METHOD SETUP USER MANUAL

Version 1.0.0



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Method Setup

After you add an instrument, you need to create methods and then create parsers for the method to parse the data received from the instruments. You can create more than one method for an instrument.

Before you create a method, ensure the following:

- Created the instrument in the Instrument Setup interface.
- The created instrument is activated.

Points to remember

You can create more than one method for an instrument.

You can create two parsers for a method. You can create same type of parsers for a method. Hence, you need to create a new method to create a different type parser.

You can add the following fields to the method:

- Constant Fields: Example
- General Fields: Fields that are generally used in all methods and sheets such as AR Number and
- Custom Fields: User defined fields for manual entry and formula entry.

A parser can extract data into many fields.

Each field can extract single or multiple values.

Using the Load Method option, you can reuse a method for the same instrument or for a different method.

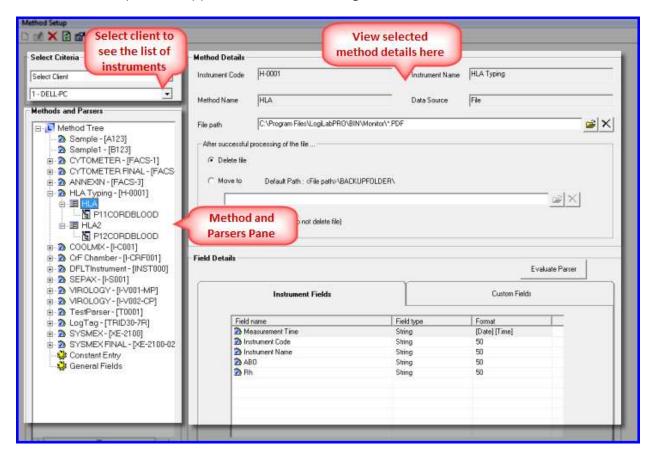
Understanding the Method Setup Screen

To open the **Method Setup** screen, follow these steps:

1. On the main menu, click **Setup** and then click **Method Setup**.

Note: Alternatively you can press F8 to open the **Method Setup** screen.

The Method Setup screen appears as shown in the figure:



Method Setup screen

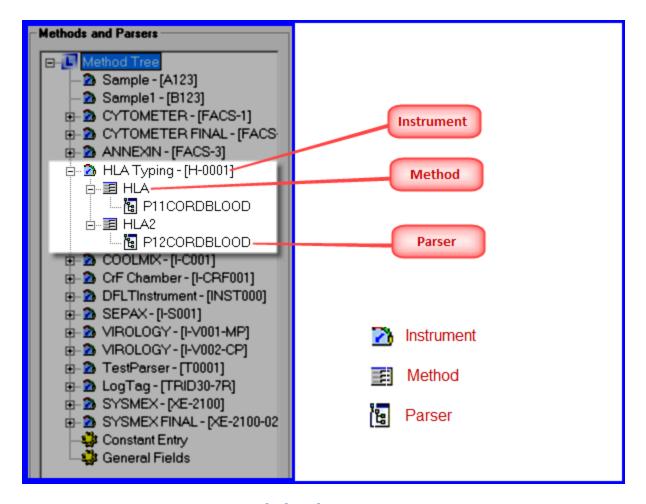
Select Criteria

This option enables you to change Methods and Parsers pane view based on the following:

- Clients: Lists all instruments and related methods mapped for the selected client.
- **Instruments:** Displays the selected instrument with its related methods.
- **Instrument Category:** Lists all instruments and related methods under selected instrument category.

Methods and Parsers Pane

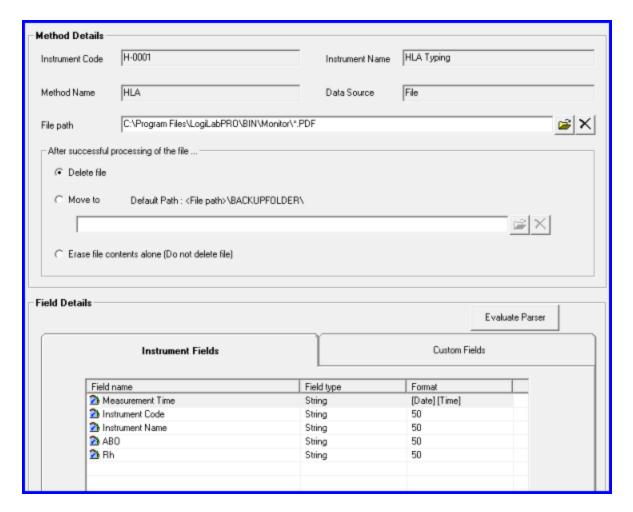
Lists instruments and methods based on the selected criteria.



Methods and Parsers pane

Method Details Pane

Helps you view details of the selected method from the Methods and Parsers pane.



Method Details pane

Instrument details and the data source type, file details and details of the fields in the selected method would appear as shown in the above figure.

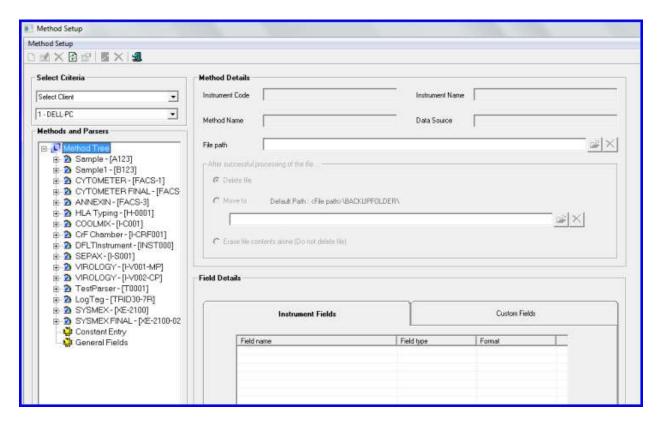
Creating a Method

To create a method, follow these steps:

1. On the main menu, click **Setup** and then click **Method Setup**.

Note: Alternatively you can press F8 to open the **Method Setup** screen.

The **Method Setup** screen appears as shown in the figure:



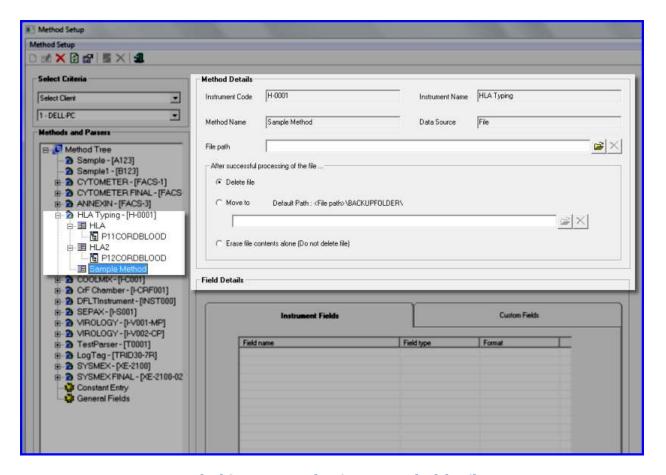
Method Setup screen

- 2. Under **Select Criteria**, select the Client / Instrument / Instrument category. Based on the selected criteria select the value to view instruments.
- 3. Under **Methods and Parsers**, you can see the instruments that you created.
- 4. Right-click the instrument to which you want to create method and then click **Add Method**. The New Method Name dialog appears as shown in the figure:



New Method Name dialog

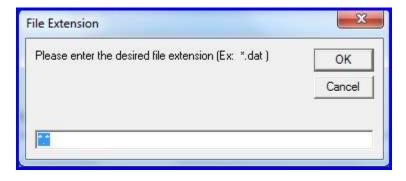
5. Type a name for the method you want to create and then click **Ok**. The Method Setup screen appears as follows:



Method Setup screen showing new method details

Here you can see the instrument details and the data source type that you are creating the method for. If the data source type is file based, then you need to specify the file path where the parser would look for the file. This file contains data for parsing.

