not re-established at the end of the retry period, then you will have to investigate the cause of the problem and then re-connect manually.

During the retry period, the current retry count is displayed in the “Status Message” column of the instrument table (“Connect Retry [1 of 30]”).

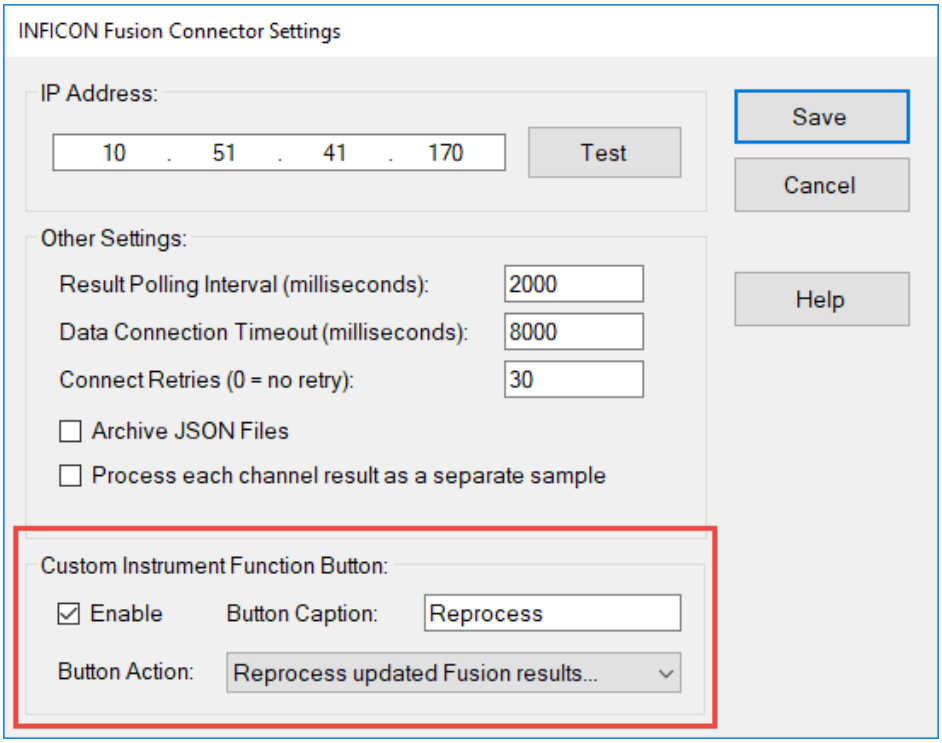
If you want to disable the automatic reconnection feature, then set the number of Connect Retries to 0.

Archive JSON Files: Check this option to archive the Fusion JSON data files to the local hard drive. The JSON files will be stored in the folder, "C:\Users\Public\Documents\Diablo EZReporter\Data\Archive\YYYY\MM", where "YYYY" is the current year, and "MM" is the current numeric month. JSON files are named as "runTimeStamp-sampleName.fusion-data".

Process each channel result as a separate sample: Check this option if you want the results from each channel/detector of the GC to be submitted to the sample processing log as separate samples.

Custom Instrument Function Button

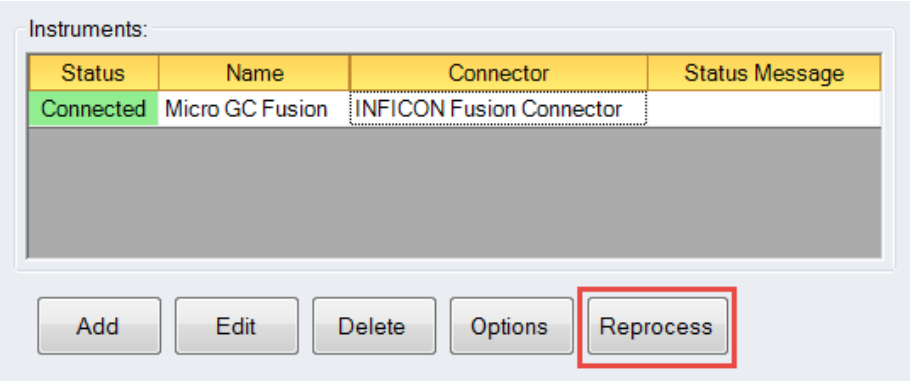
You can choose to display a custom instrument function button on the Instruments panel of the Sample Information tab. The button is configured in the INFICON Fusion Connector Settings window.



