In-Plane RSM Measurement Part
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1. How to set Part conditions

In this chapter, how to set the In-plane RSM Measurement Part conditions is described.

1.1 Setting conditions

Set the basic conditions in the In-Plane RSM Measurement dialog box.

![In-Plane RSM Measurement dialog box](image)

Fig. 1.1.1 In-Plane RSM Measurement dialog box
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**Save measurement data**

- **File name**: Enter the name of the file to save the measurement data in.
- **Sample name**: Enter the sample name (optional). The sample name entered here will be saved in the measurement data file.
- **Memo**: Enter the memo (optional). The memo entered here will be saved in the measurement data file.

**Slit information**

- **Soller/PSC(deg)**: Select the aperture angle of the incident parallel slit.
- **IS(mm)**: Enter the width of the incident slit.
- **IS L(mm)**: Select the length of the length limiting slit.
- **RS1(mm)**: Enter the width of the receiving slit # 1.
- **PSA(deg)**: Select the aperture angle of the PSA.
- **Soller(deg)**: Select the aperture angle of the receiving parallel slit.
- **RS2(mm)**: Enter the width of the receiving slit # 2.

**Measurement mode**

- **Phi step / 2-Theta Chi/Phi scan**
- **2-Theta Chi/Phi step / Phi scan**

Select the measurement mode of in-plane reciprocal space mapping from **Phi step / 2-theta chi/phi scan**, or **2-theta chi/phi step / Phi scan**.
1.1 Setting conditions

Set RSM origin

Check the **Set RSM origin** box to drive each axis to the position entered here before the in-plane RSM (reciprocal space mapping) measurement.

**2-Theta**
Enter the position to drive the 2-theta axis to in deg.

**Omega**
Enter the position to drive the omega axis to in deg.

**2-ThetaChi**
Enter the position to drive the 2-theta chi axis to in deg.

**Phi**
Enter the position to drive the phi axis to in deg.

**Read current positions**
Sets the current position of each axis in each box.

### Range
Select the scan range specification method from **Absolute** or **Relative**.

**Start (deg)**
When **Absolute** is selected as the measurement range specification method, enter the absolute start angle of the step axis. When **Relative** is selected, enter the relative distance of the start angle from the RSM origin.

**Stop (deg)**
When **Absolute** is selected as the measurement range specification method, enter the absolute stop angle of the step axis. When **Relative** is selected, enter the relative distance of the stop angle from the RSM origin.

**Step (deg)**
Enter the step width of the step axis.

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**Image:**
- A table showing the positions for 2-Theta, Omega, 2-ThetaChi, and Phi.
- A table for measurement conditions showing the step axis, range, start, and stop angles.

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**Page:**
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<table>
<thead>
<tr>
<th>Scan axis</th>
<th>Mode</th>
<th>Range</th>
<th>Start (deg)</th>
<th>Stop (deg)</th>
<th>Stop (deg)</th>
<th>Speed (deg/min)</th>
<th>Attenuator</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Theta/Cy/Phi</td>
<td>Continuous</td>
<td>Absolute</td>
<td>0.000</td>
<td>0.000</td>
<td>0.008</td>
<td>0.004</td>
<td>Auto</td>
</tr>
</tbody>
</table>

**Mode**
Select the scan mode from **Continuous** or **Step**.

**Range**
Select the scan range specification method from **Absolute** or **Relative**.

**Start (deg)**
When **Absolute** is selected as the scan range specification method, enter the absolute start angle of the step axis. When **Relative** is selected, enter the relative distance of the start angle from the RSM origin.

**Stop (deg)**
When **Absolute** is selected as the scan range specification method, enter the absolute stop angle of the step axis. When **Relative** is selected, enter the relative distance of the stop angle from the RSM origin.

**Step (deg)**
Enter the step width of the scan.

**Speed (deg/min) / Duration time (sec)**
When **Continuous** is selected as the scan mode, enter the scan speed. When **Step** is selected as the scan mode, enter the duration time per measurement point.

**Attenuator**
Select the attenuator to be used for the measurement from **Open**, **1/70**, **1/1000**, **1/10000**, **Auto**, or **Current**.

**Tip:** If **Auto** is selected, an automatic attenuator scan is performed while the attenuator is automatically switched based on intensity.

If **Current** is selected, the attenuator set before this Part is executed will be used.
1.1 Setting conditions

**Calculated scan duration**
Shows the calculated duration of the In-plane RSM measurement.

**Execute**
Executes the in-plane RSM measurement under the conditions specified in the In-Plane RSM Measurement dialog box.

**CAUTION**: Clicking the **Cancel** button after executing the in-plane RSM measurement does not cancel the specified conditions.

**Tip**: The RSM measurement is executed with the In-Plane RSM Measurement dialog box open. While the In-plane RSM measurement is running, the Part conditions cannot be changed. They can be changed again after the measurement has been completed. The setting of (Show confirmation messages) on the flow bar becomes invalid.

**Import**
Loads the saved Part conditions. Clicking the **Import** button opens the **Import** dialog box. Select the folder including the file you want to import from the **Folder** tree view. In the **Condition file** list, select the condition file you want to import and click the **OK** button to load the Part conditions.
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Export

Saves the specified Part conditions in a file. Clicking the Export button opens the Export dialog box. From the Folder tree view, select a destination folder to save the conditions file then enter a file name in the File name box. Enter comments in the Memo box, if needed. After entering them, click the OK button.

OK

Sets the conditions and closes the dialog box.

CAUTION: When selecting another Package measurement or switching the task to the Manual Control task, etc. the specified conditions will be cancelled. To save the specified conditions in a file, click the Export button and save the conditions.

Cancel

Does not set the conditions and closes the dialog box.

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Opens the online help of this Part.
2. Measurement sequence

The in-plane RSM measurement is performed automatically. However, the analyzer unit, etc. must be installed (or removed) manually as instructed by messages displayed on the screen.

Described below is the general in-plane RSM measurement sequence.

(1) Confirm that the specified slit widths and installed optical devices such as parallel slits. The standard slit widths and devices are shown in Fig. 2.1. Drive the omega and 2-theta axes to the specified position.

(2) Make the in-plane RSM measurement (phi step, 2-theta chi/phi scan).

![Fig. 2.1 Standard slit widths and devices](image1)

![Fig. 2.2 In-plane RSM measurement](image2)