6. In the **File Path** box, click and choose the location where parser would look for the file. The **File Extension** dialog appears as shown in the figure:



File Extension dialog

Here you need to mention the file format the parser would look for in the specified location. If the file extension is .txt, then file with .txt extension would be parsed.

- 7. After successful processing of the file you can choose any one of the following option:
 - **Delete file**: Delete the file from the mentioned location.
 - **Move to**: By default, the file is moved to the backup folder in the same location. You can also click to choose the location to move the file.
 - Erase file contents alone (Do not delete file): Erase the data from the file after parsing without deleting the file.

Parser Types

- Delimiter separator parser
- Auto-field parser
- Advanced parser
- Raw data parser

Delimiter separator parser

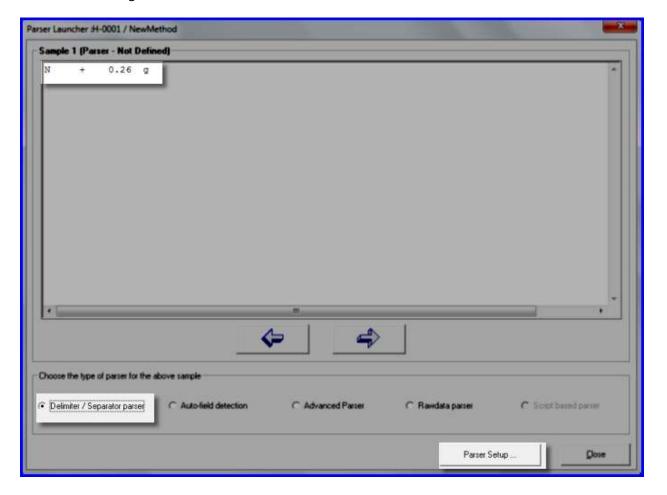
This parser splits the raw data based on the selected delimiter and separator. For example, if you want to split the following raw data:

"N +
$$0.26 \, q$$
"

You need the value 0.25 (Weight) in grams.

Assuming that always the raw data from the instruments appears same as shown below; follow these steps, to create a parser:

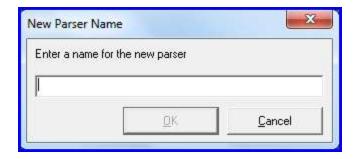
1. In the **Methods and Parsers** panel, right-click the method you want to create the parser and then click **Add New Parser**. The screen appears as shown in the figure:



Parser Launcher

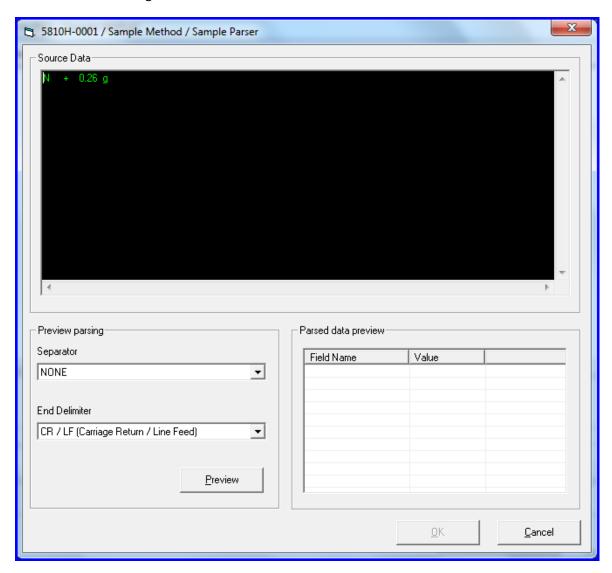
You can see the raw data that has to be parsed in the Parser Launcher. The data is received from the text file that you mentioned in the Method Setup window.

- 2. Under Choose the type of parser for the above sample, click to select **Delimiter / Separator parser**.
- 3. Click **Parser Setup**. The dialog appears as shown in the figure:



Parser Name dialog

4. Type a name for the new parser and then click **Ok**. The screen appears as shown in the figure:

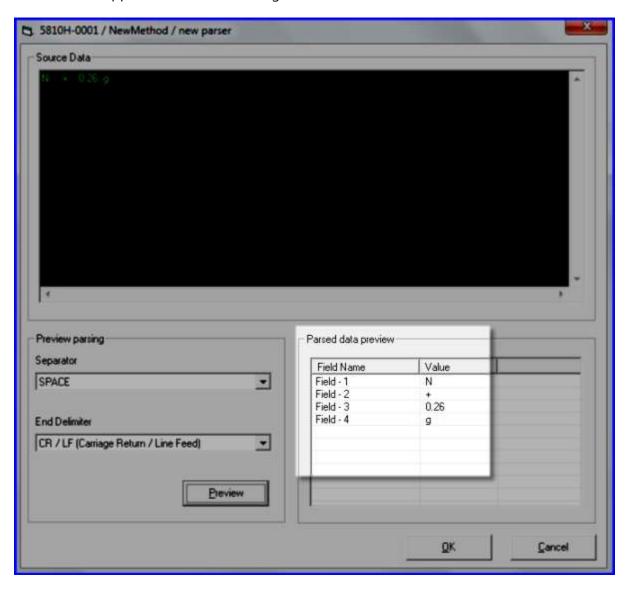


Screen showing the raw data to be parsed

You can see the raw data to be parsed under Source Data.

5. From the **Separator** box, select the separator. The separator separates the raw data.

- 6. From the **End Delimiter** box, select the delimiter to specify the boundary to split.
- 7. Click **Preview** to preview the parsed data under **Parsed Data Preview**. You can try multiple separator Delimiter combinations to parse the data. The preview appears as shown in the figure:

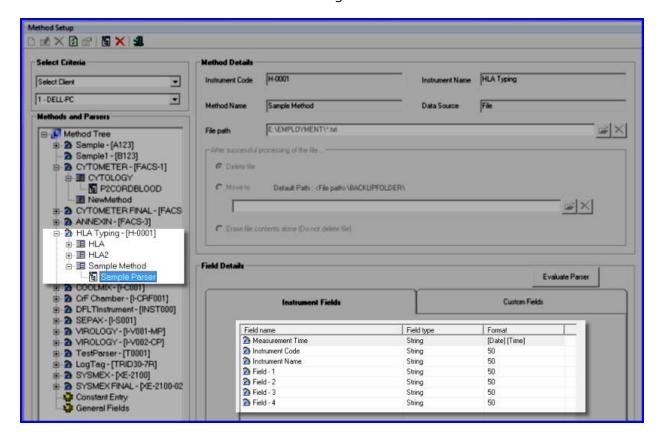


Screen showing the parsed data preview

8. Field-3 contains the required data "0.26". You can rename the field appropriately in the **Method Setup** screen **Field Details** section.

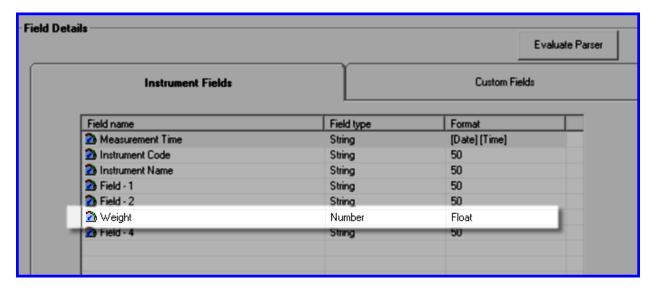
- 9. Click **Ok**.
- 10. In the Parser Launcher, click Close.