Enter a caption for the button and the action to take place when the button is clicked. By default the caption is "Reprocess", and the action is "Reprocess updated Fusion results". You can also choose the action to be "Open and Process Fusion JSON data file".

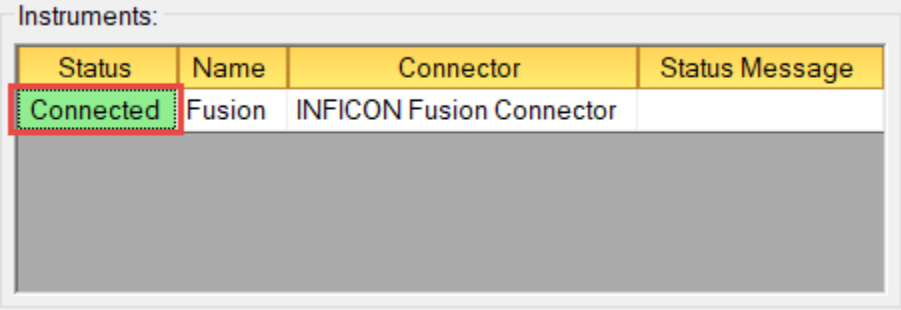
Note: The button automatically resizes itself to accommodate the length of the caption you enter. To prevent the button from becoming too wide, you should enter a short caption.

Once you have enabled and configured the button, and saved the instrument, the button will be displayed on the instrument panel. When you click the button the specified action will be taken.

