TraceFinder Acquisition Quick Reference Guide

This quick reference guide describes the Acquisition mode tasks of the Thermo TraceFinder[™] 4.1 application.

Contents

- Opening the Acquisition Mode
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IMPORTANT TraceFinder 4.1 uses the same data as TraceFinder 4.0. The application stores the method, project, template, and compound database data for the 4.1 release in the TraceFinderData/4.0 folder.

To open the Acquisition mode

Click **Acquisition** in the navigation pane.

The navigation pane for the Acquisition mode opens.



The task pane for the Acquisition mode tracks your actions.





Opening the

Acquisition

Mode

Selecting a Batch

Use the Batch Selection page of the Acquisition mode to create a new batch in any of your current projects, or use a batch template to start a new batch.

- To start a new batch
- 1. In the navigation pane, click Create a New Batch.
- 2. Select the Quantitation option, the Target Screening option, or the Unknown Screening option.
- 3. Select the batch folder where you want to create a new batch.
- 4. Type a unique name for the new batch in the Batch Name box.
- 5. Select a method from the Method Selection list.

The Method Compound Data pane displays the compounds in the method. You cannot edit the compounds list in the Acquisition mode.

| N | Aethod se | election: Alprazola | am | | - | | |
|---|-----------|--|--|--|--|---|--|
| M | lethod | Compound Dat | a | | | | |
| | RT | Compound | Compound type | Active | CAS No | LIMS ID | Use a |
| • | 3.14 | Propanenitrile | Target Compound | V | 107120 | | |
| | 3.15 | Pyrazinamide | Target Compound | V | 98964 | | |
| | 3.67 | 1,3-Dioxolane, | Target Compound | V | 4359573 | | |
| | 4.70 | Pyrazinamide | Target Compound | V | 98964 | | |
| | | | | | | | |
| | | | | | | | |
| | N | Method RT ▶ 3.14 3.15 3.67 | Method Compound Date RT Compound 3.14 Propanenitrile 3.15 Pyrazinamide 3.67 1,3-Dioxolane, | Method Compound Data RT Compound Compound type 3.14 Propanenitrile Target Compound 3.15 Pyrazinamide Target Compound 3.67 1,3-Dioxolane, Target Compound | Method Compound Data RT Compound Compound type Active 3.14 Propanenitrile Target Compound Image: Compound <t< td=""><td>Method Compound Data RT Compound Compound type Active CAS No 3.14 Propanenitrile Target Compound I 107120 3.15 Pyrazinamide Target Compound I 98964 3.67 1,3-Dioxolane, Target Compound I 4359573</td><td>Method Compound Data RT Compound Compound type Active CAS No LIMS ID 3.14 Propanenitrile Target Compound IV 107120 3.15 Pyrazinamide Target Compound IV 98964 3.67 1,3-Dioxolane, Target Compound IV 4359573</td></t<> | Method Compound Data RT Compound Compound type Active CAS No 3.14 Propanenitrile Target Compound I 107120 3.15 Pyrazinamide Target Compound I 98964 3.67 1,3-Dioxolane, Target Compound I 4359573 | Method Compound Data RT Compound Compound type Active CAS No LIMS ID 3.14 Propanenitrile Target Compound IV 107120 3.15 Pyrazinamide Target Compound IV 98964 3.67 1,3-Dioxolane, Target Compound IV 4359573 |

6. To continue to the next page, click **Next**.

The Sample Definition page opens. See Defining the Sample List.

To start a new batch from a template

- 1. In the navigation pane, click Create a New Batch.
- 2. Select the Quantitation option, the Target Screening option, or the Unknown Screening option.
- 3. In the Available Templates pane, select the template and method combination that you want to use.

The system creates a batch name with the selected template name and appends the date and time stamp. The application selects the default project, subproject, and method associated with this template.

- 4. (Optional) Select a different batch folder where you want to create the new batch.
- 5. (Optional) Select a different method to use for the new batch.
- 6. To continue to the next page, click Next.

The Sample Definition page opens. See Defining the Sample List.

To select a prepared batch

1. In the navigation pane, click **Submit a Prepared Batch**.

The application displays all your unacquired, saved batches. The application stores all unacquired batches in the ...\TraceFinderData\4.0\Projects\... folder.

