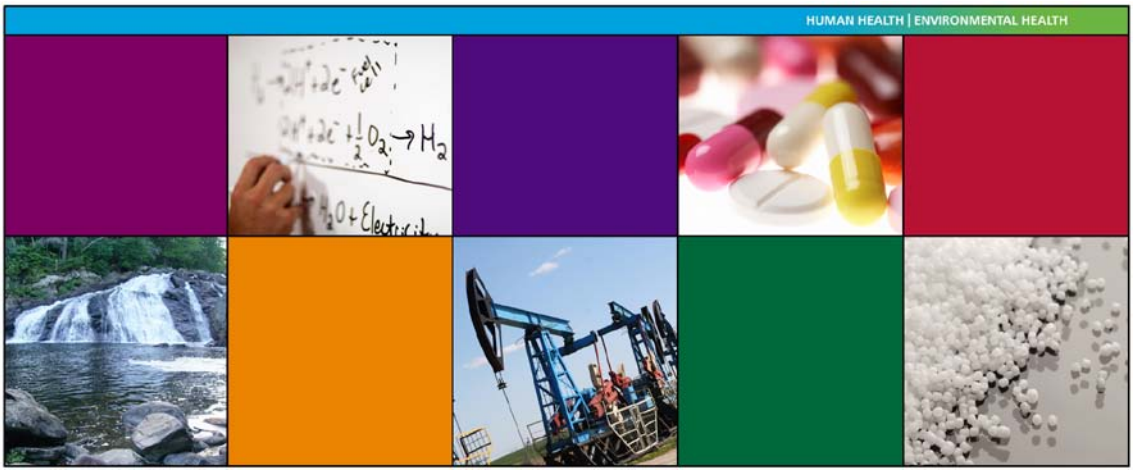
SAMPLE SHUTTLE ACCESSORY



User's Guide

PerkinElmer®

Release History

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Any comments about the documentation for this product should be addressed to:

User Assistance
PerkinElmer Ltd
Chalfont Road
Seer Green
Beaconsfield
Bucks HP9 2FX
United Kingdom

Or emailed to: info@perkinelmer.com

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Introduction

The Sample Shuttle enables you to automatically locate either of two sample slides in the optical beam of the spectrometer without opening the sample compartment. This prevents carbon dioxide and water vapor from entering the sample compartment each time you switch from a background scan to a sample scan.

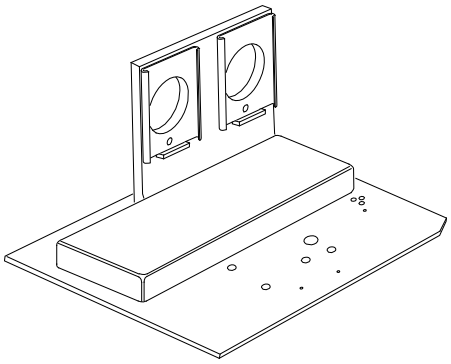


Figure 1 The Sample Shuttle accessory

How is the Sample Shuttle used?

The main purpose of the Sample Shuttle is to enable the use of an *interleaved scan cycle*. This is where the shuttle switches between the two positions to enable a new background to be collected with each sample, automatically.

The shuttle also enables a slide-mounted sampling accessory to be interchanged in the beam without disturbing the alignment of the accessory.

How to Install the Accessory

The Sample Shuttle can be installed easily into the sample compartment of the spectrometer, after first removing any other sampling accessory fitted.

To remove the current accessory and install the Sample Shuttle accessory:

1. Raise the sample cover (Figure 2a).

2. Reach in under the base of the current accessory and pull the release handle towards you to release the accessory (Figure 2b).

3. Now simply slide the accessory out of the sample area.
   Store it in a safe place for future re-use.

4. Slide in the Sample Shuttle accessory. Rest the back of it on the ledge in the sample area and slide it into position (Figure 2c). Push it firmly home to ensure that the multiway connector on the rear of the Sample Shuttle accessory mates properly with the spectrometer connector.