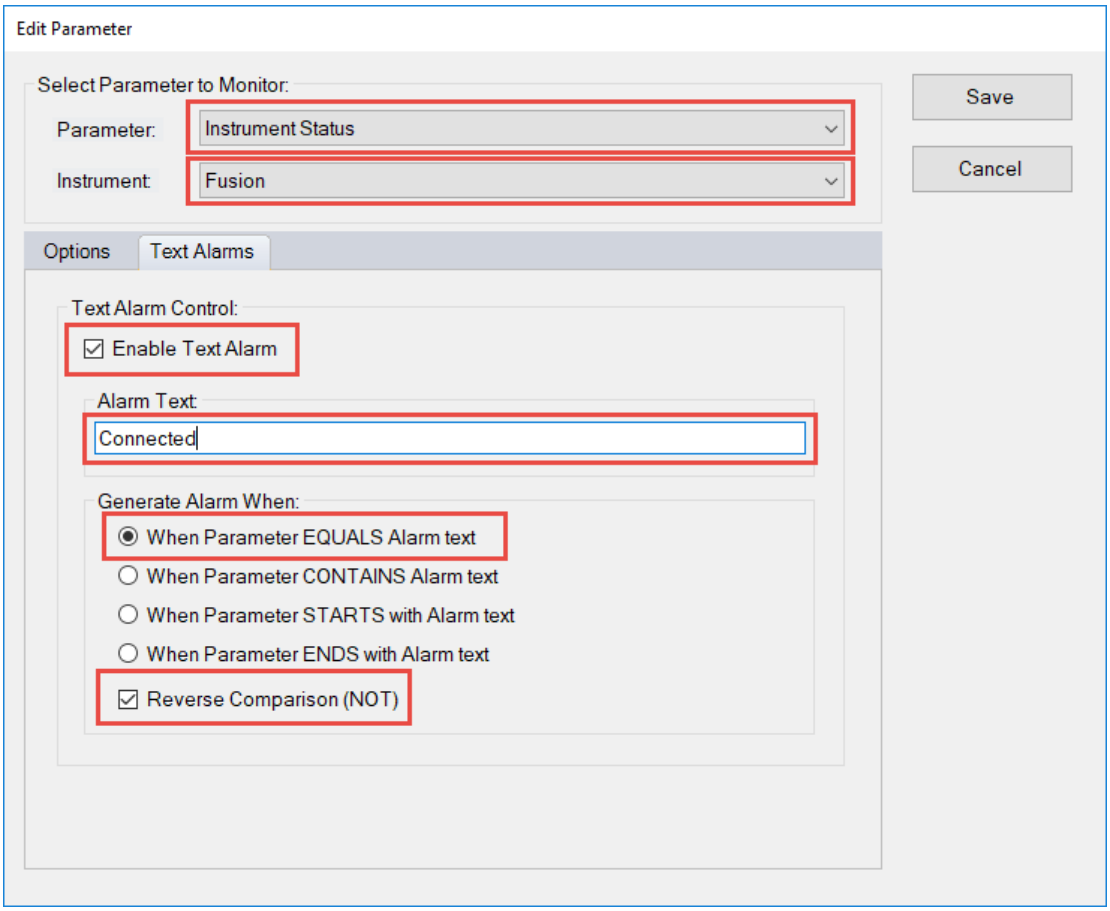


Instrument Status Alarm

The Micro GC Fusion Connector requires a continuous network connection to the instrument in order to process results in real time. The "Status" column in the Instruments table must display "Connected" with a green background in order for results to be processed automatically.



To help you notice when the connection has been lost for some reason, you can define "Instrument Status" as a monitored parameter and create a Text Alarm that generates an alarm with the instrument status is something other than "Connected":



Once you have created the Instrument Status parameter with a text alarm, you can monitor the connection status in the parameter table along with other important results:

Sample Results | **Parameter Monitor** | Results Database | Modbus | Sample Processing

Parameter	Value	Lower Limit	Upper Limit	Status
Fusion - Instrument Status	Connected			
Total un-normalized amount	98.8300	97.0000	103.0000	Pass

Sample Results | **Parameter Monitor** | Results Database | Modbus | Sample Processing

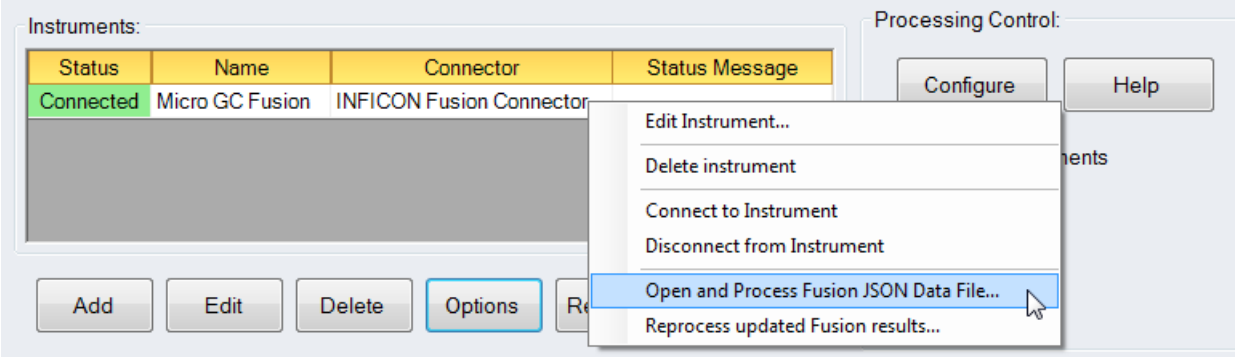
Parameter	Value	Lower Limit	Upper Limit	Status
Fusion - Instrument Status	Error			
Total un-normalized amount	98.8300	97.0000	103.0000	Pass

Refer to the EZReporter Reference Manual for more information on Monitored Parameters and Text Alarms.