Now you can see the parser that you created in the **Methods and Parsers** panel and the created fields under **Instrument Fields** as shown in the figure:



Method Setup screen showing parser created and the fields

- 11. Edit the fields to specify the data type and format as explained in the Editing Parser Fields topic.
- 12. After you edit fields you can see the updated fields as shown in the figure:

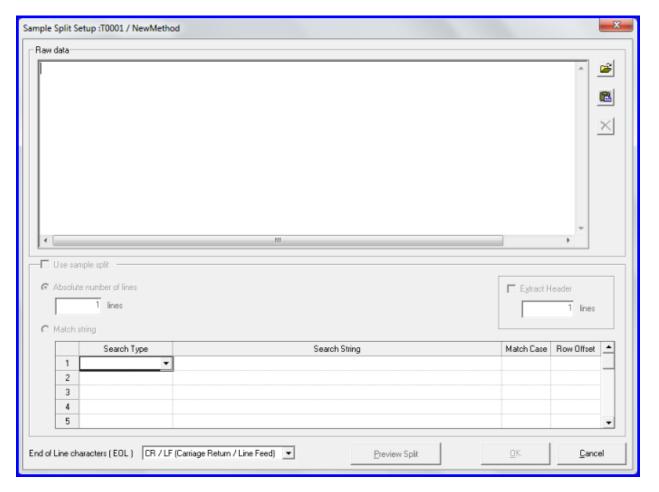


Updated parser field details

Auto-Field Parser

Auto field parser is used for results whose content structure is simple and remains constant. Auto-field parser splits data automatically into various fields.

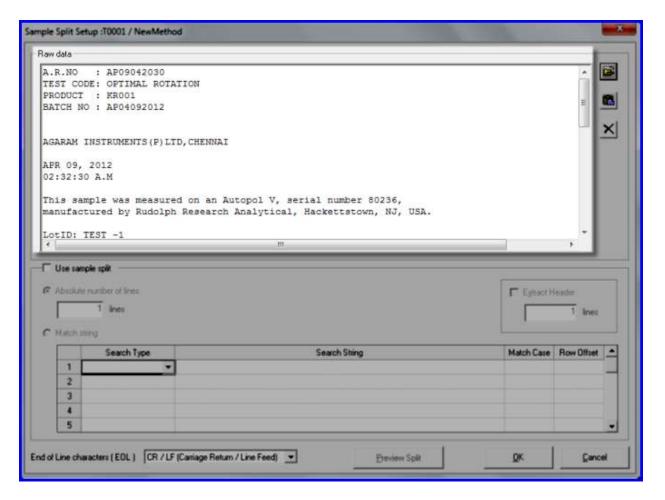
1. In the **Methods and Parsers** panel, right-click the method and then click **Add New Parser**. The screen appears as shown in the figure:



Parser Launcher

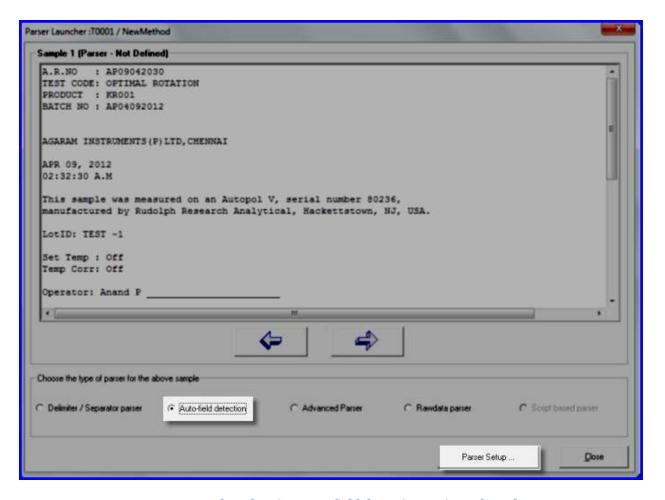
- 2. Click In the **Open** dialog locate the file that you stored the sample data collected from the Data Source window in the Instrument Setup process. To see how to collect sample data from the instrument, <u>click here</u>.
- 3. Alternatively, open the file, copy the file content and then click to paste content in to the parser launcher.

You can see the file content uploaded in the Parser Launcher as shown in the figure:



Screen showing sample content uploaded from the file

4. Click **Ok**. The Parser Launcher screen appears as shown in the figure:



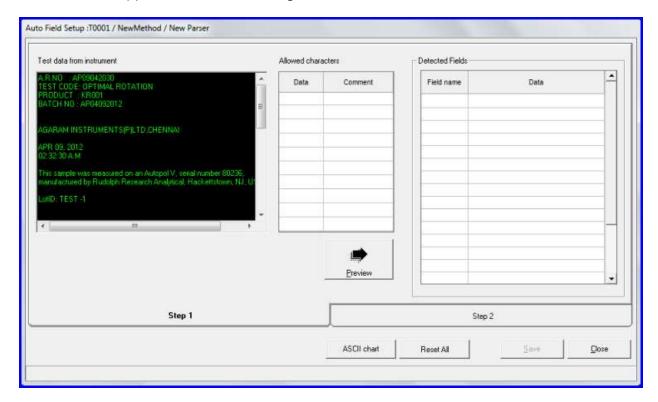
Parser Launcher showing Auto-field detection option selected

- 5. Under Choose the type of parser for the above sample, click to select Autofield detection.
- 6. Click **Parser Setup**. The dialog appears as shown in the figure:



Parser Name dialog

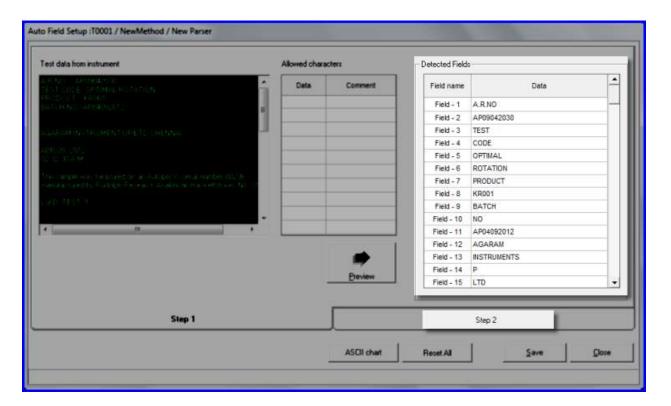
7. Type a name for the new parser and then click **Ok**. The **Auto Field Setup** screen appears as shown in the figure:



Auto-field parser setup screen

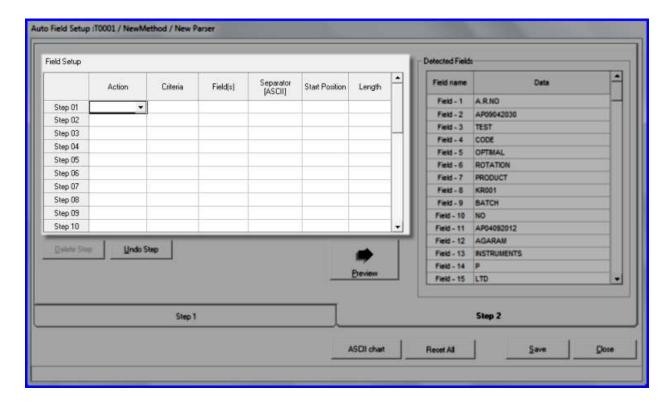
You can see the test data to be parsed under **Test data from instrument**.