2. Select the batch that you want to acquire.

| Batch selection > | | Previous Nex |
|-------------------|-----------------|--------------------|
| Batch name | Folder | Last modified |
| Batch_Quan_1 | Project_Quan | 02-05-2015 11:00AM |
| Batch_Quan_1 | Project_Quan | 02-05-2015 10:59AM |
| Batch_Target_1 | Project_Target | 02-05-2015 11:00AM |
| Batch_Unknown_1 | Project_Unknown | 02-05-2015 11:01AM |

3. To continue to the next page, click Next.

The Finish page of the Acquisition mode opens. From the Finish page, you can save the batch, submit the batch for acquisition, or go back to the Sample Definition page to edit the sample list for this batch.

- 4. Do one of the following:
 - To prepare the batch for acquisition, click Submit, III Submit.

For detailed instructions, see Submitting the Batch.

- -or-
- To edit the samples list, click **Previous**.

For detailed instructions about editing a samples list, see Defining the Sample List.

-or-

• To save the batch to be acquired later, click Save, 🔚 Save .

The application saves your batch, closes the Acquisition mode, and returns you to the mode you were last using.

The application saves batches to the ...\TraceFinderData\4.0\Projects\... folder.

* To reinject samples in a previously acquired batch

- 1. In the navigation pane, click Reinject Samples.
- 2. On the Batch page, select the batch that you want to reacquire.

The Batch page displays all previously acquired batches, both quantitative and screening.

| • | Batch selection > | | Previous | Next |
|----|--------------------|--------------|----------|------|
| Ba | tch | | | |
| | C:\TraceFinderData | 4.0\Projects | | |
| Ė | 🕒 📄 Project A | | | |
| | BatchA | | | |

3. To continue to the next page, click Next.

The Sample Definition page opens. See Defining the Sample List.

To create a quantitation batch template

- 1. In the navigation pane, click **Create or Edit a Template**.
- From this page, you can begin a new batch template.
- 2. Select the Quantitation option.

Method

- 3. Click ... and select the folder where you want to create the new batch template.
- 4. Type a name for the new batch template in the Template Name box.
- 5. Select a method from the Method Selection list.

The Method Compound Data pane displays the compounds in the method. You cannot edit the compounds list from the Acquisition mode.

| Method selection: Method_Quan | | | | | | |
|-------------------------------|----------------------|-----------|---------------|-----------------|----------|----------|
| M | Method Compound Data | | | | | |
| | RT | Compou | nd | Compound type | Active | CAS No |
| • | 3.14 | Propaneni | itrile | Target Compound | V | 107120 |
| | 3.15 | EDIFENPH | IOS-CE5-R20-T | Target Compound | V | 17109498 |

6. To continue to the next page, click Next.

The Sample Definition page opens. See Defining the Sample List.

To create a target screening batch template

1. In the navigation pane, click **Create or Edit a Template**.

From the Template Selection page, you can begin a new batch template.

- 2. Select the Target Screening option.
- 3. Click _____ and select the folder where you want to create the new batch template.
- 4. Type a name for the new batch template in the Template Name box.
- 5. Select a method from the Method Selection list.

The Method Compound Databases pane displays the screening databases available for the selected method.

| Me | Method selection: Method_Alprazolam 💌 | | | | | | |
|----|---------------------------------------|------------------|--|--|--|--|--|
| Me | Method Compound Databases | | | | | | |
| | Enabled | Database File | | | | | |
| ١. | V | Default Database | | | | | |
| | V | Database 1 | | | | | |

- 6. Select the check box for each database that you want to use for screening.
- 7. To continue to the next page, click Next.

The Sample Definition page opens. See Defining the Sample List.

To create an unknown screening batch template

1. Click Create or Edit a Template in the navigation pane.

Note When user security is activated, you must have Acquisition Wizard – Template Editing permission to create a batch template.

- 2. Select the Unknown Screening option.
- 3. Click _____ and select the folder where you want to create the new batch template.
- 4. Type a name for the new batch template in the Template Name box.

| Template selection > | |
|--|--|
| Quantitation Target Screening Unknown Screening Batch Folder: | |
| Project_Unknown | |
| Template name: | |
| Template_Unknown | |

5. Select a method from the Method Selection list.

The Method Compound Databases pane displays the unknown screening databases available for the selected method.

| - Met M | hod ethod selection: | Method_unknown 👻 | | | | |
|------------|-------------------------|------------------------------|------------|--|--|--|
| M | Method Search Databases | | | | | |
| | File Name | | Туре | | | |
| • | Benzodiazepines | s Example Database | CDB | | | |
| | NISTDEMO | | NIST | | | |
| | Abacipharm | Reg. Record Construction and | ChemSpider | | | |

- 6. Select the check box for each database that you want to use for unknown screening.
- 7. To continue to the next page, click **Next**.

