

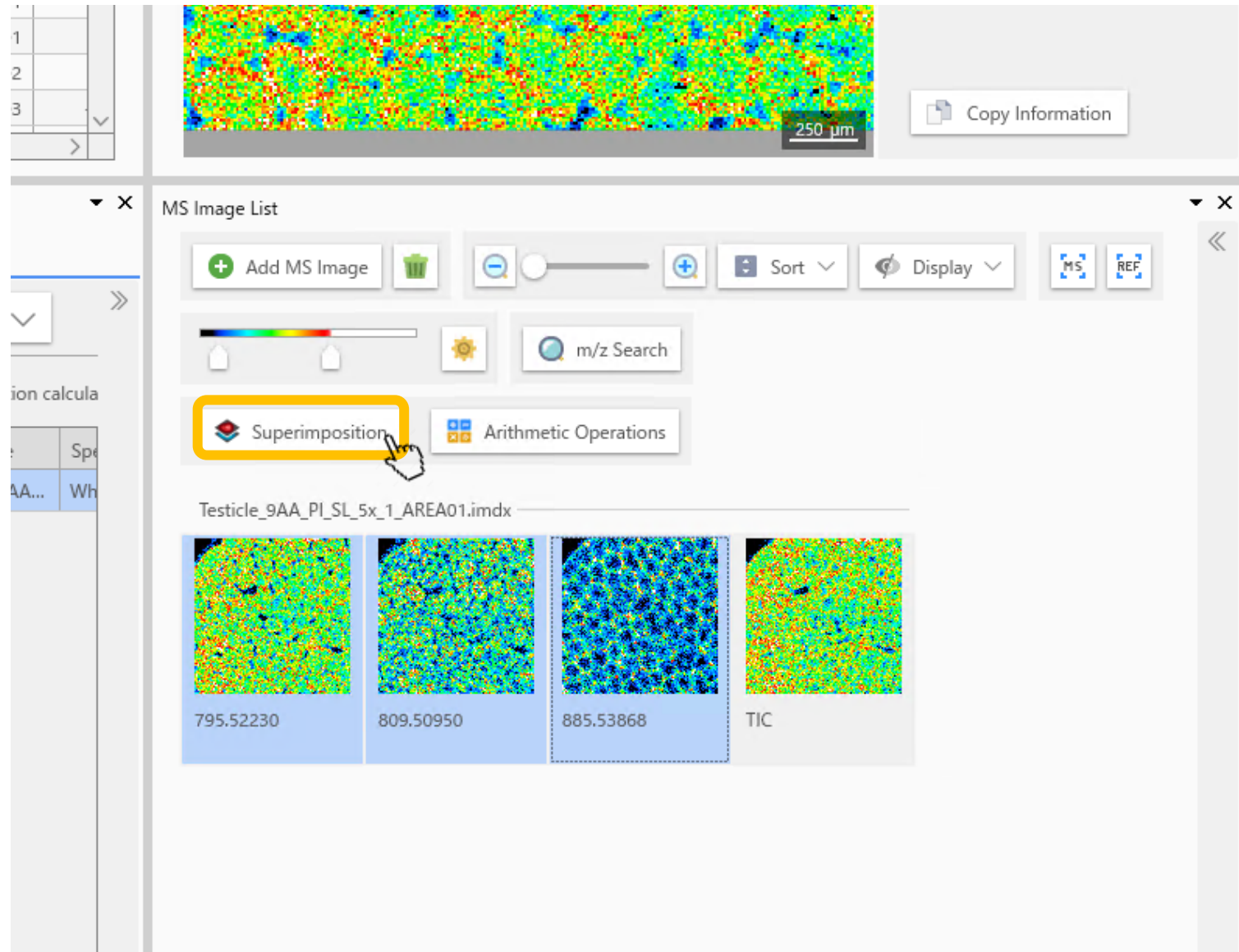
Superimposing images

Select the images to be superimposed

The screenshot displays the IMAGEREVEAL software interface with several panels:

- ROI List:** A table with columns No., Use, File Name, ROI Na..., and Attribute. It lists four ROIs for 'Testicle_9A...'.
- Data Matrix Table:** A table with columns No., Use, Tag, Label, m/z, PCA-Horizontal Axis, PCA-Vertical Axis, and PLS. It contains 18 rows of data points.
- MS Image:** A large heatmap visualization of mass spectrometry data. To its right, a panel shows parameters: m/z Tolerance (795.52230±0.0200), Compound Name/Comment (795.52230 from ANOVA), File Name (Testicle_9AA_PL_SL_5x_1_AREA01.i.mdx), and Type (Data Matrix).
- Graph:** A 'Spectrum' plot showing Intensity vs. m/z. It features a baseline with several labeled peaks: 721.48186, 767.49182, 795.52230, 796.52363, 797.52374, 837.53900, and 885.53868.
- Analysis Parameters:** A table with columns No., Name, and Value. It lists five parameters: Normalize (None), Data Matrix Analysis Method (Target), Compound Template (Peak List), Tolerance/Bin Size (Da) (0.0200), and Threshold Setting (Off).
- MS Image List:** A panel at the bottom right showing a list of MS images. Three images are highlighted with a yellow box and labeled with their m/z values: 795.52230, 809.50950, and 885.53868. A hand icon points to the list with the word 'select'.