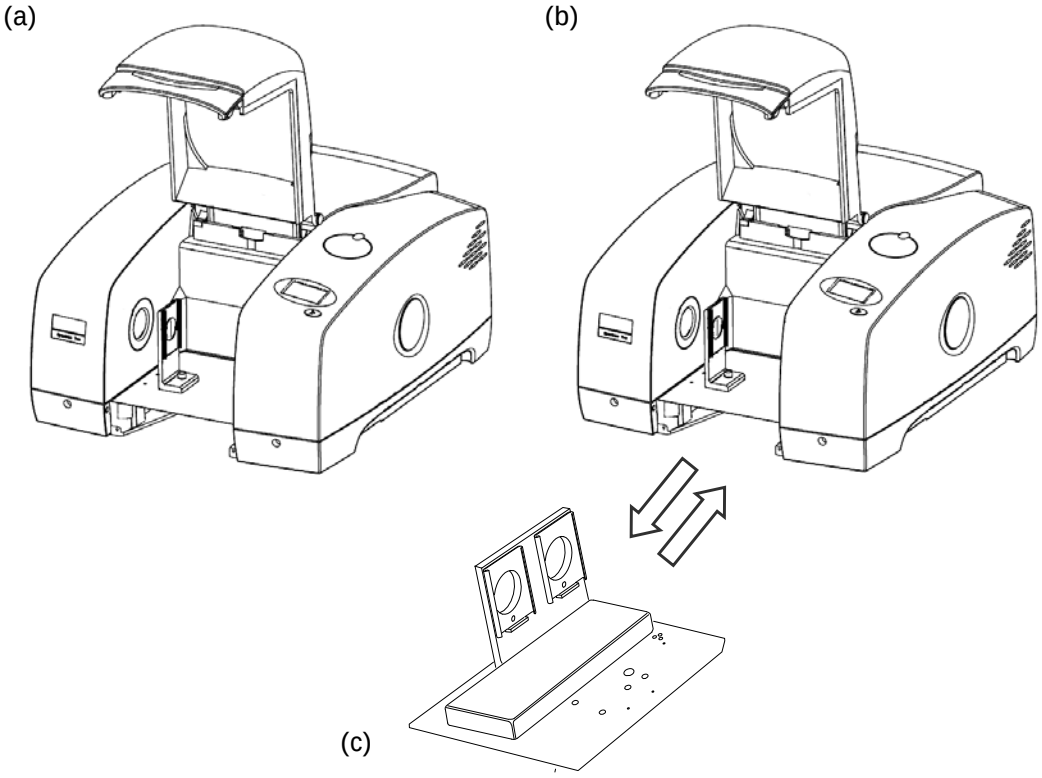


Figure 2 Removing the Sample Slide and installing the Sample Shuttle

WARNING

When the Sample Shuttle locks into place it aligns itself, which means that the slide holder may move. Be careful that your fingers or clothing are not trapped by the movement.

5. Lower the sample cover.

Accessory detection in Spectrum software

The Spectrum software (version 10 or later) detects the presence of the accessory, and the Accessory toolbar is displayed (Figure 3).

Figure 3 Sample Shuttle Accessory toolbar

The Setup Instrument Basic (Figure 4) and Setup Instrument BeamPath (Figure 5) tabs are updated to show that the Shuttle accessory is in position.

