

Reducing the data size

Converting from imzML

The way to reduce the data at convert

1. Limiting the m/z range
2. Setting the sampling interval

IMDX converter

The screenshot displays the IMDX Converter application window. The interface is divided into several sections:

- Input Panel (KBD/imzML/analyze/RAW):**
 - Target Data:** Folder: C:\temp; File Name: testimzml; Number of Pixels: 2250(45, 50); Pitch: 100.0, 100.0 [um]; Measurement Range: m/z 100.073547363 - 1499.734497071; m/z: Processed; Radio buttons for Profile (selected) and Centroid.
 - Reference Image:** Fields for Folder and File Name, a preview area, and icons for adding (+) and deleting (-) images.
- Output Panel (IMDX):**
 - Output Data:** Folder: C:\temp; File Name: test.
 - Conversion Parameter:**
 - m/z Range:** A green box highlights the "m/z range" label and the "All Areas (Auto Calculation During Conversion)" radio button. Below it, the "m/z" radio button is selected with a value range of 100.073547363 - 1499.734497071.
 - Noise Cut:** Radio buttons for None (selected) and Cut Below Specified Percentage (10%).
 - Sampling Interval:** A green box highlights the "Sampling interval" label and the "Manual" radio button. The value is set to 0.001 Da (at m/z:500). A "Refer to IMDX file" button is also visible.
 - Downsampling:** Bin Size: 1.
 - Mass Compensation:** Checkmark and "Peak Setting" gear icon.
 - Intensity Correction:** "Intensity Correction TOF" checkbox.
 - Sample Information:** Polarity: Unknown; Matrix: Unknown.
 - Comments:** A text input field.
 - Buttons:** "Add to Conversion List" and "Run Convert".
- Conversion List:** A table at the bottom with columns: No., Input File Name, Measurement Range, Output Destination Folder, Output File Name, and m/z Range. The table is currently empty.

Limiting the m/z range

Limit the m/z range as small as possible.

Conversion Parameter

m/z Range

All Areas (Auto Calculation During Conversion)

m/z -


Noise Cut

None

Cut Below Specified Percentage %

Sampling Interval

Auto Use Common Sampling Interval

Manual Da (at m/z:500) 

Refer to IMDX file

Downsampling

Bin Size :

Change the sampling rate

Conversion Parameter

m/z Range

All Areas (Auto Calculation During Conversion)

m/z -


Noise Cut

None

Cut Below Specified Percentage %

Sampling Interval

Auto Use Common Sampling Interval

Manual s (at m/z:500) 

Refer to IMDX file

Downsampling

Bin Size :

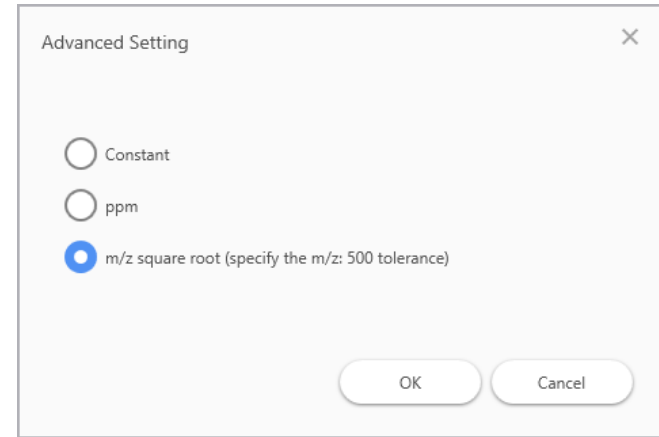
Advanced Setting ✕

Constant

ppm

m/z square root (specify the m/z: 500 tolerance)

Sampling interval guidelines



- "Auto" and "Constant": A fixed interval is used.
 - In the case of "Auto", it is the minimum interval in the data.
- "ppm": The interval is proportional to the m/z.
 - Approximate value is the reciprocal of (resolving power x 10).
 - Resolving power 100k: $1/100k/10=1\text{ppm}$
- "m/z square root" : The interval is proportional to $\sqrt{m/z}$
 - Use for TOF type MS.
 - Set based on the resolving power at m/z500.
 - Resolving power 10k: $500/10k/10 = 0.005 \text{ Da}$