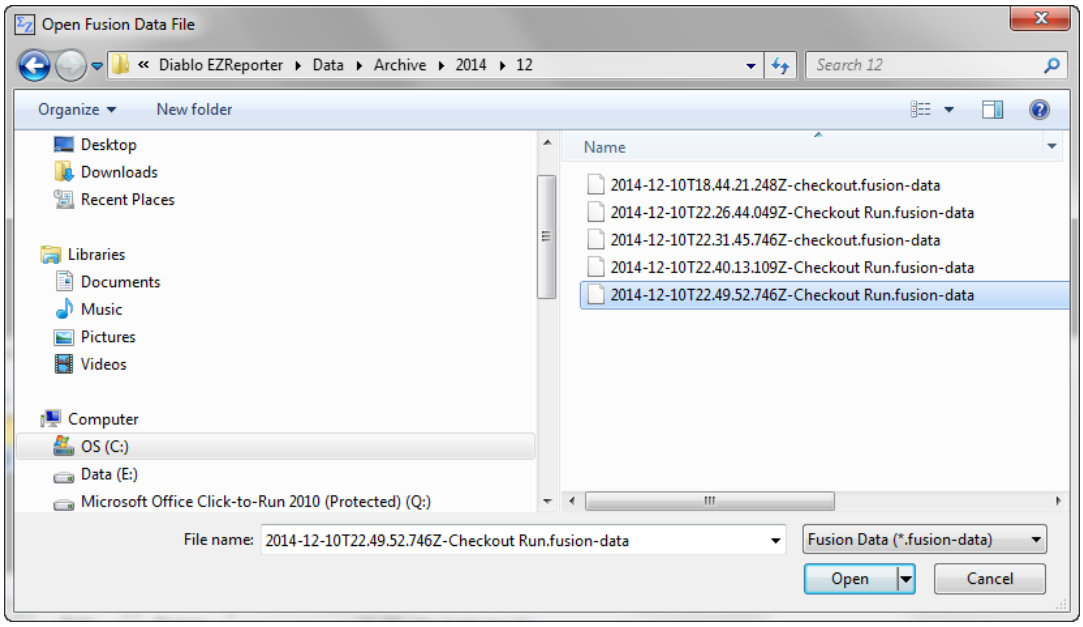
Reprocessing Archived JSON Files

If you archive JSON data files, or use the Fusion Data Browser to export data files to the local hard drive, you can reprocess those data files in EZReporter.

1) Click the “Options” button, or right-click the desired Fusion instrument in the EZReporter Instruments table and select, “Open and Process Fusion JSON Data File…”



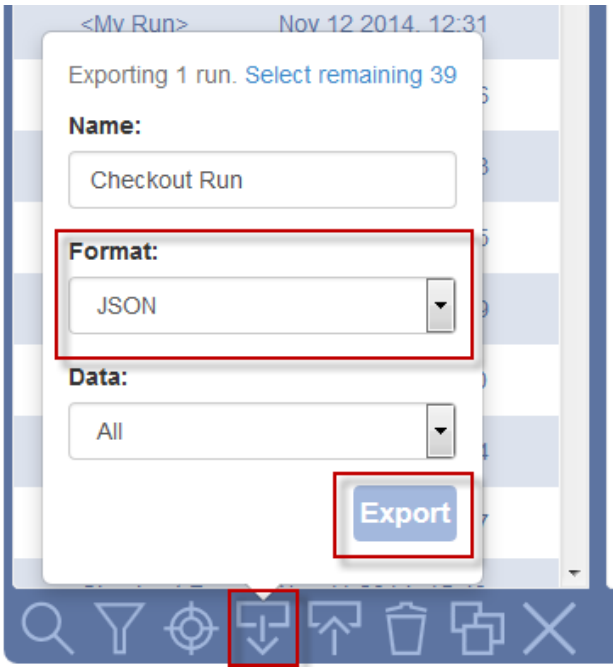
2) Browse to the folder contain the JSON data file and select it.



The JSON file will be added as a new sample to the EZReporter sample processing log, and will be processed as if it was a new data file generated from the Fusion.

Exporting JSON Data Files from the Fusion

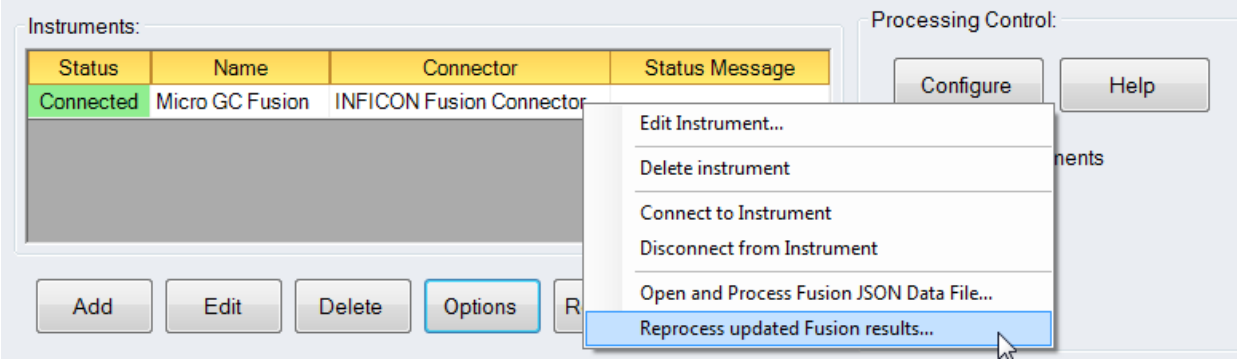
You can export JSON data files stored on the Fusion to your local hard drive using the Fusion Data Browser of the web interface.