8. Click **Preview**. The data is split into various fields automatically and the split fields appears under **Detected Fields** as shown in the figure:



Auto Field Setup screen showing detected fields

9. Click **Step 2**. The Step 2 tab contains the **Field Setup** section as shown in the figure:



Auto Field Setup screen showing Field Setup tab

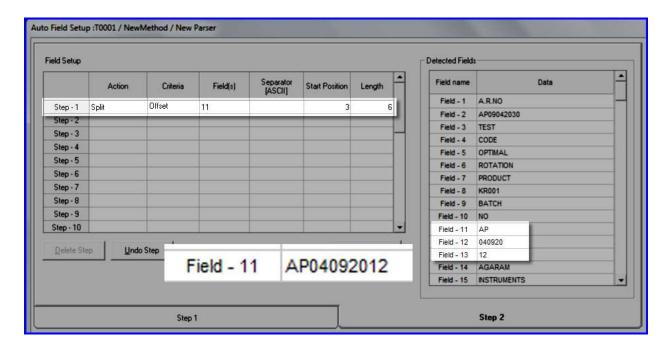
Field Setup section enables you to merge, split and remove detected fields. You can use these options appropriately to customize the fields as required.

You can use the following options under Action:

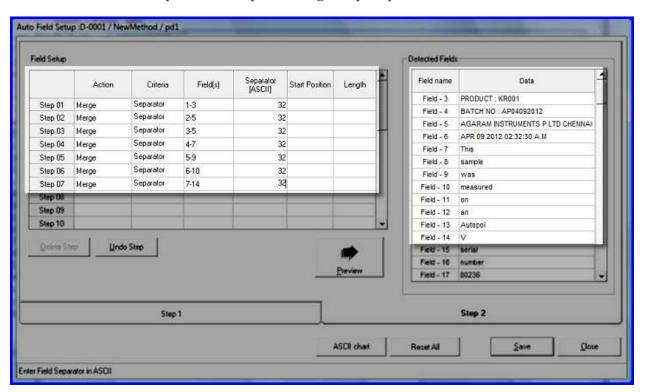
- Merge: Specify the field numbers to merge
- Split: Use the criteria: Separator / Alphanumeric / Offset
- Remove: Specify the field numbers to remove

Use the ASCII chart to find the ASCII value for the separator when used in the merge, split and remove options.

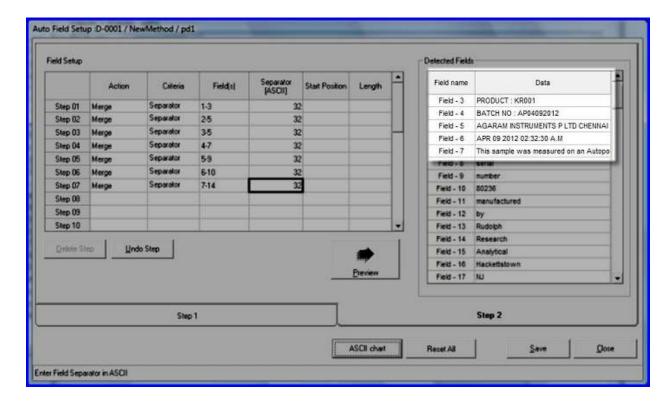
Following examples explains how to use the **Field Setup** options to customize the detected fields:



Auto-field parser - Example showing the split option with Offset criteria



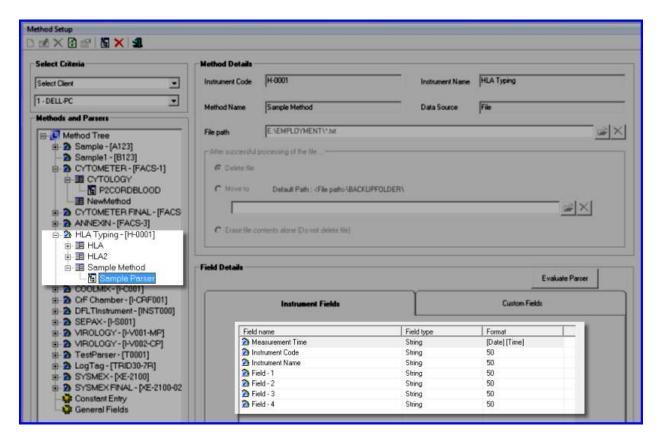
Auto-field parser - Example showing the merge option



Auto-field parser - Example showing the merge option results

- 10. Once you setup the fields, click **Save**.
- 11. On the **Parser Launcher** screen, click **Close**.

Now you can see the parser that you created in the **Methods and Parsers** panel and the created fields under **Instrument Fields** as shown in the figure:



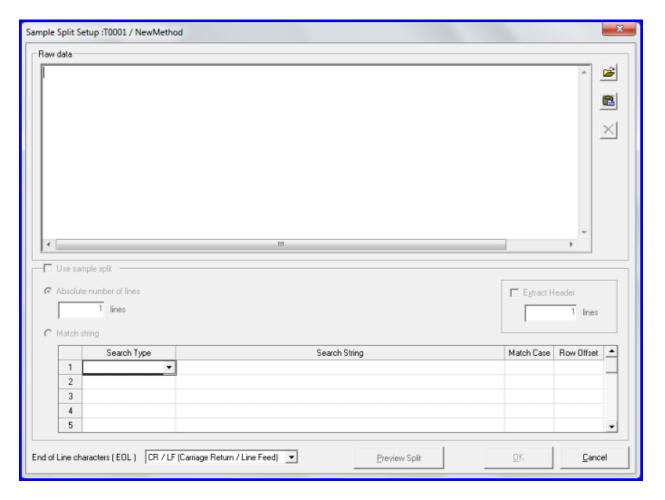
Method Setup screen showing the parser created and the fields

12. Edit the fields to specify the data type and format as explained in the <u>Editing</u> <u>Parser Fields topic</u>.

Advanced Parser

Advanced parser is used to parse results whose content structure does not remain constant.

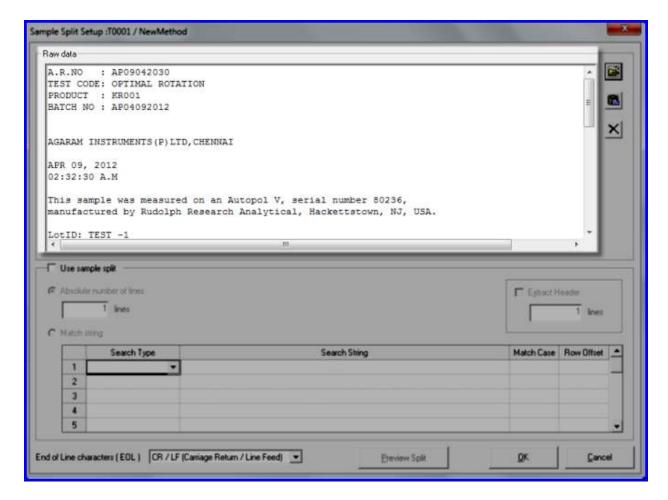
 In the Methods and Parsers panel, right-click the method and then click Add New Parser. The screen appears as shown in the figure:



Parser Launcher

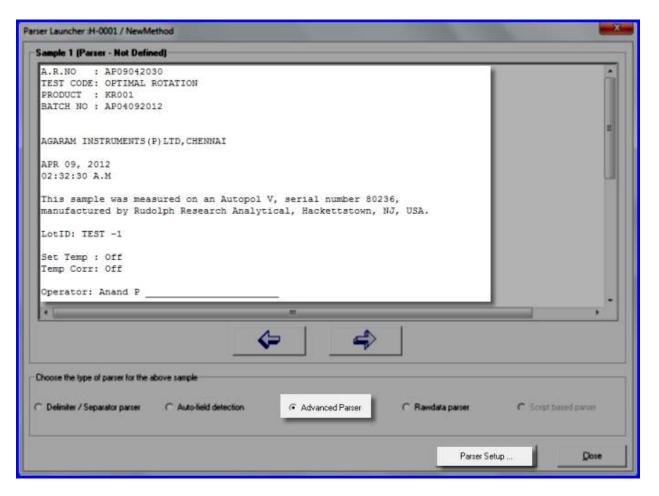
- 2. Click In the **Open** dialog locate the file that you stored the sample data collected from the Data Source window in the Instrument Setup process. To see how to collect sample data from the instrument, <u>click here</u>.
- 3. Alternatively, open the file, copy the file content and then click to paste the content in to the parser launcher.