The Sample Definition page of the Acquisition mode opens. See Defining the Sample List.

Defining the Sample List

Use the Sample Definition Page of the Acquisition mode to create a list of samples for the batch. You can add or insert samples to the list, import a sample list, or remove samples from the list.

As you enter sample values, you can use the Copy Down and Fill Down commands to quickly enter column values. For detailed instructions, refer to the "Using Copy Down and Fill Down" appendix in the *TraceFinder User Guide*.

After defining the list of samples, click Next.

- If you are creating a batch from scratch, creating a batch from a template, or editing a batch template, the Report Selection page opens. See Selecting and Reviewing Reports.
- If you are editing a previously acquired batch or a prepared batch, the Finish page opens. See Submitting the Batch.

To add samples to the list

1. Select the number of sample rows to add and then click **Add**, Add

Tip To quickly add one sample row, right-click the sample list and choose **Add Sample** from the menu.

- 2. For each sample, type a unique file name in the Filename column.
- 3. For each sample, select a sample type from the Sample Type list.

| Available sample types | | | | |
|------------------------|------------|----------|----|--|
| Specimen | Hydrolysis | Solvent | QC | |
| Unextracted | Calibrator | Negative | | |

For a detailed description of sample types, refer to "Using the Acquisition Mode" in the TraceFinder User Guide.

4. For each Calibrator or QC sample, select a level from the Level list.

The sample levels are defined in the master method. If there are no levels to select from the Level list, ask a user with Supervisor or LabDirector permissions to edit the method and specify the levels.

For detailed instructions about defining sample levels, refer to the method development chapters in the *TraceFinder Lab Director User Guide*.

5. For each sample, type a vial position in the Vial Position column.

Tip Use the Fill Down command to make entering vial positions easier.

- 6. For each sample, type a volume in the Injection Volume column.
- 7. (Optional) Type or edit the values for the remaining columns.

Note When you use the scroll bar at the bottom of the sample list, the following columns remain fixed: Status, Filename, Sample Type, Groups, Qual Processing (quantitation) or Blank Subtraction (target screening) Level, Sample ID, and Sample Name, while the other columns scroll right and left.

To insert samples into the list

- 1. Select the sample above which you want to insert new Specimen samples.
- 2. Select the number of samples to insert and click Insert, Insert

The application inserts the Specimen samples above the selected sample.

| Inserted | | Status | Filename | Sample type | Groups |
|----------|---|------------|------------|-------------|--------|
| samples | 1 | 6 | cal_std_5 | Calibrator | |
| | 2 | - 🕒 | Unknown2 | Specimen | |
| | 3 | _ 🕒 | Unknown1 | Specimen | |
| | 4 | \bigcirc | cal_std_10 | Calibrator | |

- 3. For each sample, type a unique file name in the Filename column.
- 4. For each sample, select a sample type from the Sample Type list.
- 5. For each Calibrator or QC sample, select a level from the Level list.

The sample levels are defined in the master method. If there are no levels to select from the Level list, ask a user with Supervisor or Lab Director permissions to edit the method and specify the levels.

For detailed instructions about defining sample levels, refer to "Using the Method Development Mode" in the *TraceFinder Lab Director User Guide*.

6. Type a vial position in the Vial Position column for each sample.

Tip Use the Fill Down command to make entering vial positions easier.

- 7. For each sample, type a volume in the Injection Volume column.
- 8. (Optional) Type or edit the values for the remaining columns.

To import samples into the list

1. Click Import, Import

The Sample Import Tool dialog box opens where you can import a sample list from a CSV, an XML, or an SLD file.

| Sample import tool | |
|---|--------|
| Import from a file (.csv, .xml, .sld) | |
| l | Browse |
| Imported samples will be: appended to the end of the list | • |
| Import | Cancel |

2. Browse to and select a CSV, an XML, or an SLD file with the sample definitions that you want to import.

Note The .csv, .xml, or .sld data format must match the TraceFinder data format.

- 3. From the Imported Samples Will Be list, select either **Appended to the End of the List** or **Inserted at the Selected Row**.
- 4. Click Import.

The Sample Import Tool dialog box closes, and the application adds the specified samples to the samples list. When you import samples from an Xcalibur[™] sequence file, the TraceFinder application makes the following column name and sample type substitutions.

| Xcalibur column | TraceFinder column | Xcalibur sample type | TraceFinder sample type |
|-----------------|--------------------|----------------------|-------------------------|
| Position | Vial Position | Blank | Negative |
| Inj Vol | Injection Volume | Std Bracket | Calibrator |
| Dil Factor | Conversion Factor | | |

5. For each Calibrator or QC sample, select a level from the Level list.

The sample levels are defined in the master method. If there are no levels to select from the Level list, ask a user with Method Development permission to edit the method and specify the levels.