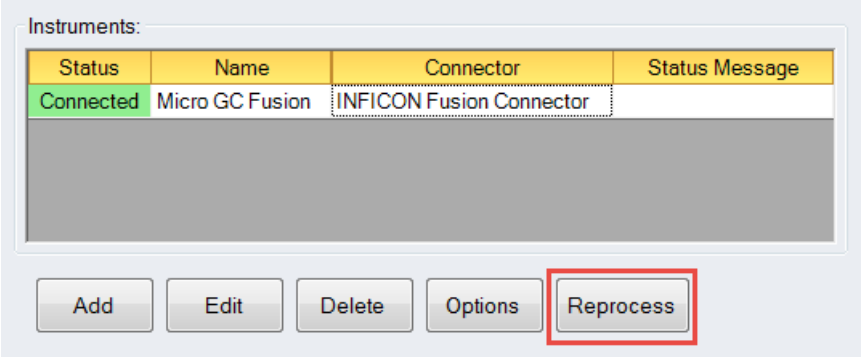
Reprocessing Updated Fusion Results

The Fusion connector does *not* automatically process and report results that have been reprocessed/updated using the Micro GC Fusion data browser's "Calibrate" and "Reprocess" functions. In order to reprocess results, you need to connect to the Micro GC Fusion, and then do one of the following:

1. Click the "Options" button, or right-click the desired Fusion instrument in the EZReporter Instruments table and select, "Reprocess updated Fusion results".



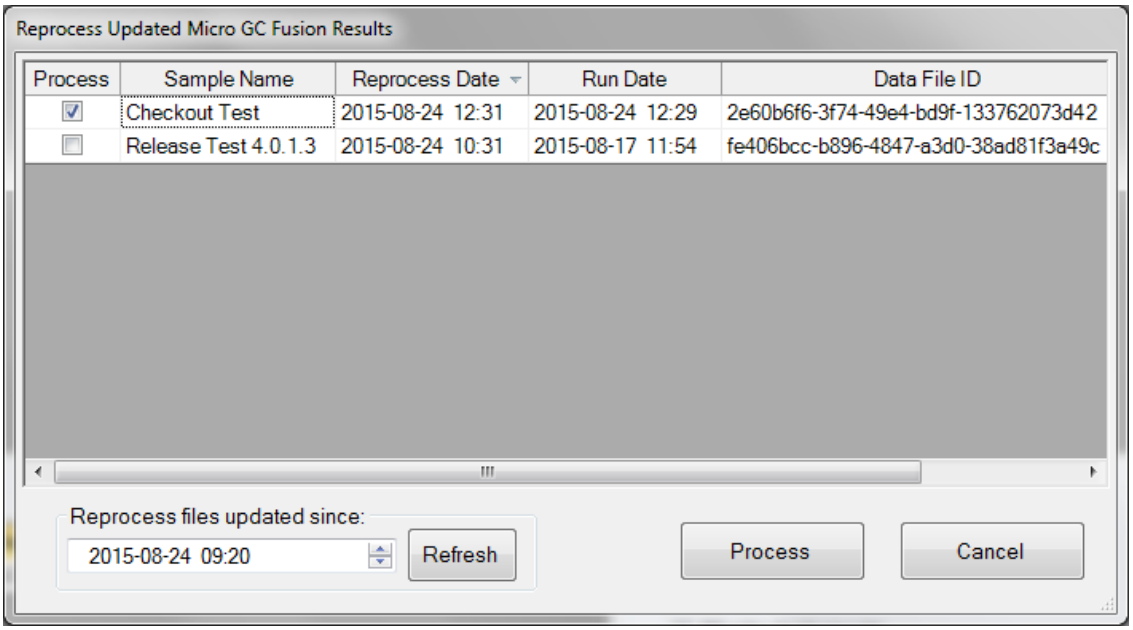
2. If you have enabled the Custom Instrument Function Button with the action, "Reprocess updated Fusion results", then you can also click this button:



The Fusion Connector will retrieve all results that have been updated/reprocessed in the last 30 minutes from the Micro GC Fusion and display them in the updated results table. The most recent result to be updated is listed at the top and is checked by default.