Click the “superimposition” button



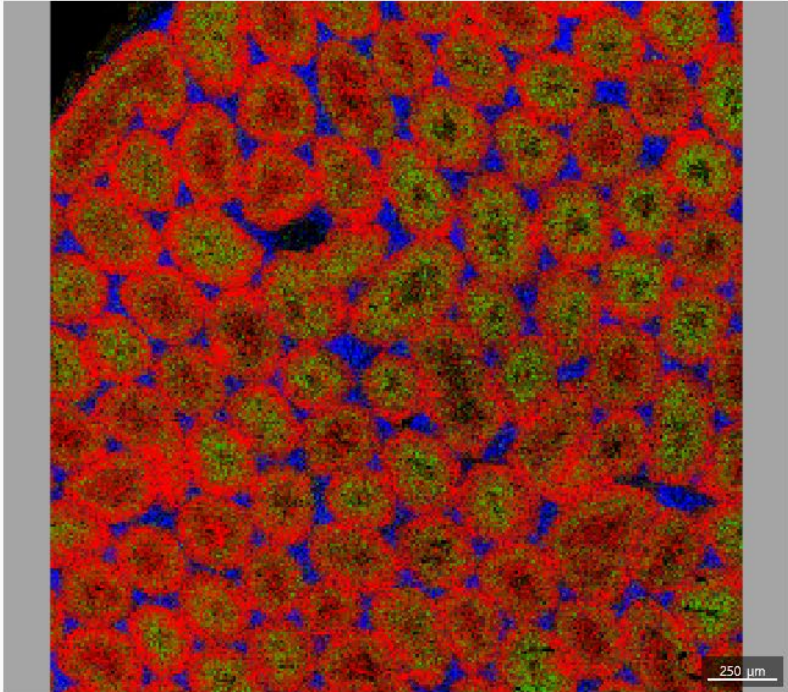
“Superimposition” screen:

Superimposition

Display	m/z	Compound Name	Adduct Ion	File Name	Tolerance
<input checked="" type="checkbox"/>	795.52230	795.52230		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02
<input checked="" type="checkbox"/>	809.50950	809.50950		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02
<input checked="" type="checkbox"/>	885.53868	885.53868		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02

Colours are automatically assigned to each m/z.

Preview Real Time Update MS REF Display



250 μm

Superimposition Method: AND OR XOR Blend

Interpolation: None

Transparency:

Add to MS Image List

Close

Select an m/z value

Superimposition

Preview Real Time Update MS REF Display

Display	m/z	Compound Name	Adjustment	File Name	Intensity
<input checked="" type="checkbox"/>	795.52230	795.52230		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02
<input checked="" type="checkbox"/>	809.50950	809.50950		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02
<input checked="" type="checkbox"/>	885.53868	885.53868		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.02

The up/down button is activated and the MS Image Adjustment Tool is displayed.

MS Image

Filter: None

Level

Superimposition Method: AND OR XOR Blend

Interpolation: None

Transparency

Add to MS Image List

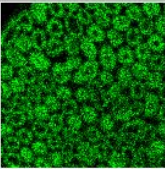
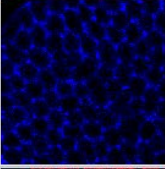
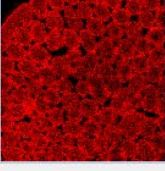
Close



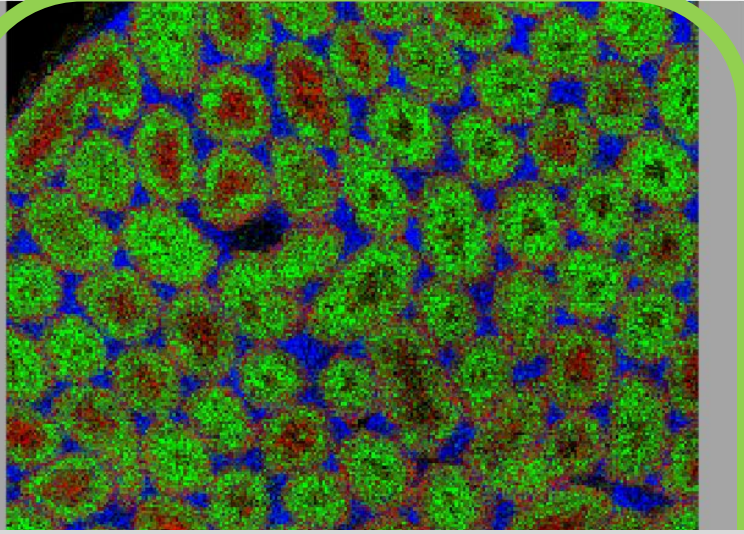
Change the order of images

Superimposition

[-] [Slider] [+] [Up] [Down]

