

Superimposing images

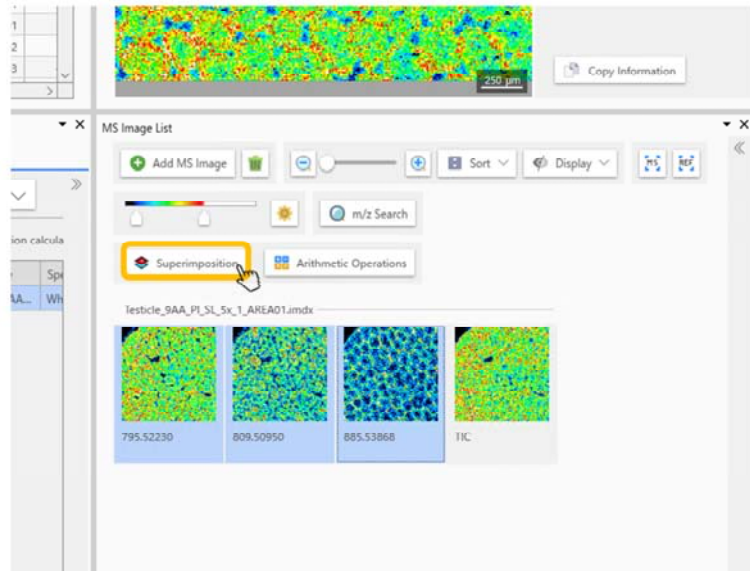
Select the images to be superimposed

The screenshot displays a software interface with several panels. On the left is a sidebar with navigation options. The top-left panel shows a list of files with columns for 'File Name', 'File No.', and 'Address'. The top-center panel is a 'Data Matrix Table' with columns for 'File', 'Type', 'Label', 'PLR', 'PLR Percentage Area', and 'PLR Volume Area'. The top-right panel shows a large heatmap visualization. The bottom-left panel contains 'Analysis Parameters' with a table of parameters. The bottom-center panel shows a 'File List' with a 'Free Viewing' button. The bottom-right panel is titled 'M3 Image List' and contains a 'select' button next to a row of four small image thumbnails, which are highlighted by a yellow box.

File	Type	Label	PLR	PLR Percentage Area	PLR Volume Area
1	PLR	PLR - Horizontal Axis	795.5220	5.1464e-001	2.8070e-001
2	PLR	PLR - Vertical Axis	796.2240	2.2200e-001	2.8470e-001
3	PLR	PLR - Diagonal Axis	797.2240	2.1700e-001	1.8400e-001
4	PLR	PLR - Diagonal Axis	800.2240	2.4000e-001	2.2400e-001
5	PLR	PLR - Diagonal Axis	797.4020	1.1270e-001	1.2270e-001
6	PLR	PLR - Diagonal Axis	800.2240	2.2200e-001	1.2200e-001
7	PLR	PLR - Diagonal Axis	810.2240	1.1700e-001	1.2200e-001
8	PLR	PLR - Diagonal Axis	796.2240	2.0200e-001	2.8000e-001
9	PLR	PLR - Diagonal Axis	796.2240	1.2200e-001	1.2200e-001
10	PLR	PLR - Diagonal Axis	795.2240	2.0000e-001	1.8000e-001
11	PLR	PLR - Diagonal Axis	800.2240	1.4000e-001	2.2000e-001
12	PLR	PLR - Diagonal Axis	796.2240	2.0000e-001	2.8000e-001
13	PLR	PLR - Diagonal Axis	796.2240	1.2200e-001	1.2200e-001
14	PLR	PLR - Diagonal Axis	796.2240	2.0000e-001	2.8000e-001
15	PLR	PLR - Diagonal Axis	807.2240	1.2200e-001	1.2200e-001
16	PLR	PLR - Diagonal Axis	807.2240	2.1200e-001	1.8200e-001
17	PLR	PLR - Diagonal Axis	795.2240	2.0000e-001	1.8000e-001
18	PLR	PLR - Diagonal Axis	797.4700	1.0000e-001	8.7700e-001