Check all of the results you want to reprocess and then click the "Process" button. The checked results will be added to the EZReporter Sample Processing table and will be processed and reported according to the settings you have specified for the instrument.

Note: You can right-click on the updated results table and choose "Select All" or "Select None" from the pop-up menu to check or uncheck all of the results instead of checking them individually.



If you want to retrieve results that were updated more than 30 minutes ago, enter the desired date/time and click the "Refresh" button. All results updated since this date/time will be displayed in the table.

Important: The dates and times are displayed in your local time. Make sure that you have set the Micro GC Fusion instrument time to the computer's time in the System Configuration window.

Important: This table only displays results that have been reprocessed/updated since the specified time. It does not display new samples that were run during that time.

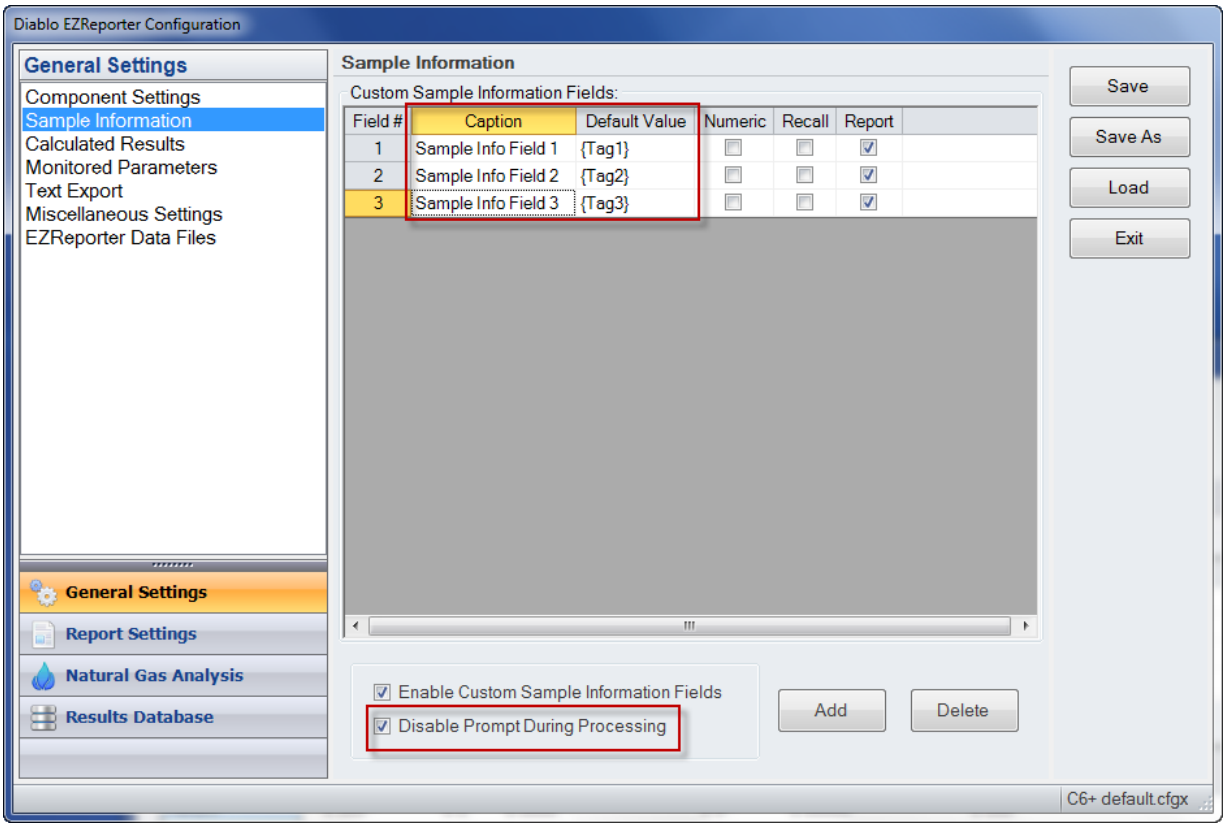
Reporting Fusion Tags in EZReporter

The Micro GC Fusion allows you to define additional sample information “Tags” when you start a run. These tags are identified in order starting with “Tag1”. You can display these tags in the EZReporter report by defining them as the default values of Custom Sample Information Fields in the EZReporter configuration editor as follows