You can see the file content uploaded in the Parser Launcher as shown in the figure:



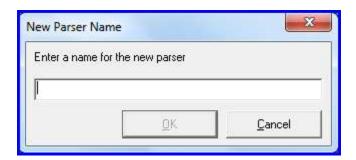
Screen showing sample content uploaded from the file

4. Click **Ok**. The Parser Launcher screen appears as shown in the figure:



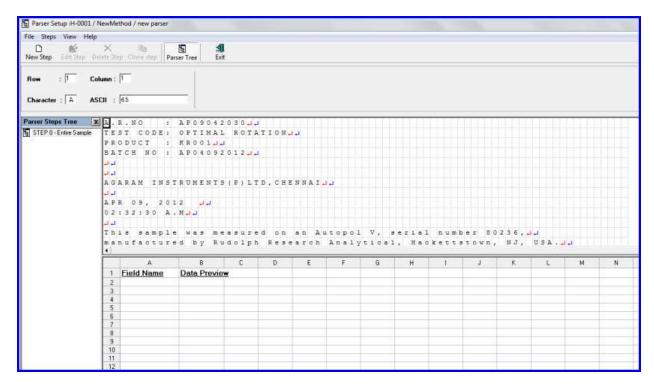
Parser Launcher showing Advanced Parser option selected

- 5. Under Choose the type of parser for the above sample, click to select Advanced Parser.
- 6. Click **Parser Setup**. The dialog appears as shown in the figure:



Parser Name dialog

7. Type a name for the new parser and then click **Ok**. The **Parser Setup** screen appears as shown in the figure:

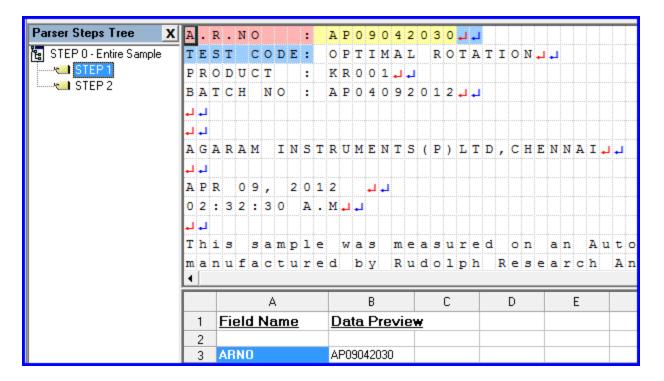


Parser Setup screen showing the raw data to be parsed using advanced parser

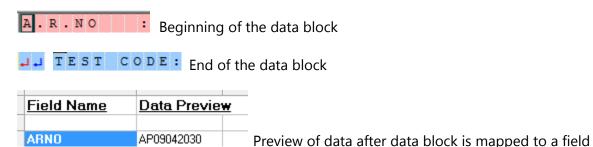
You can see the test data to be parsed on the right panel and parser steps in the **Parser Steps Tree** (left panel).

Understanding data blocks in advanced parser

Advanced parser works based on data blocks. You can mark the data that is required to be mapped to a field. Then mark the beginning of the data block and end of the data block as shown in the figure. Each field is created as a step and step 1 is explained in the following figure:

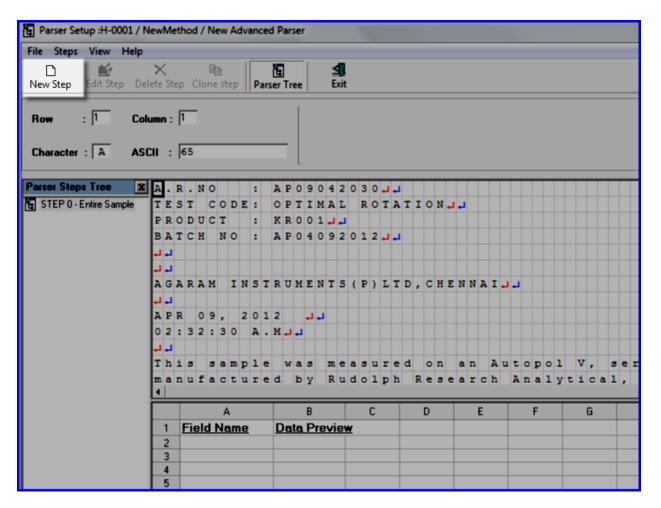


APO9042030 Required data that has to be mapped to a field



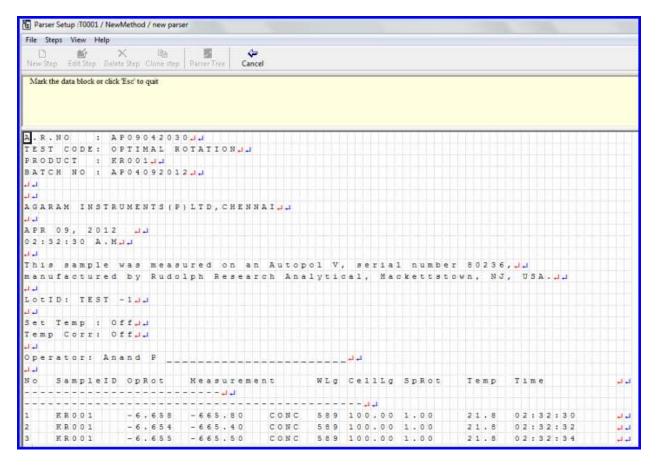
The **Step Creation Wizard** helps you to create a field/step. To create a step, follow these steps:

8. In the **Parser Setup** screen, click **New Step** as shown in the figure:



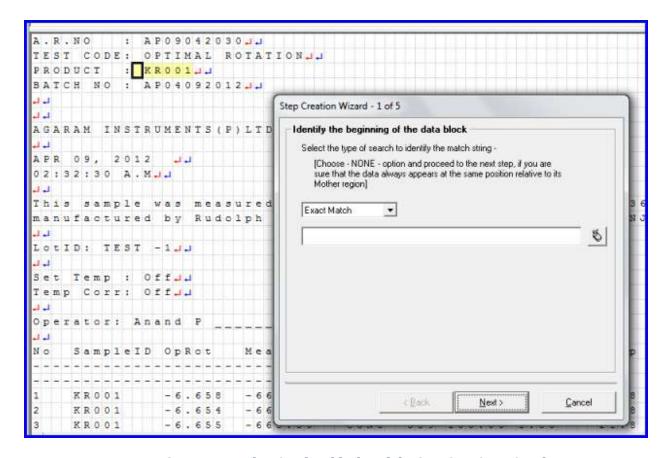
Parser Setup screen showing New Step option

The Parser Setup screen appears as shown in the figure:



Parser Setup screen showing data for parsing

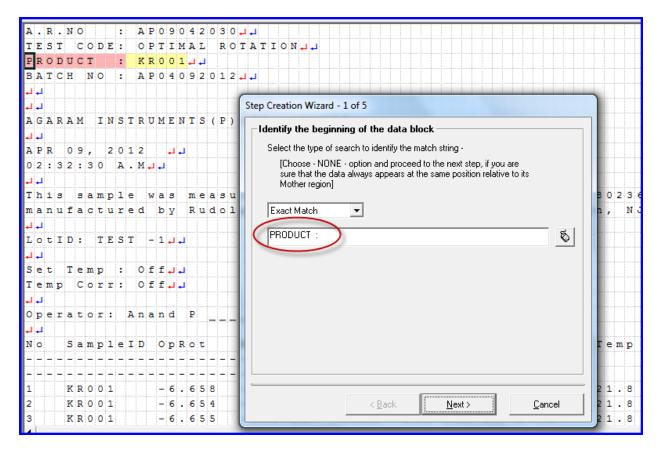
9. In the **Parser Setup** screen, click and drag to select the data required as shown in the figure:



Parser Setup screen showing data block and the Step Creation Wizard

As soon as you block the data, you can see the **Step Creation Wizard** appear as shown in the above figure. The **Step Creation Wizard- 1 of 5** helps you to identify the beginning of the data block.