File	Name	Value
1	Resolution	1000
2	Data Matrix Analysis Method	Target
3	Compositional Template	Peak List
4	Reference/Std. Data File	020202
5	Threshold Setting	Off

Click the “superimposition” button



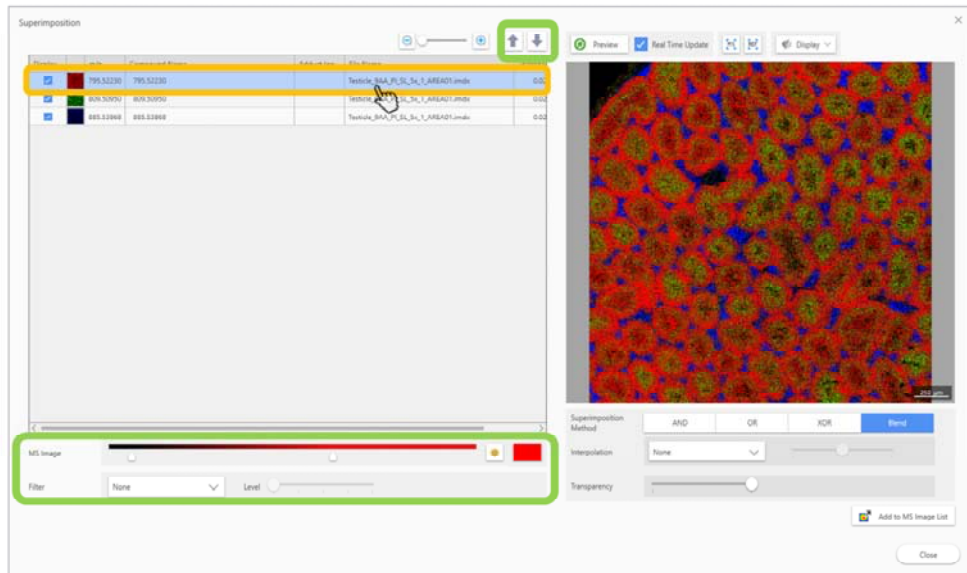
“Superimposition” screen:

The screenshot displays a software window titled "Superimposition". On the left, a table lists three m/z values with their corresponding colors: 795.52230 (red), 808.20990 (green), and 833.53949 (blue). The table columns are: Display, m/z, Compound Name, Alkylated Ion, File Name, and Abundance. The right side of the window shows a preview of a mass spectrum image where these three m/z values are overlaid in their respective colors. Below the image, there are controls for the Superimposition Method (AND, OR, XOR, Blend), Interpolation (None), and Transparency. A "Close" button is located at the bottom right.

Display	m/z	Compound Name	Alkylated Ion	File Name	Abundance
<input checked="" type="checkbox"/>	795.52230			Test004_SAA_P1_S1_S1_1_AREAD1.msdx	0.01
<input checked="" type="checkbox"/>	808.20990			Test004_SAA_P1_S1_S1_1_AREAD1.msdx	0.01
<input checked="" type="checkbox"/>	833.53949			Test004_SAA_P1_S1_S1_1_AREAD1.msdx	0.01

Each m/z is automatically shown on the image in different colours.

Select an m/z value



The up and down buttons can be used, and the MS image adjustment tool is displayed.