Start by entering the desired tags in the Fusion “Tag run” window:

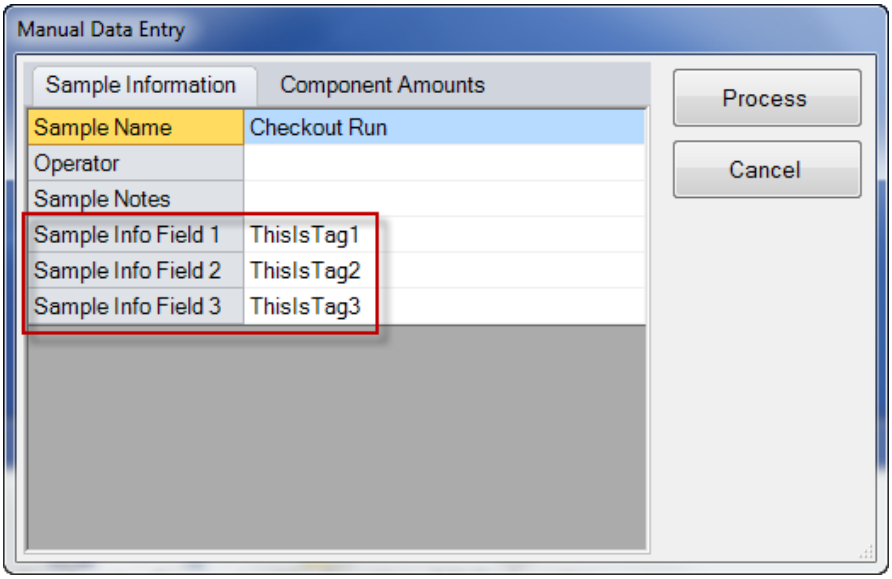
Note that if Tag1 is present, it will also be defined as the “Sample Notes/Comments field” in EZReporter.

In order to make these tags accessible to EZReporter and to display them in the report, you have to create custom Sample Information Fields in the EZReporter configuration editor (see the EZReporter Reference Manual for details). Place the desired tag labels in curly braces as the default value for the custom sample information fields as shown below.

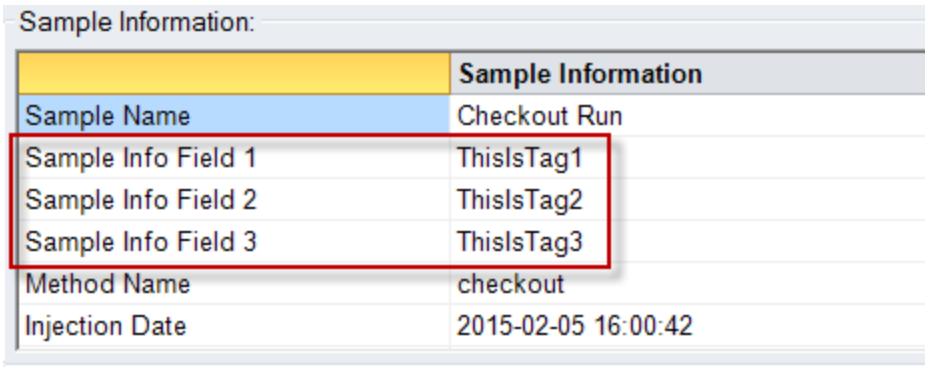


If you have no other custom sample information fields requiring manual entry during processing, you can check, "**Disable prompt during processing**" to bypass the manual entry window since those sample information fields will be filled by the tag values from the Fusion GC.

If you do allow the manual data entry form to be displayed, you will see that the tag labels you placed as the default values for the sample information fields are replaced by the actual tag values that were entered in Fusion when the run was started:



The tag values will then also be displayed in the Sample Information table of the EZReporter report.


Sample Information:

	Sample Information
Sample Name	Checkout Run
Sample Info Field 1	ThisIsTag1
Sample Info Field 2	ThisIsTag2
Sample Info Field 3	ThisIsTag3
Method Name	checkout
Injection Date	2015-02-05 16:00:42

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