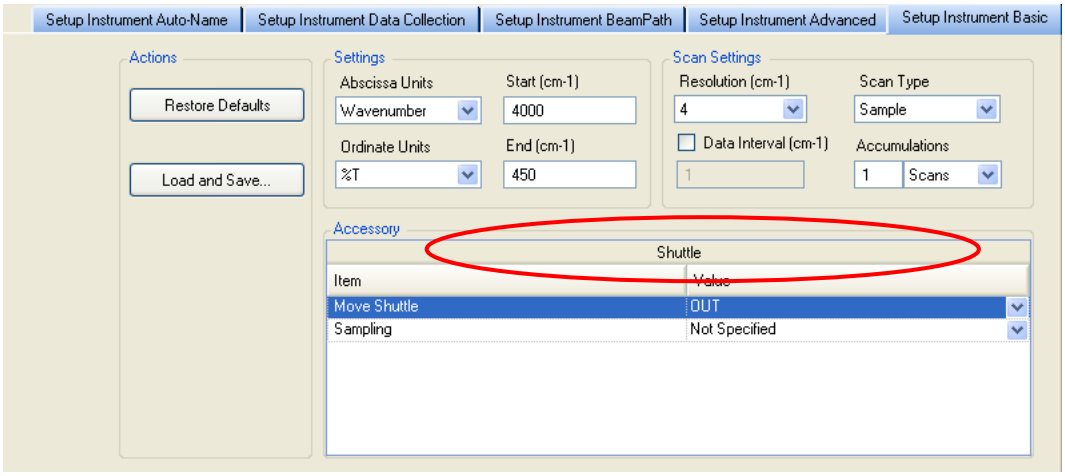


Figure 4 Setup Instrument Basic tab

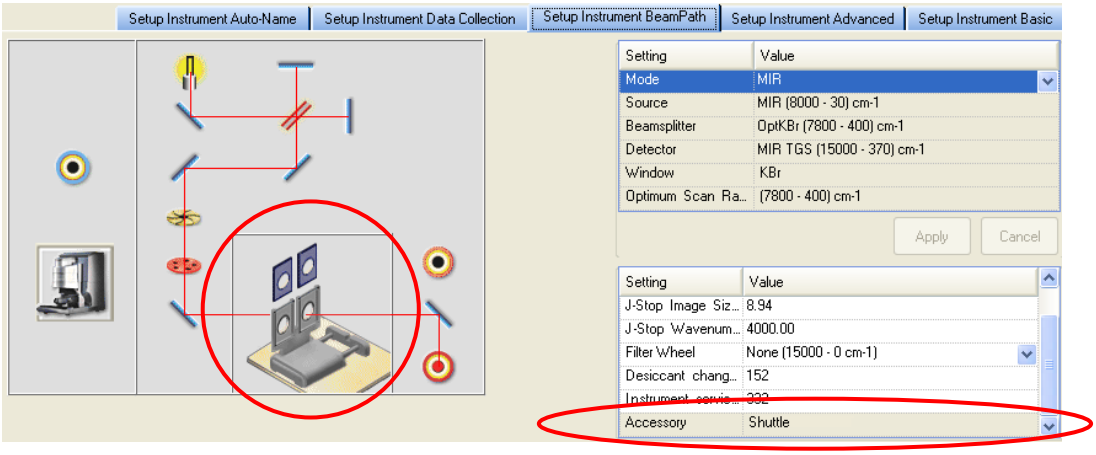


Figure 5 Setup Instrument BeamPath tab with the Shuttle accessory (circled)

Your accessory is now ready for use.

Using the Accessory with Spectrum Software

Manually moving the shuttle

You can change the shuttle position using the  button on the toolbar. Alternatively, you can use **Move Shuttle** on the Setup Instrument Basic tab to move the shuttle (Figure 6). In the **OUT** position, the back slide is in the beam path. In the **IN** position, the front slide is in the beam path.

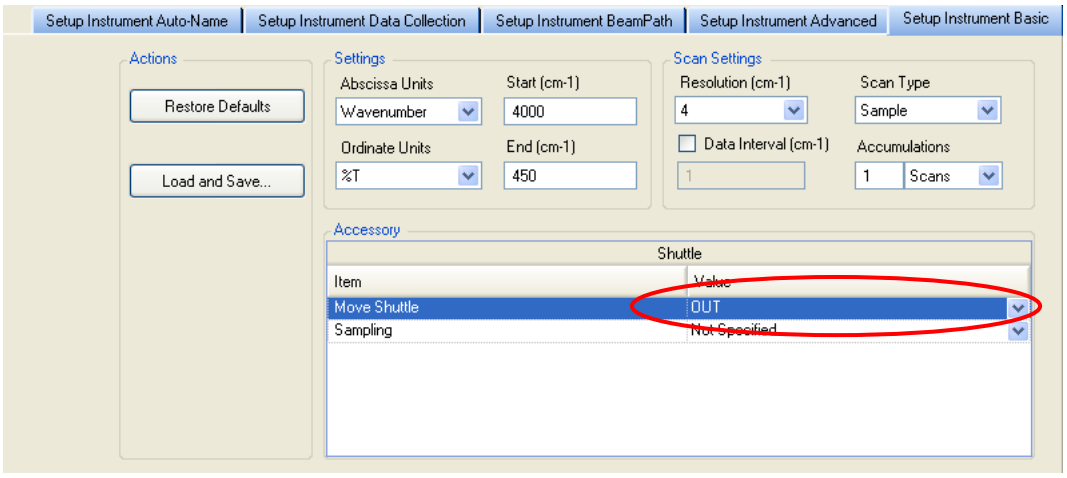


Figure 6 Manually changing the shuttle position

Automatically moving the shuttle

1. To use the interleaved mode, where the shuttle automatically collects a background before scanning the sample, set the **Scan Type** to **Interleaved** on the Setup Instrument Basic tab (Figure 7).