Change the order of images

Superimposition

Display	m/z	Compound Name	Abund. Ion	File Name	Tolerance	Type
<input checked="" type="checkbox"/>	808.50950	808.50950		Testicle_BAA_PL_Si_Si_1_AREAD1.mxd	0.0200	Data Matrix
<input checked="" type="checkbox"/>	885.53868	885.53868		Testicle_BAA_PL_Si_Si_1_AREAD1.mxd	0.0200	Data Matrix
<input checked="" type="checkbox"/>	795.52230	795.52230		Testicle_BAA_PL_Si_Si_1_AREAD1.mxd	0.0200	Data Matrix

ME Image:

Filter: None Level:

Superimposition Method: AND OR XOR **Blend**

Interpolation: None

Transparency:

Add to ME Image List

Close

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

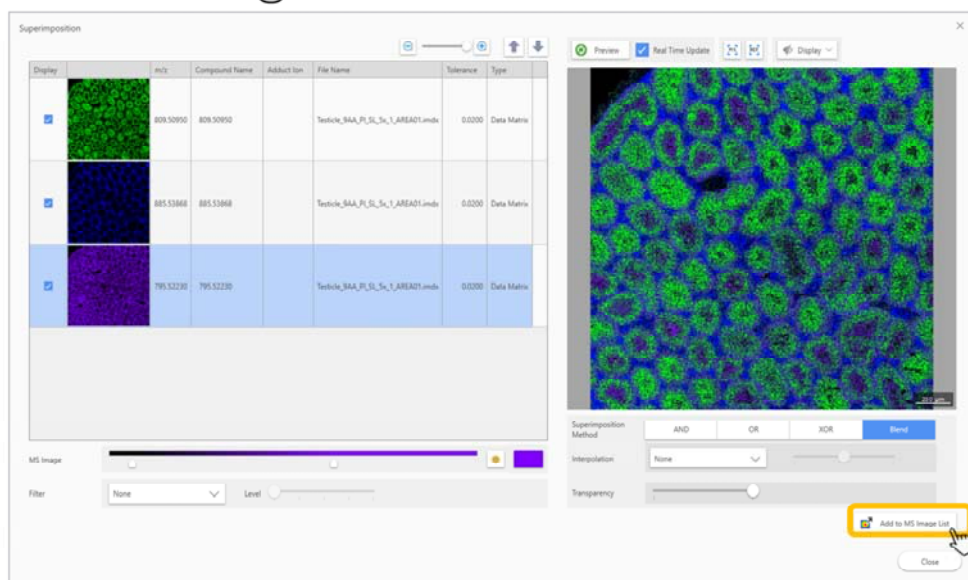
Change the colours

The screenshot shows the 'Superimposition' software interface. It features a table with columns for 'Display', 'm/z', 'Compound Name', 'Adduct Ion', 'File Name', 'Tolerance', and 'Type'. Three rows are visible, each with a small image preview and a checkbox. Below the table, there are controls for 'MS Image' (a slider and a color selection tool highlighted with a yellow box), 'Filter' (a dropdown menu set to 'None' and a 'Level' slider), and 'Superimposition Method' (radio buttons for AND, OR, XOR, and a 'Blend' button). Other controls include 'Interpolation' (a dropdown menu set to 'None') and 'Transparency' (a slider). A 'Preview' window on the right shows a large image with green, blue, and purple spots. At the bottom right, there are 'Add to MS Image List' and 'Close' buttons.

Display	m/z	Compound Name	Adduct Ion	File Name	Tolerance	Type
<input checked="" type="checkbox"/>	809.50950	809.50950		Testicle_SAA_PL_Si_Sc_1_AREAD1.mnda	0.0200	Data Matrix
<input checked="" type="checkbox"/>	885.53868	885.53868		Testicle_SAA_PL_Si_Sc_1_AREAD1.mnda	0.0200	Data Matrix
<input checked="" type="checkbox"/>	795.52230	795.52230		Testicle_SAA_PL_Si_Sc_1_AREAD1.mnda	0.0200	Data Matrix