Display		m/z	Compound Name	Adduct Ion	File Name	Tolerance	Type
<input checked="" type="checkbox"/>		809.50950	809.50950		Testicle_9AA_Pt_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>		885.53868	885.53868		Testicle_9AA_Pt_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>		795.52230	795.52230		Testicle_9AA_Pt_SL_5x_1_AREA01.imdx	0.0200	Data Matrix

Preview Real Time Update MS REF Display



If the superimposition method is “blend”, the image will change according to the order of superimposition.

MS Image [Slider] [Settings] [Color]

Filter [None] [Level] [Slider]

Superimposition Method: AND OR XOR **Blend**

Interpolation: [None] [Slider]

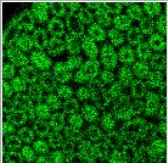
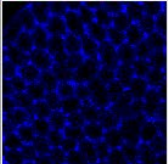
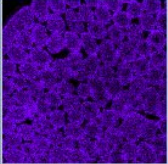
Transparency: [Slider]

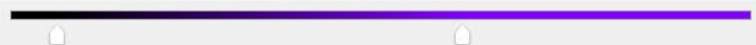


Add to MS Image List

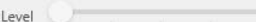
Close

Change the colours


Superimposition

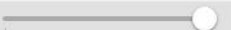
Display		m/z	Compound Name	Adduct Ion	File Name	Tolerance	Type
<input checked="" type="checkbox"/>		809.50950	809.50950		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>		885.53868	885.53868		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>		795.52230	795.52230		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix


MS Image   

Filter None Level 

Superimposition Method AND OR XOR Blend

Interpolation None 

Transparency 

 Add to MS Image List

Close

In "Superimposition", only the "Transparent/Specified colours" can be used .

Add the image to the main screen

Superimposition

Display	m/z	Compound Name	Adduct Ion	File Name	Tolerance	Type
<input checked="" type="checkbox"/>	809.50950	809.50950		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>	885.53868	885.53868		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix
<input checked="" type="checkbox"/>	795.52230	795.52230		Testicle_9AA_PL_SL_5x_1_AREA01.imdx	0.0200	Data Matrix