For detailed instructions about defining sample levels, refer to the method development chapters in the *TraceFinder Lab Director User Guide*.

6. For each sample, type a vial position in the Vial Position column.

Tip Use the Fill Down command to make entering vial positions easier.

- 7. For each sample, type a volume in the Injection Volume column.
- 8. (Optional) Enter or edit the values for the remaining columns.

Note When you use the scroll bar at the bottom of the sample list, the following columns remain fixed: Status, Filename, Sample Type, Groups, Qual Processing (quantitation) or Blank Subtraction (target screening) Level, Sample ID, and Sample Name, while the other columns scroll right and left.

9. (Optional) When using multiplexing, select a channel for each imported sample.

Imported samples default to Auto.

To remove samples from the list

1. Select the samples you want to remove.

Tip Use the CTRL or SHIFT keys to select multiple samples.

2. Right-click and choose Remove Selected Samples from the shortcut menu.

To reinject a sample from a previously acquired batch

- 1. In the sample list, select the sample that you want to reinject.
- 2. Right-click and choose Reinject Selected Samples from the shortcut menu.

The application creates a copy of the selected sample and appends INJ001 to the file name. Additional reinjections of the same sample are numbered INJ002, INJ003, and so forth.

The application copies all parameter values from the original sample. A green status icon indicates previously acquired samples (acquired and processed), and the sample name is grayed out. A blue status icon indicates samples created for reinjection (not acquired).

| 0 | cal_50_INJ001 | Calibrator | 10 |
|---|---------------|------------|----|
| • | cal_50 | Calibrator | 10 |
| 0 | cal_10_INJ001 | Calibrator | 10 |
| • | cal_10 | Calibrator | 10 |

When you submit this batch, the application acquires only the reinjection samples.

Sample Definition Page

| 5 | Status | Filename | Sample type | Groups | Level | Sample ID | Sample name | Vial position | Injection volume | Channel | | Barcode Expected | Sample Volume | Dilution Factor | Sample Weight | Calcula Type | tion |
|---|--------|----------|-------------|--------|-------|--------------|----------------|------------------|---------------------|-----------|---|---------------------|------------------|--------------------|------------------|-----------------|------|
| | • | Unknown1 | Solvent | | | | | CStk1-01:1 | 10.0 | Channel 1 | • | | 1 | 1 | 1 | Liquid | • |
| | • | Unknown2 | Negative | | | | | CStk1-01:3 | 10.0 | Auto | - | | 1 | 1 | 1 | Liquid | |
| | • | Unknown3 | Specimen | | | | | CStk1-01:4 | 10.0 | Auto | - | | 1 | 1 | 1 | Liquid | |

Table 1. Sample Definition page parameters (Sheet 1 of 2)

| Parameter | Definition |
|-----------------------|---|
| Previous | Returns you to the previous Acquisition page. |
| Next | Takes you to the next Acquisition page. |
| Sample Controls | |
| Add | Adds the specified number of empty rows to the sample grid. |
| Insert | Inserts the specified number of empty rows above the selected row. |
| Import | Opens the Sample Import Tool to import samples from a CSV, an XML, or an SLD file. |
| Multiplexing Channels | Available only when you have activated multiplexing. Refer to "Using the Configuration Console" in the <i>TraceFinder Lab Director User Guide</i> . |
| All Channels | Uses all configured channels to acquire this batch. |
| Channel 1-n | Uses only the selected channels to acquire this batch. |
| Shortcut menu | |
| Add Sample | Adds one empty row to the sample grid. |
| Insert Sample | Inserts one empty row to the sample grid above the selected row. |
| Insert Copy Sample | Copies the currently selected row and inserts a copy above the row. |