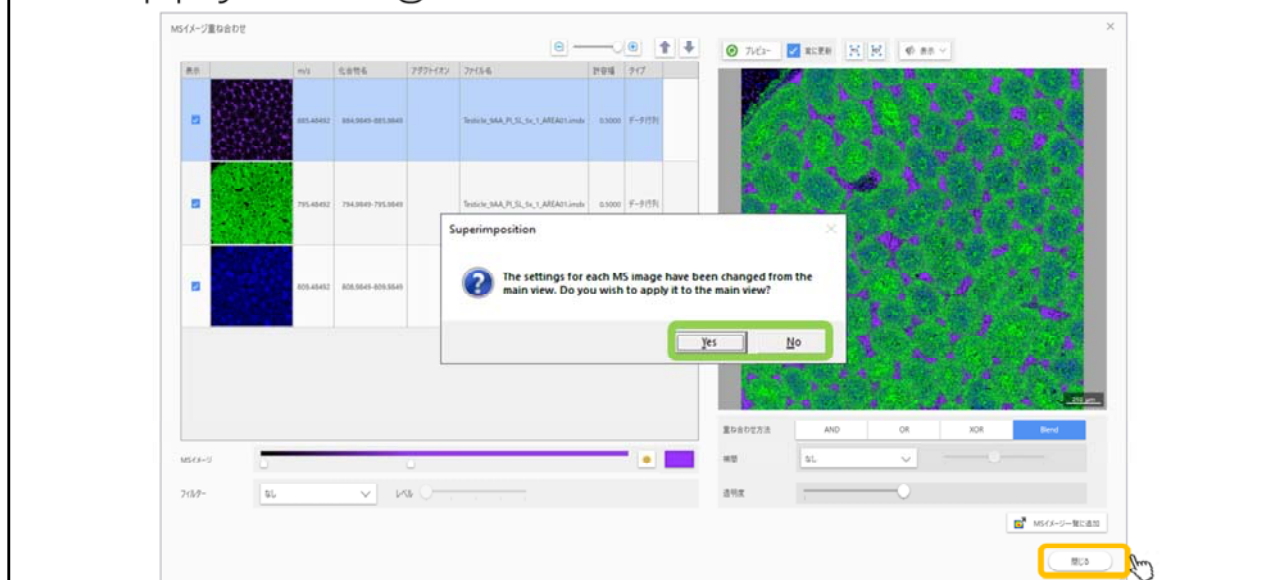
Only the “Transparent/Specified colours” can be used from the colour table in MS image superimposition

Add the image to the main screen



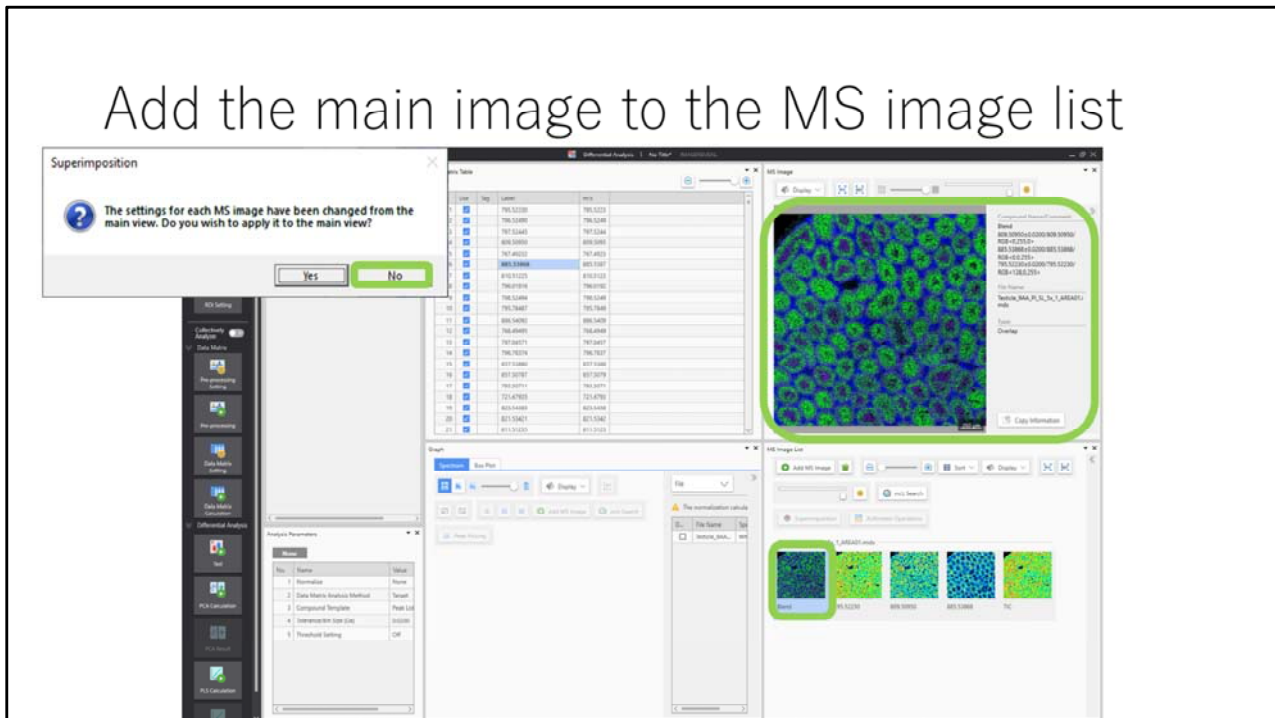
The image that has been created can be added to the list of MS images on the main screen.