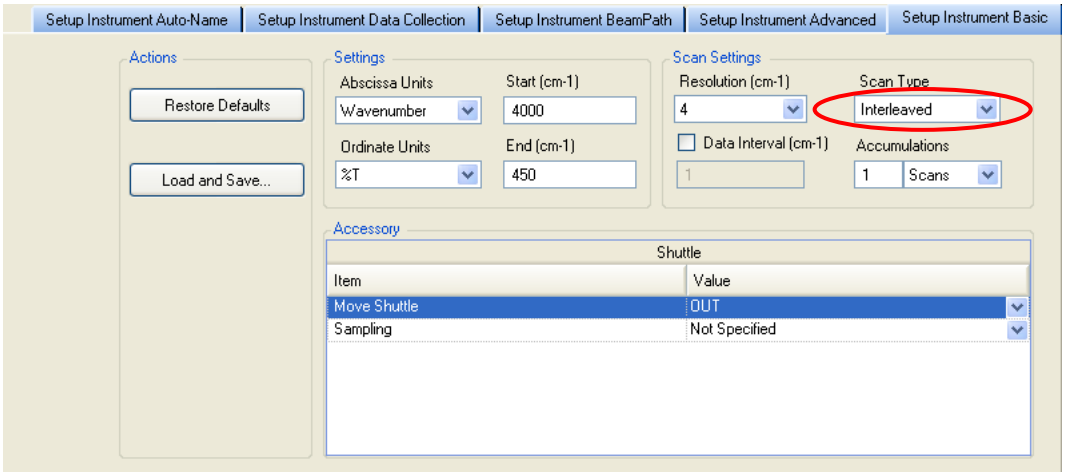


Figure 7 Selecting Interleaved as the Scan Type

2. Place your sample in the front slide.
   The back slide is used for the background scan, as shown in Figure 8.

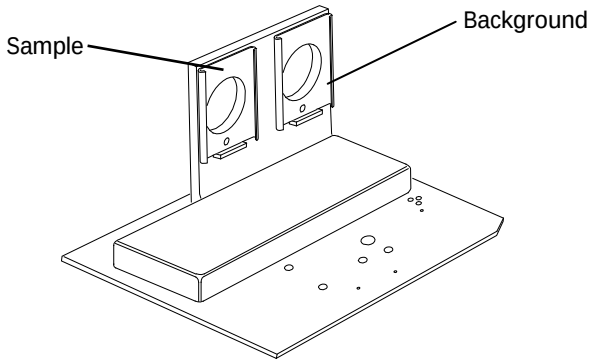
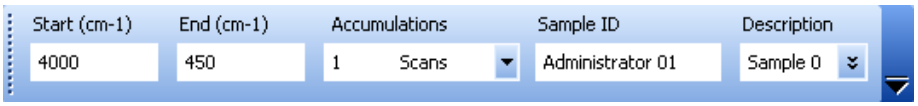


Figure 8 Sample and background slides

Performing a scan

1. Check and set the instrument parameters, such as the **Start** and **End** points of the scan range and the **Accumulations** required, and, if required, enter a unique **Sample ID** and **Description** in the Instrument Settings toolbar.



NOTE: The **Sample ID** and **Description** are automatically supplied by the Auto-Name function. See “Auto-Name” in the *Setup and Administration* book in the Spectrum Help file for more information.

   To amend any value, select the parameter and enter your new value.

2. Ensure that you have selected the appropriate **Scan Type** on the Setup Instrument Basic tab, for example, if you want to perform an interleaved scan.