| Table 1. Sample Definition page | |
|---|--|
| Parameter | Definition |
| Reinject Selected Samples | Creates a copy of the selected samples and appends INJ001 to the end of the file name. Additional reinjections of the same sample are numbered INJ002, INJ003, and so forth. |
| Remove Selected Samples | Removes the selected samples from the sample grid. |
| Copy Down | Copies the value in the selected row to all rows below it. This command is available only when you have selected a value that can be copied down. |
| Fill Down | Enters sequential values in the column, starting with the value in the selected row and ending with the last row in the column. |
| Modify Columns | Opens the Modify Columns dialog box to customize the column display. Refer to "Using the Analysis Mode" in the <i>TraceFinder User Guide</i> . |
| Enable/Disable Sample Weight Calculation | Displays or hides the Sample Volume, Dilution Factor, Sample Weight, Calculation Type, and Final Units columns. |
| Сору | Copies the data in the selected rows or columns to the Clipboard. Use this command to copy sample information to a text editor or a spreadsheet application. You cannot paste this data back into the Acquisition mode sample list. |
| Copy With Headers | Copies the data in the selected rows or columns and the associated column headers to the Clipboard. Use this command to copy sample information to a text editor or a spreadsheet application. You cannot paste this data back into the method development compound list. |
| Paste | Pastes one column of copied data from a text editor or a spreadsheet application into the selected column. |
| Undo Last Paste | Removes the last pasted item in the sample list. |
| Export to CSV File | Opens the Save As dialog box to save the batch to a CSV file. |

Selecting and Reviewing **Reports**

Use the Report Selection page of the Acquisition mode to specify the types of reports that you want to create.

The Report Selection page lists all the available reports and displays the report name, report title, and the options to create printed, PDF, CSV, or Microsoft[™] Excel[™] output.

After specifying your report options, click Next to go to the Finish page and submit your batch. See Submitting the Batch.

The application saves the resulting output files for your reports in the following folder:

...\TraceFinderData\4.0\Projects\...\batch\Reports

✤ To edit a report title

Select the text in the Report Title column and edit the default text.

The default text in this column is the same as the report name.

To specify a report in print format or as a PDF, a CSV, or an Excel file

- 1. For each report that you want to create, select the check box in the Print, Create PDF, Create CSV, or Create Excel column.
- 2. To duplicate the output type for all reports, right-click the cell and choose **Copy Down** from the shortcut menu.

| Print | Create PDF | Create CSV | Create Excel |
|-------|------------|------------|--------------|
| | | | |
| | | Copy down | |
| | | | Γ |

All check boxes in the column below the selected cell duplicate the selected or cleared state in the selected cell.

Report Selection Page

| tch selection 👂 🥝 | Sample definition > | Report se | election > | 🧭 Finish 🔉 | | Previous |
|-----------------------|-----------------------|-----------|------------|------------|--------------|----------|
| Report Name | Report Title | Print | Create PDF | Create CSV | Create Excel | |
| Batch Report | Batch Report | | | V | |] |
| Blank Report | Blank Report | | | | | |
| Calibration Report | Calibration Report | | | | | 1 |
| Check Standard Report | Check Standard Report | | | | | 1 |

| Parameter | Description |
|-----------------------------|--|
| Report Name | The name of a report. |
| Report Title | User-editable description of the report. |
| Print | Reports to be sent to the printer. |
| Create PDF | Reports to be saved as PDF files. |
| Create CSV | Reports to be exported as CSV files. |
| Create Excel | Reports to be exported as Excel files. |
| Shortcut menu: Copy Down | Copies the selected or cleared state to all subsequent reports in the column. This action applies only to report types that make this output format available. |

Submitting the Batch

Use the Finish Page of the Acquisition mode to specify a startup method, a shutdown method, or a calibration file. You can save the batch to be acquired later, or you can submit the batch and acquire data, process data, or create reports.

Note If you are working with a batch template, the only available function is Save.

To specify device states

In the System Status area of the Finish page, right-click the name of the device, and then choose a device state.

| Devices | |
|----------|---------------------|
| | |
| ····· • | Turn Device On |
| Batch St | Turn Device Standby |
| Project: | Turn Device Off |
| | |

| Ins | tru | me | ent | sta | te |
|-----|-----|----|-----|-----|----|
| | | | | | |

| Turn Device On | (Default) Keeps the system in the On state when the current run finishes, so you can begin another run without waiting. All power and flows are maintained at operational levels. |
|----------------------------|--|
| Turn Device Standby | Keeps the system in the Standby state when the current run finishes, so you can begin another run with only a short delay between runs. |
| Turn Device Off | Keeps the system in the Off state when the current run finishes. The Off state indicates that all power to the instrument, which the TraceFinder application can control, is turned off. Power to the instrument includes power to all heaters and most subassemblies, but in some cases not all subassemblies. |
| Instrument status indicato | rs |

| • | Green indicates that the device is turned on. |
|---|--|
| 6 | Yellow indicates that the device is in standby mode. |
| • | Red indicates a device error. |

To specify startup or shutdown methods

1. (Optional) Select a method from the System Startup Method list on the Finish page.