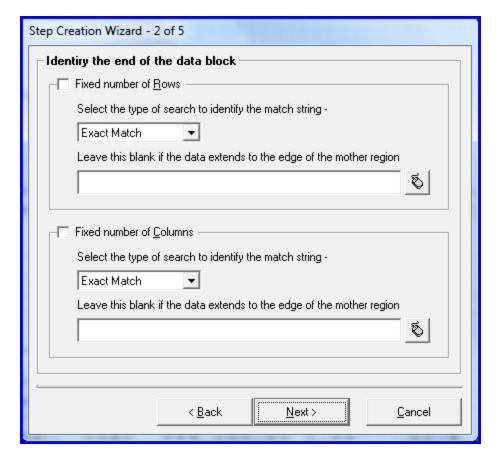
10. In the wizard, click and mark the beginning of the data block as shown in the figure:



Parser Setup screen showing the beginning of the data blocked marked

The selected area appears in pink and the same selection appears in the wizard.

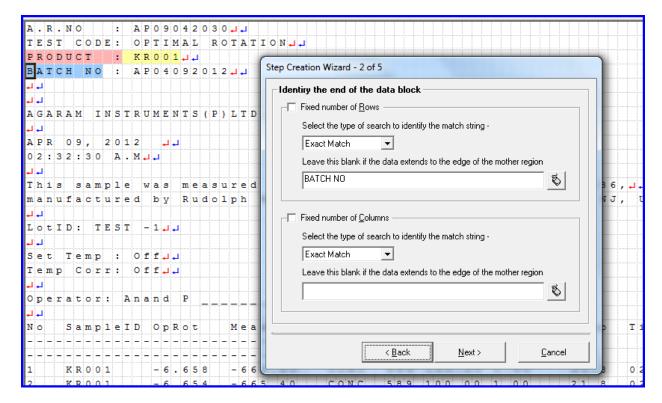
11. In the Wizard, click **Next**. The **Step Creation Wizard - 2 of 5** appears as shown in the figure:



Step Creation Wizard-2 of 5

This dialog helps you to identify the end of the data block.

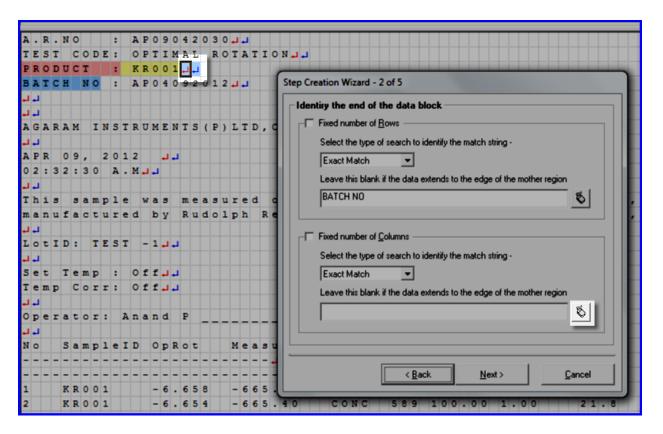
12. In the wizard, click and then select the end of the data block as shown in the figure:



Parser Setup screen showing end of the data block marked

End of the data block appears in blue. Since end of data block is in the next row, to mark it accurately, select the two columns that appear next to the data block.

13. To block those two columns, under **Fixed number of Columns** click and then select as shown in the figure:

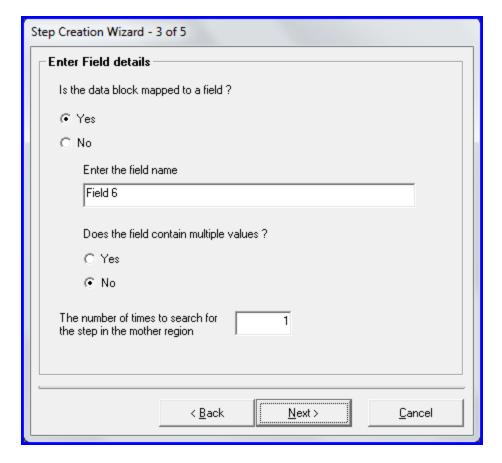


Parser Setup screen showing end of the data block marked accurately

Now you can see the data block with the beginning and end area marked as shown in the figure:



14. In the wizard, click **Next**. The **Step Creation Wizard- 3 of 5** appears as shown in the figure:



Step Creation Wizard- 3 of 5

This dialog helps you to map the data block to a field. To do so, follow these steps:

- 15. If the data block is mapped to a field, click **Yes** and then in the **Enter the field name** box, type a name for the field.
- 16. By default, the field consists of single value. If the field consists multiple values, click **Yes**.
- 17. Click **Next**. The **Step Creation Wizard 4 of 5** appears as shown in the figure:



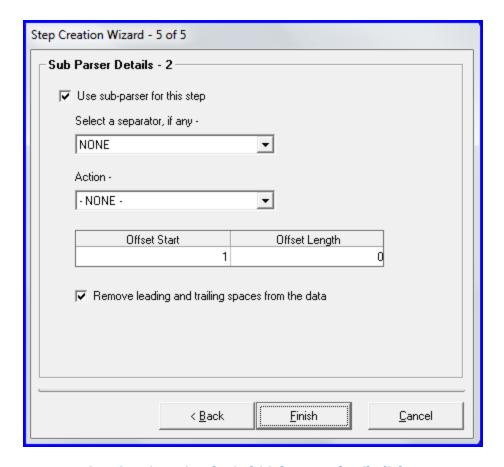
Step Creation Wizard- 4 of 5

18. In the wizard, click to select **Convert the data block to a Table**. Now you can see the data that you marked in the table. You can preview the data here.



Step Creation Wizard - 4 of 5 with data preview

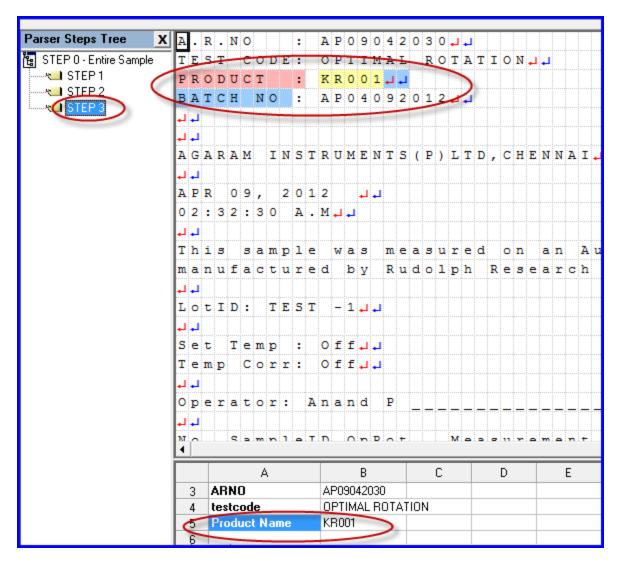
19. Click **Next**. The **Step Creation Wizard – 5 of 5** appears as shown in the figure:



Step Creation Wizard - 5 of 5 Sub Parser details dialog

This dialog helps you to sub parse the data that you parsed in this step if required. You can use a separator and then action for parsing.