MS Image

Filter: None

Level

Superimposition Method: AND OR XOR Blend

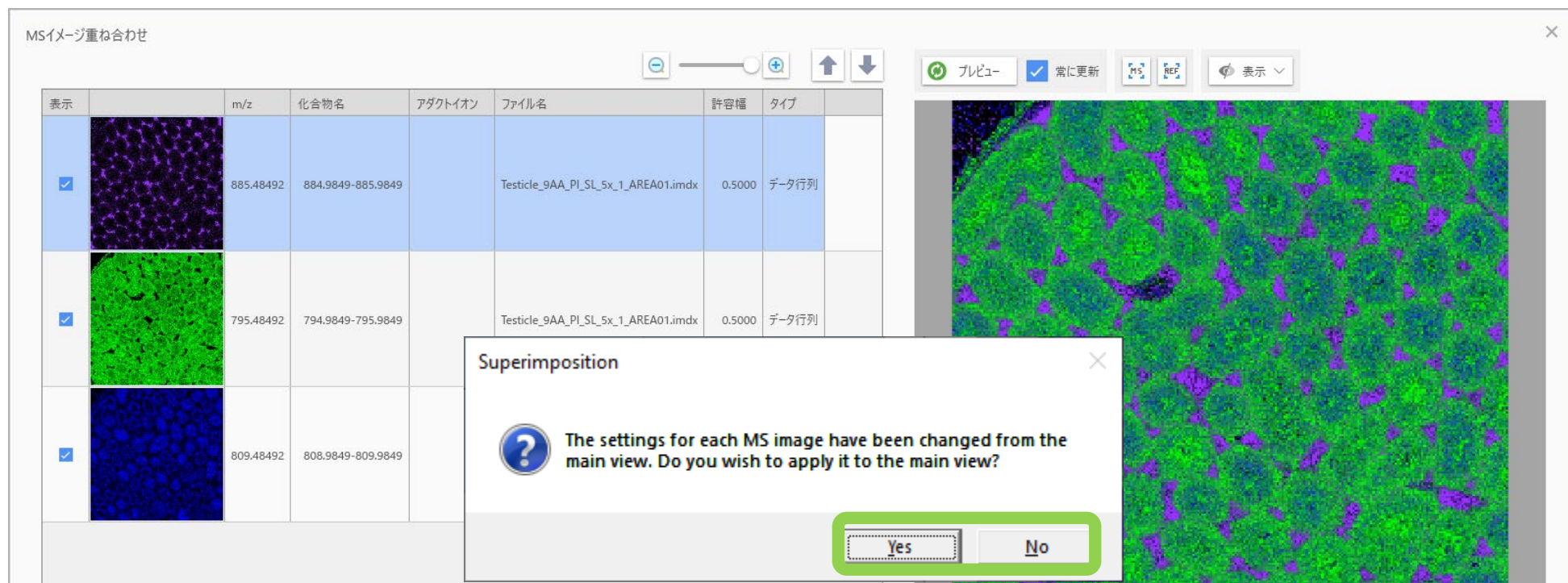
Interpolation: None

Transparency

Add to MS Image List

The created superimposition image can be added to the list of MS images on the main screen.

Apply settings to the main view



Click “Yes”, the colours assigned to each m/z in the superimposed image will be applied to the main window. Click “No”, the images in main window will not change.



Add the main image to the MS image list

The screenshot displays the IMAGEREVEAL software interface with several key components:

- Superimposition Dialog Box:** A modal window at the top left asking, "The settings for each MS image have been changed from the main view. Do you wish to apply it to the main view?" with "Yes" and "No" buttons.
- Data Matrix Table:** A table listing 21 rows of data with columns for Use, Tag, Label, and m/z. The 6th row is highlighted, showing a label of 885.53868.
- MS Image:** A large image showing a compound map with a color scale from 0.0200 to 0.255. A green box highlights the image and its associated metadata on the right.
- MS Image List:** A list of images at the bottom right, including "Blend", "95.52230", "809.50950", "885.53868", and "TIC". A green box highlights the "Blend" image.
- Analysis Parameters:** A section on the left side of the interface showing a table of parameters for normalization, data matrix analysis, and threshold setting.
- Graph:** A section at the bottom center showing a spectrum plot with a peak at 885.53868.

Apply settings to the main view→If “Yes” is selected:

Superimposition

The settings for each MS image have been changed from the main view. Do you wish to apply it to the main view?

Yes **No**

Matrix Table

	Use	Tag	Label	m/z
1	<input checked="" type="checkbox"/>		795.52230	795.5223
2	<input checked="" type="checkbox"/>		796.52490	796.5249
3	<input checked="" type="checkbox"/>		797.52445	797.5244
4	<input checked="" type="checkbox"/>		809.50950	809.5095
5	<input checked="" type="checkbox"/>		767.49232	767.4923
6	<input checked="" type="checkbox"/>		885.53868	885.5387
7	<input checked="" type="checkbox"/>		810.51225	810.5123
8	<input checked="" type="checkbox"/>		796.01916	796.0192
9	<input checked="" type="checkbox"/>		798.52494	798.5249
10	<input checked="" type="checkbox"/>		795.78487	795.7849
11	<input checked="" type="checkbox"/>		886.54092	886.5409
12	<input checked="" type="checkbox"/>		768.49495	768.4949
13	<input checked="" type="checkbox"/>		797.04571	797.0457
14	<input checked="" type="checkbox"/>		796.78374	796.7837
15	<input checked="" type="checkbox"/>		837.53880	837.5388
16	<input checked="" type="checkbox"/>		857.50787	857.5079
17	<input checked="" type="checkbox"/>		793.50711	793.5071
18	<input checked="" type="checkbox"/>		721.47935	721.4793
19	<input checked="" type="checkbox"/>		823.54383	823.5438
20	<input checked="" type="checkbox"/>		821.53421	821.5342
21	<input checked="" type="checkbox"/>		811.51235	811.5123

MS Image

m/z Tolerance: 795.52230±0.0200
Compound Name/Comment: 795.52230
File Name: Testicle_9AA_PL_SL_5x_1_AREA01.i.mdx
Type: Data Matrix

Graph

Spectrum Box Plot

The normalization calculation is being performed.

MS Image List

Testicle_9AA_PL_SL_5x_1_AREA01.i.mdx

Blend 795.52230 809.50950 885.53868 TIC

Analysis Parameters

No.	Name	Value
1	Normalize	None
2	Data Matrix Analysis Method	Target
3	Compound Template	Peak List
4	Tolerance/Bin Size (Da)	0.0200
5	Threshold Setting	Off

The colours change to those used in the superimposition.