The application runs this method before running the batch. No autosampler injection takes place. This feature is not available for all instruments.

2. (Optional) Select a method from the System Shutdown Method list.

The application runs this method after running the batch. No autosampler injection takes place. This feature is not available for all instruments.

| System startup method: |
|-------------------------|
| AS Method 1 |
| System shutdown method: |
| AS Method 3 |

To automatically update the timed selected reaction monitoring information

On the Finish page, select the Auto TSRM Update check box.

Auto TSRM Update

When you submit the batch, the application updates the TSQ[™] method with mass transitions, collision energy, and other appropriate data for TSRM functionality.

To specify a calibration file

1. In the Calibration area of the Finish page, select a calibration (.calx) file from the list.

| Calibrat | ion | |
|----------|----------------|---|
| Evte | nd calibration | |
| | | |
| | | • |
| | | |

Note You must acquire at least one batch with the current method to create a calibration (.calx) file.

- 2. To add calibration data from the current batch to the selected calibration file, select the **Extend Calibration** check box.
- To save a batch for later acquisition or processing

From the Finish page, click **Save**, Save.

The application saves your batch as a prepared file.

- To start an acquisition or processing
- From the Finish page, click Submit, Submit.
 The Submit Options Dialog Box opens.
- 2. To acquire (or reacquire) the submitted samples, select the Acquire Data check box.
 - When all submitted samples have been previously acquired, this option is (by default) not selected.
 - When there are any samples in the batch that have not been acquired, this option is (by default) selected.

Tip You can process the data with or without performing peak detection. For example, you might want to turn off peak detection when reprocessing samples.

3. To process the submitted samples, select the Process Data check box.

The application displays options for each type of method that the batch uses: Quantitation, Target Screening, Unknown Screening, or a combination of methods.

4. For each method type, select the check box for the options that you want to use.

Peak Detect: Performs peak detection for all method types. You can process the data with or without performing peak detection. For example, you might want to turn off peak detection when reprocessing samples.

Quantitate: Performs quantitation for quantitation methods.

Identify: Performs identification for unknown screening methods.

Identify and Confirm: Performs both identification and confirmation for target screening methods.

With RT Alignment: Performs retention time alignment for unknown screening methods. This produces the heat map and group averages data in the Unknown Screening View. When you select this option, the application automatically selects the Peak Detect option.

- 5. (Optional) Select the **Create Reports** check box.
- 6. (Optional with multiplexing activated) Select the Priority Sequence check box.

The application acquires the priority batch on the next available channel or the assigned channel.

- 7. (Optional without multiplexing activated) Select the **Priority Sequence** check box and then select one of the following priority options to place the batch in the queue:
 - Next Available Batch places the batch immediately after the currently acquiring batch.
 - Next Available Sample places the batch immediately after the currently acquiring sample.

Note When you select Full Sequence Submission in the Configuration console, these options are unavailable because the current batch and the current sample are, in effect, the same thing.

- 8. To specify the following optional parameters, click Show Details.
 - a. Select the Use check box for the device that you want to use for this acquisition.
 - b. Select the **Start Device** check box to indicate the device that will initiate communication with the other instruments.

This is usually the autosampler.

c. Select the **Start When Ready** check box, which starts all instruments together when they are all ready.

When you clear this check box, individual instruments can start at different times and then must wait for the last instrument to be ready.

- d. Select the system state after it acquires the last batch: On, Standby, or Off.
- 9. To start the selected processes, click OK.

The selected processes begin, and the application shows the real-time display at the bottom of the current window. You can begin another batch in the Acquisition mode while you watch the real-time display of the currently acquiring batch.

IMPORTANT When your batch uses unknown screening features, after the first processing, you might see an error message stating that the total number of results is too large for a single batch (more than 500 000). Return to the Processing pages for the unknown screening features and make one or more of these parameter adjustments:

- Limit the RT range.
- Shorten the signal range.
- Specify a lower value for the Number of Top Matches.
- Specify a Simple Search instead of an Exhaustive Search.
- Specify Top Peaks instead of All Peaks.
- Limit the number of search types.