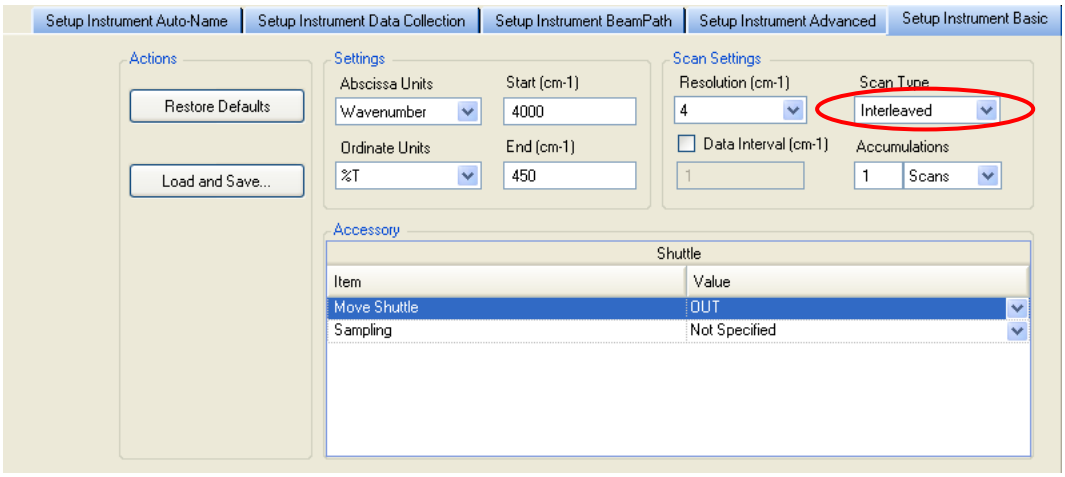


Figure 9 Selecting Interleaved as the Scan Type

3. If you wish, in the Accessory section of the Setup Instrument Basic tab you can select the **Sampling** type from the drop-down list of predefined configurations.

4. Click **Scan**  to begin collecting data.

   By default, during scanning the sample data is displayed on the Live tab in the Viewing Area.

   The completed spectrum is displayed on the Graph tab, and added to the current Sample View in the Data Explorer.

Although Spectrum automatically alerts you when you need a new background, and can be configured to request a new background at set intervals (on the Setup Instrument Data Collection tab), if you want to collect a background, set the **Scan Type** on the Setup Instrument Basic tab to **Background** or click  .

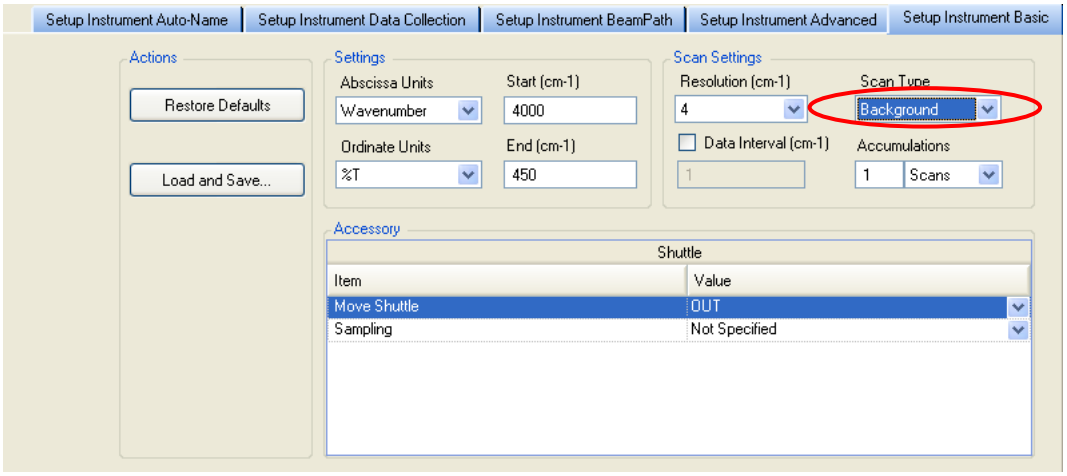


Figure 10 Selecting Background as the Scan Type

NOTE: If **Background** is selected as the **Scan Type** on the Setup Instrument Basic tab, the spectrum will be added to the Sample View and can be saved.

For further information on collecting, viewing and processing spectra using Spectrum software, refer to the Help file that you can access from the Help menu.