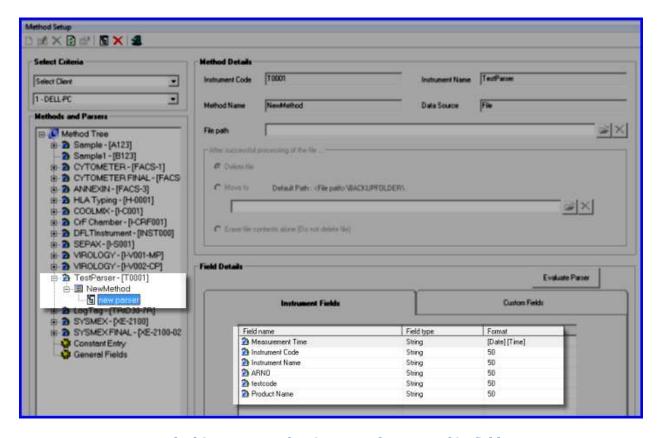
- 20. Click Finish. The Audit Trail dialog appears.
- 21. Type the password and the reason and then click **Ok**. The **Parser Setup** screen appears with the created step in the **Parser Step Tree** and the fields created in the lower part of the screen as shown in the figure:



Parser Setup screen showing the step created, data block and the field

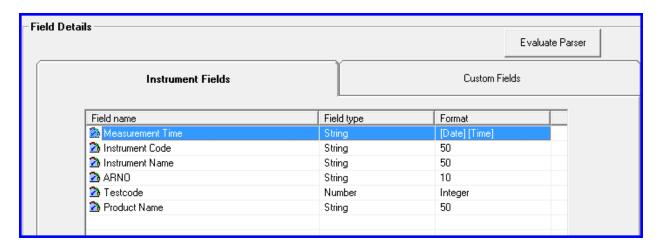
22. You can create required steps in the Parser Set up screen and then click **Exit**.

Now you can see the parser that you created in the **Methods and Parsers** panel and the created fields under **Instrument Fields** as shown in the figure:



Method Setup screen showing created parser and its fields

- 23. Edit the fields to specify the data type and format as explained in the <u>Editing</u> <u>Parser Fields topic</u>.
- 24. After you edit fields you can see the updated fields as shown in the figure:

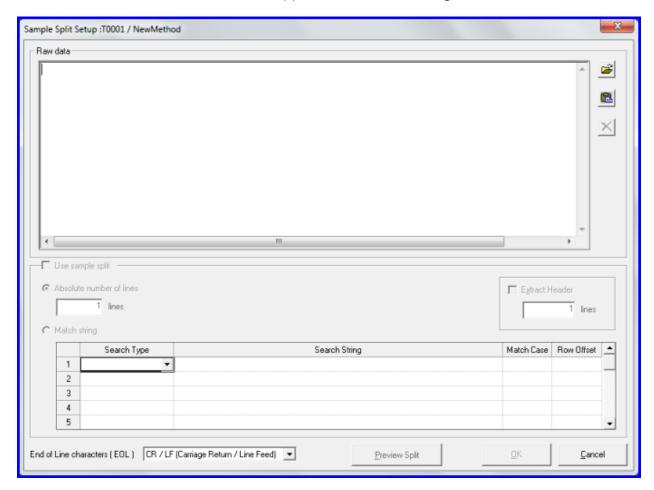


Field Details tab after editing the fields

Raw Data Parser

To create a raw data parser, follow these steps:

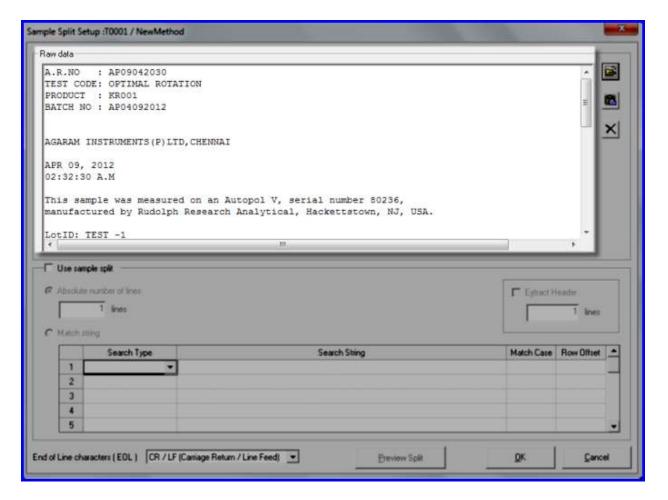
 In the Methods and Parsers panel, right-click the method and then click Add New Parser. The screen appears as shown in the figure:



Parser Launcher

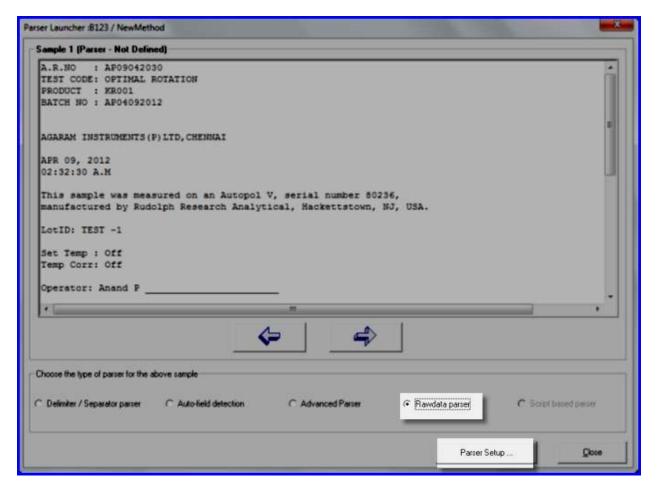
- 2. Click In the **Open** dialog locate the file to be parsed.
- 3. Alternatively, open the file, copy the file content and then click to paste the content in to the parser launcher.

You can see the file content uploaded in the Parser Launcher as shown in the figure:



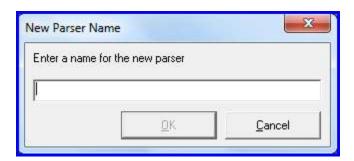
Screen showing sample content uploaded from the file

4. Click **Ok**. The Parser Launcher screen appears as shown in the figure:



Parser Launcher showing Rawdata parser option selected

- 5. Under Choose the type of parser for the above sample, click to select Rawdata parser.
- 6. Click **Parser Setup**. The dialog appears as shown in the figure:



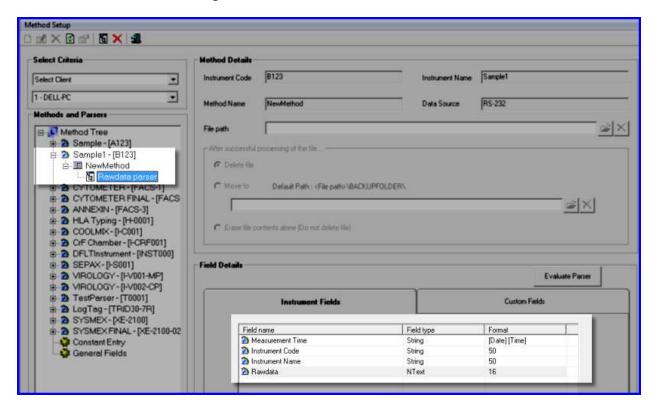
Parser Name dialog

7. Type a name for the parser and then click **Ok**. A confirmation dialog appears as shown in the figure:



Confirmation dialog

- 8. In the Parser Launcher screen, click Close.
- 9. In the **Method Setup** screen you can see the parser created and the fields as shown in the figure:



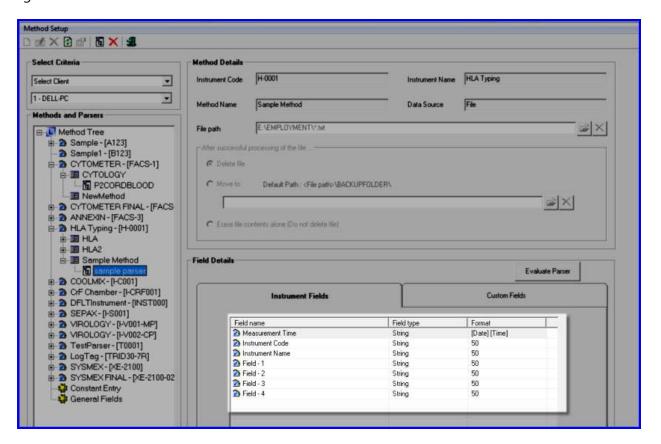
Method Setup screen showing the parser created and the fields tab

The raw data is stored as a file and the same appears as shown above.