Submit Options Dialog Box

| Submit Options | | | | | | |
|--------------------------------|-------------------|-----------------|------------|----------------|----------|--|
| User name: | | | | | | |
| Samples: | Samples: | | | | | |
| -Workflow steps to perform - | | | | | | |
| Acquire | data 1 unacq | uired sample(s) | | | | |
| Process | s data | | | | | |
| Quanti | tation : | Peak Detect | Quantitate | | | |
| Unkno | wn Screening : | Peak Detect | ldentify | 🔲 With RT Alig | nment | |
| Create r | reports | | | | | |
| -Submit as a priority sequence | e? | | | | | |
| Priority | Sequence | | | | | |
| Nex | t Available Batch | I | | | | |
| Nex | t Available Samp | le | | | | |
| Acquisition | | | | | | |
| | | | _ | | ^ | |
| Device Name | | Device | | | | |
| MS | V | | | | | |
| ✓ Start when ready | | | | | | |
| Post-run system state: On | | | | | | |
| | | Hide Details ^ | ОК | | Cancel | |

| Table 2. | Submit Options dialog box parameters | (Sheet 1 | of 2) |
|----------|--------------------------------------|----------|-------|
|----------|--------------------------------------|----------|-------|

| Parameter | Description | | | |
|---------------------|---|--|--|--|
| User Name | Displays the name of the current user. | | | |
| Samples | Reports the batch number and number of samples. | | | |
| Method Types | Lists the types of methods (quantitation, target screening, or unknown screening) used in the submitted batches. | | | |
| Workflow Steps to P | erform | | | |
| Acquire Data | Submits the current batch to acquisition. When all submitted samples have been previously acquired, this option is (by default not selected. When there are any samples in the batch that have not been acquired, this option is (by default) selected. | | | |
| Process Data | Processes the data for the current batch using any of the following options: | | | |
| | Peak Detect: Performs peak detection for all method types. You can process the data with or without performing peak detection. For example, you might want to turn off peak detection when reprocessing samples. | | | |
| | Quantitate: Performs quantitation for quantitation methods. | | | |
| | Identify: Performs identification for unknown screening methods. | | | |
| | Identify and Confirm: Performs both identification and confirmation for target screening methods. | | | |
| | With RT Alignment: Performs retention time alignment for unknown screening methods. This produces the heat map and group averages data in the Unknown Screenin View. When you select this option, the application automatically selects the Peak Detect option. | | | |

| Parameter | Description | | | | |
|--------------------------|--|--|--|--|--|
| Create Reports | Creates reports for the current batch. | | | | |
| Submit as a Priority Seq | uence? | | | | |
| Priority Sequence | With multiplexing activated, places the batch immediately after the currently acquiring batch. | | | | |
| | Without multiplexing activated, specifies one of the following priority options to place the batch in the queue: | | | | |
| | Next Available Batch places the batch immediately after the currently acquiring batch. | | | | |
| | Next Available Sample places the batch immediately after the currently acquiring sample. | | | | |
| | Note When you select Full Sequence Submission in the Configuration console, these options are unavailable because the current batch and the current sample are, in effect, the same thing. | | | | |
| Acquisition pane | | | | | |
| Device Name | Lists all configured instruments. If the instrument that you want to use is not configured, close the TraceFinder application, configure the instrument, and then reopen the application. You cannot configure an instrument while the TraceFinder application is running. | | | | |
| Use | Specifies the instruments used for this acquisition. | | | | |
| Start Device | Specifies the instrument that is used to initiate the communication with the other instruments. This is usually the autosampler. | | | | |
| Start When Ready | Starts the specified device when all the instruments are ready to acquire data. | | | | |
| Post-run System State | Specifies the system state after it acquires the last batch: On (default), Standby, or Off. | | | | |
| Buttons | | | | | |
| Hide/Show Details | Collapses or expands the acquisition details of the Submit Options dialog box. | | | | |
| ОК | Begins the selected processes. | | | | |
| Cancel | Closes the Submit Options dialog box without submitting any tasks. | | | | |

To view the output files

Locate the files to view from the following directories:

- The application writes saved batches to the project folder: ...\TraceFinderData\4.0\Projects\...
- For each acquired sample, the application writes an RSX file to the batch Data folder: ...\TraceFinderData\4.0\Projects\...\Data
- The application saves method information to the batch Methods folder: ...\TraceFinderData\4.0\Projects\...\Methods
- The application writes the reports to the batch Reports folder:
 - ...\TraceFinderData\4.0\Projects\...\batch\Reports

