

Workspace

Name	Value
mass	<54x2 double>
out	<1x1 struct>

Command Window

>>

I

This tutorial contains navigation buttons that enable you to move throughout the tutorial.

Please use the navigation buttons and not the page up/page down or arrow keys to navigate through the tutorials.

This is the 'Next' button. It takes you to the next frame or stop point.



This is the 'Previous' button. It takes you to the previous frame or stop point.



This is the 'Go to frame' button. It takes you to a specified frame.



This is the 'Go to URL' button. It takes you to a website link.



Press the 'Next' button below to start this tutorial.



Current Directory Workspace

Command History

Workspace

Name	Value
mass	<54x2 double>
out	<1x1 struct>

Command Window

>> |

I

This tutorial will cover one method that can be used to import image data from PHI RAW files into matlab using the rawread.m script from Eigenvector Research.

This script is part of the Eigenvector's MIA toolbox so you must own that toolbox to have the script.

I did not write, cannot distribute, and cannot help with problems with the rawread.m script.

As I am not a PHI user I cannot provide any support other than what is contained in this tutorial.

This tutorial is provided to show how you can configure the output of the rawread.m script so that you can import your data into the imagegui.



Workspace



Name	Value
------	-------

mass	<54x2 double>
out	<1x1 struct>

Command Window

>> |

After running the rawread.m script you should have two variables within the matlab workspace, mass and out.

'mass' contains the integration limits of the selected peaks.

'out' is a structure that contains the peak image data, total counts image, and some other things.



Workspace

Name	Value
mass	<54x2 double>
out	<1x1 struct>

Command Window

>>

Editor - C:\Program Files\MATLAB\R2006b\toolbox\temp\thingsfordevelopment...

```
1 totalcounts_myimage=unfold(out.total_ion);  
2 imagedata_myimage=unfold(out.data);  
3 imagedata_myimage=imagedata_myimage(:,1:size(mass,1));  
4 sumofselected_myimage=sum(imagedata_myimage,2);  
5 exactmass_myimage=num2str(mean(mass,2));
```

After running the script, type the following commands at the matlab command line.

If desired, 'myimage' in the names shown can be changed to whatever name you want. The actual name is not important.



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Workspace

Name	Value
mass	<54x2 double>
out	<1x1 struct>

Command Window

```
>> totalcounts_myimage=unfold(out.total_ion);  
imagedata_myimage=unfold(out.data);  
imagedata_myimage=imagedata_myimage(:,1:size(mass,1));  
sumofselected_myimage=sum(imagedata_myimage,2);  
exactmass_myimage=num2str(mean(mass,2));
```

Here I copied and pasted the commands onto the matlab command prompt.



Workspace

Name	Value
exactmass_myimage	<54x8 char>
imagedata_myimage	<65536x54 double>
mass	<54x2 double>
out	<1x1 struct>
sumofselected_myim...	<65536x1 double>
totalcounts_myimage	<65536x1 double>

Command Window

```
>> totalcounts_myimage=unfold(out.total_ion);  
imagedata_myimage=unfold(out.data);  
imagedata_myimage=imagedata_myimage(:,1:size(mass,1));  
sumofselected_myimage=sum(imagedata_myimage,2);  
exactmass_myimage=num2str(mean(mass,2));  
>> |
```

After running all of the commands you should have 4 new variables within the active matlab workspace, exactmass, imagedata, totalcounts and sumofselected.

exactmass is a character array containing the peak masses chosen. This is created by taking the mean of the two integration limits contained in 'mass'. If you want a more accurate list of peak masses, you can create this variable yourself. You just have to make sure it is a character array and not a set of numbers.

imagedata is an unfolded data matrix containing all of the peak images for the selected peaks.

totalcounts is an unfolded data matrix containing the total counts image data.

sumofselected is an unfolded data matrix containing an image that is the sum of all selected peak intensities.

Totalcounts and sumofselected are used for image normalization if you choose to normalize your data.



File Data Pre Processing MVA Data Display

- Import Data
 - Import From Workspace
 - Import Bif File
 - Import Bif6 File
- Normalize Data
- Crop Image
- Filter Image

Select data [v] Select Variables [v]

le Matrix

Once you have the data imported and formatted correctly you can import it into the imagegui from the 'Data Pre Processing' menu.

Choose 'Import Data' -> 'Import From Workspace'

← →

Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

Import Data From Workspace

Press the "Get Variables" button to see a list of all variables in the workspace. Then select a variable and then press the appropriate button to load it into the proper list menu in the "Data Selection Panel".

Get Variables

Press the 'Get Variables' button to see a list of available variables in the matlab workspace.

← →

Add to Image Overlay List

MVA Data

- Add to PCA Scores List
- Add to PCA Loadings List
- Add to PCA Variance List
- Add to MAF Scores List
- Add to MAF Loadings List
- Add to MAF Variance List

Close Panel

Data Selection Panel

Name of Image Matrix:

Name of Variable Matrix:

Import Data From Workspace

Press the "Get Variables" button to see a list of all variables in the workspace. Then select a variable and then press the appropriate button to load it into the proper list menu in the "Data Selection Panel".

Get Variables

- exactmass_myimage
- imagedata_myimage
- mass
- out
- sumofselected_myimage
- totalcounts_myimage

Raw Data

- Add to Image List
- Add to Variable List
- Add to Image Overlay List

MVA Data

- Add to PCA Scores List
- Add to PCA Loadings List
- Add to PCA Variance List
- Add to MAF Scores List
- Add to MAF Loadings List
- Add to MAF Variance List

Close Panel

Select the 'exactmass' variable and press the 'Add to Variable List' button.

← →

Data Selection Panel

Name of Image Matrix:

Name of Variable Matrix:

Import Data From Workspace

Press the "Get Variables" button to see a list of all variables in the workspace. Then select a variable and then press the appropriate button to load it into the proper list menu in the "Data Selection Panel".

Get Variables

- exactmass_myimage
- imagedata_myimage
- mass
- out
- sumofselected_myimage
- totalcounts_myimage

Raw Data

- Add to Image List
- Add to Variable List
- Add to Image Overlay List

MVA Data

- Add to PCA Scores List
- Add to PCA Loadings List
- Add to PCA Variance List
- Add to MAF Scores List
- Add to MAF Loadings List
- Add to MAF Variance List

Close Panel

Select the 'imagedata' variable and press the 'Add to Image List' button.

← →

Data Selection Panel

Name of Image Matrix:

Name of Variable Matrix:

Import Data From Workspace

Press the "Get Variables" button to see a list of all variables in the workspace. Then select a variable and then press the appropriate button to load it into the proper list menu in the "Data Selection Panel".

Get Variables

- exactmass_myimage
- imagedata_myimage
- mass
- out
- sumofselected_myimage
- totalcounts_myimage

Raw Data

- Add to Image List
- Add to Variable List
- Add to Image Overlay List

MVA Data

- Add to PCA Scores List
- Add to PCA Loadings List
- Add to PCA Variance List
- Add to MAF Scores List
- Add to MAF Loadings List
- Add to MAF Variance List

Close Panel

Press the 'Close' button to close the panel.

← →

Data Selection Panel

Name of Image Matrix Name of Variable Matrix

Select Data

Select Variables

- Select Data
- imagedata_myimage**



The data is added to the selection panel.
You are now ready to use the imagegui.

← →

Data Selection Panel

Name of Image Matrix

Name of Variable Matrix

imagedata_myi...

exactmass_myima...

That ends this tutorial. Press the button on the left to go back to the previous step. Press the button on the right to start the tutorial over.