Editing Parser fields

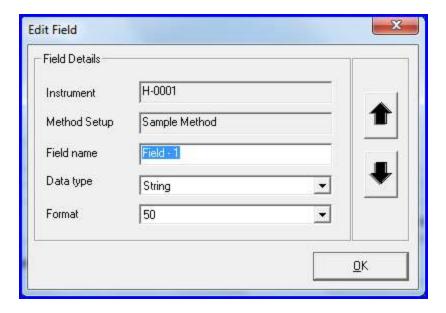
After you create a parser, you need to edit fields to change the name, data type and the length of the fields to accommodate the data received appropriately.

After you create a parser, you can see the fields in the **Method Setup** screen as shown in the figure:



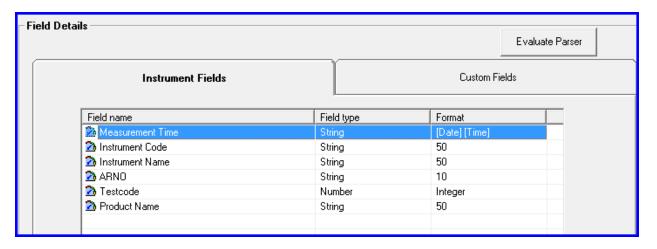
Method Setup screen showing fields for edit

1. Double click a field to edit. The **Edit Field** dialog appears as shown in the figure:



Edit Field dialog

- 2. In the **Field name** box, type appropriate name for the field. For Example: Balance count
- 3. From the **Data type** box, select appropriate data type. For example: String
- 4. From the **Format** box, select the length for the field. For example: 20
- 5. Use the up and down arrows in the **Edit Field** dialog to navigate to the next field for edit.
- 6. Click **Ok**.
- 7. Edit fields using the steps mentioned above.
- 8. Now you can see updated fields as shown in the figure:



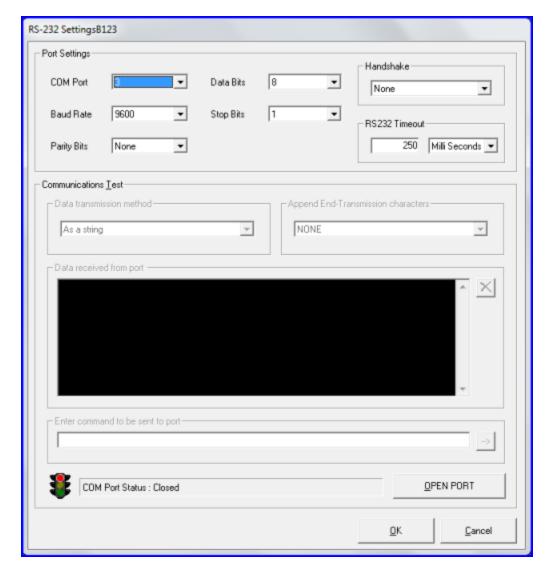
Fields Details tab after editing the fields

Collecting Sample Data for Parsing (For RS232 and TCP/IP based instruments)

Before you create a parser for RS232 and TCP/IP based instruments, you need to collect sample data from the instruments. You can collect sample data from the Data Source window in the Instrument Setup process.

For RS-232 Based Instruments

- On the main menu, click Setup and then click Instrument Setup. The Instrument Setup screen appears.
- 2. In the **Instrument Setup** screen, select the instrument from the list to configure and then click **Data Source**. The **Data Source** screen appears based on the data transfer mode specified while creating\adding the instrument. For RS-232 mode data transfer, the settings dialog appears as shown in the figure:



RS-232 Data Source configuration settings dialog

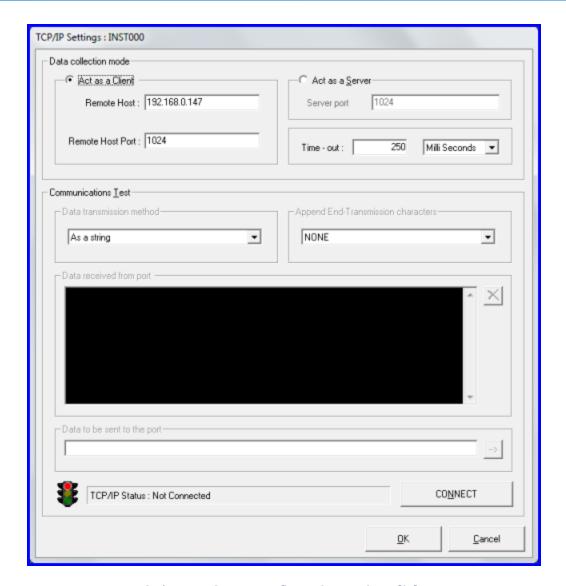
- 3. In the **Com Port** box, select the port to which the instrument is connected.
- 4. In the **Baud Rate** box, select the speed of communication in bits per second.
- 5. In the **Data Bits** box, select number of bits to transmit each character.
- 6. In the **Parity Bits** box, select the method of error checking (Odd /Even/Mark/Space)
- 7. In the **Stop Bits** box, select number of bits between characters during transmission.

8. To validate the settings, click **OPEN PORT**. If the port is opens and if you see **COM Port Status:** "**Open**" then the setting is correct.

- 9. You can see the sample data received from the instrument under **Data received from port.**
- 10. Copy the sample data and save it in a local file for future use.
- 11. Click **Ok**.

For TCP/IP Based Instruments

- 1. On the main menu, click **Setup** and then click **Instrument Setup**. The **Instrument Setup** screen appears.
- 2. In the **Instrument Setup** screen, select the instrument from the list to configure and then click **Data Source**. The **Data Source** screen appears based on the data transfer mode specified while creating\adding the instrument. For TCP/IP mode data transfer, the settings dialog appears as shown in the figure:



TCP/IP Data Source configuration settings dialog

- 3. Under **Data Collection Mode**, click to select **Act a as Client**.
- 4. Set the **Remote Host** and **Remote Host Port** to connect to the IP device/Instrument.
- 5. To validate the settings, click **CONNECT**. If the port is opens and if you see **TCP/IP Status:** "**Connected**" then the setting is correct.
- 6. You can see the sample data received from the instrument under **Data received from port.**
- 7. Copy the sample data and save it in a local file for future use.

8. Click **Ok**.

Deleting a Method

You cannot delete a method if the parser in the method is associated with a labsheet. To delete a method, follow these steps:

- 1. In the **Method Setup** screen go to the **Methods and Parsers** panel.
- 2. Right-click the method you want to delete and then click **Delete Method**. The Audit Trail dialog appears. Type the password and the reason and then click **Ok**.

Deleting a Parser

You cannot delete a parser if the parser is associated with a labsheet. To delete a parser, follow these steps:

- 1. In the **Method Setup** screen go to the **Methods and Parsers** panel.
- 2. Right-click the parser you want to delete and then click **Delete Parser**. The Audit Trail dialog appears. Type the password and the reason and then click **Ok**.