Finish Page

| Batch selection | tion > 🥝 Finish > Previous Previous Nex |
|---|---|
| System Status | Submission |
| Devices Accela AS Batch Status SubFolder: Project_Quan Name: Batch_Quan_Unknown_1 Sequence Status Number of samples: 1 Number of unacquired samples: 1 Number of unacquired samples: 1 Excel: 0 Method Status Local method: Batch_Quan_Unknown_1_Method_Quan_Unknown Instrument method: Instrument1 Number of compounds: 17 | Save Submit System startup method: System shutdown method: Auto TSRM Update Calibration Extend calibration |

| Parameter | Description | | | |
|---|---|--|--|--|
| System Status | The System Status pane displays the following: Devices used for the acquisition Project, subproject, and name of the batch Number of acquired and unacquired samples in the batch Number of reports to be printed and saved as PDF, CSV, or Excel files Local method and instrument method used for the batch Number of compounds in the method | | | |
| System Startup Method System Shutdown Method | The instrument methods that run before and after the batch. No autosampler injection takes place. These features are not available for all instruments. | | | |
| Auto TSRM Update | Updates the TSQ method with mass transitions, collision energy, and other appropriate data for TSRM functionality. | | | |
| Calibration | Use calibration: Uses the selected calibration file to process the current data. Extend calibration: Adds calibration data from the current batch to the selected calibration file. | | | |
| Previous | Returns you to the previous Acquisition page. | | | |
| Save | Saves the current batch as a prepared file. | | | |
| Submit | Opens the Submit Options dialog box. | | | |

Using Quick Acquisition

Use the quick acquisition feature to quickly submit samples from any mode in the application.

Note The Quick Acquisition feature is available only when you activate it in the Configuration console.

To run a quick acquisition

Choose Tools > Quick Acquire Sample from the main menu or click the Quick Acquire Sample icon, The TraceFinder Quick Acquisition window opens.

| TraceFinder Quick Acquisition | | | | | | | | |
|--|-----------------|------------------------------|-----------|-------------|---------|---------------|---------------------|----------------------|
| Sequence: 🗋 New 🔊 Open 🕒 Save 😹 Save As Samples: 1 📮 🕪 Add 1 🚔 🕼 Insert 🚛 Delete Acquire: 🕀 Sample 🕀 Sequence Tools: 🔍 Qual Explorer 🕅 Library | | | | | | | | |
| | Status Filename | File Path | Sample ID | Sample name | Comment | Vial position | Injection volume | Instrument Method |
| ▶ 1 | O Unknown1 | C:\TraceFinderData\Sequences | | | | | 1.000 | |
| | | | | | | | | |

- 2. To create the sequence of samples that you want to acquire, do any of the following:
 - Use the Sequence buttons in the toolbar to open and save Xcalibur sequence (.sld) files.

| | • Use the Sequence but | • Use the Sequence buttons in the toolbar to open and save Xcalibur sequence (.sld) files. | | | | |
|------------|--|---|--|--|--|--|
| | Sequence: 🗋 New | Open 🖹 Save As | | | | |
| | Button | Description | | | | |
| | New | Replaces the current sequence with a new sequence that contains one Unknown sample. | | | | |
| | Dpen 🔁 | Opens a saved SLD file. | | | | |
| | E Save | Saves the current sequence as an SLD file in the C:\TraceFinderData\Sequences folder. | | | | |
| | 📑 Save As | Saves the current sequence to a new file name or location. | | | | |
| | • Use the Samples butto | ons in the toolbar to create a sequence of samples. | | | | |
| | Samples: 1 | | | | | |
| | Button | Description | | | | |
| | 1 💽 🕕 Add | Adds the specified number of new, empty samples to the end of the sample list. | | | | |
| | 1 ▲ 🗍 Insert | Inserts a new, empty sample or samples above the selected sample. | | | | |
| | J= Delete | Removes the selected samples from the sample list. | | | | |
| | • (Optional) Use the To | • (Optional) Use the Tools buttons in the toolbar to open a qualitative browser or the NIST library browser. | | | | |
| | Tools: 🛄 Qual Expl | lorer Library | | | | |
| | Button | Description | | | | |
| | Qual Explorer | Opens the qualitative explorer that you configured as your default qualitative explorer in the Configuration console. | | | | |
| | Library | Opens the NIST library browser. | | | | |
| | 3. When you have complete | d your sequence of samples, click either of the Acquire buttons. | | | | |
| | Acquire: 🕂 Sample | Sequence | | | | |
| | Button | Description | | | | |
| | Sample | Submits only the selected samples for acquisition, processing, or report generation. | | | | |
| | Sequence | Submits the sequence for acquisition, processing, or report generation. | | | | |
| | The application submits t | the samples for acquisition, processing, and report generation. | | | | |
| Trademarks | TraceFinder and TSQ are trac United States. | demarks and Xcalibur is a registered trademark of Thermo Fisher Scientific Inc. in the | | | | |
| | Excel and Microsoft are regist | tered trademarks of Microsoft Corporation in the United States and other countries. | | | | |