Apply settings to the main view



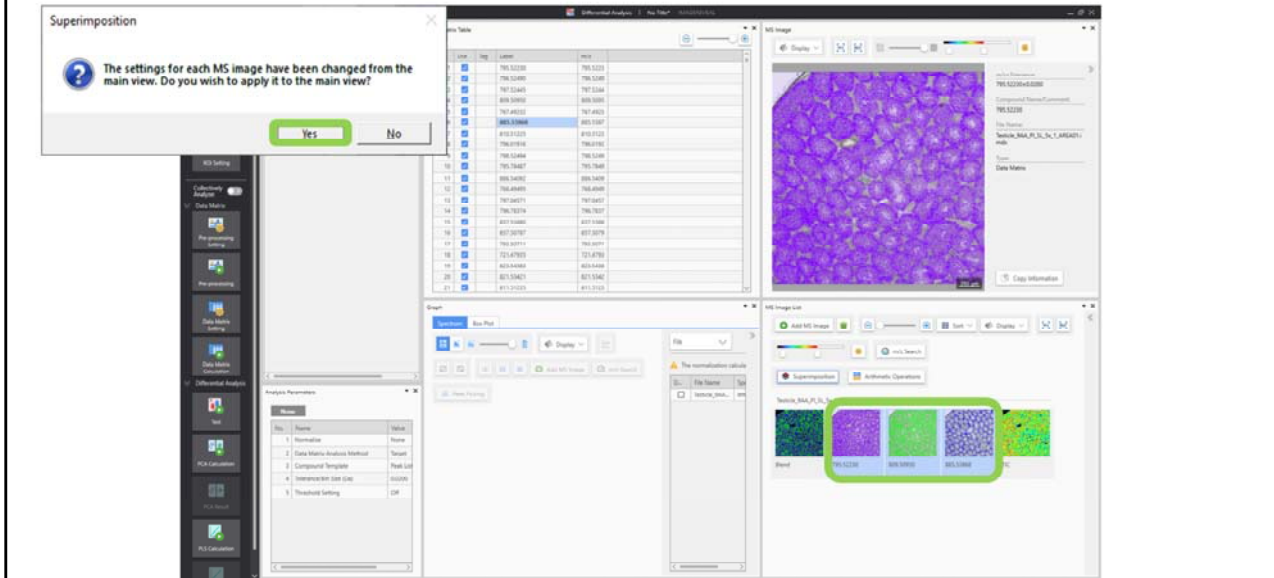
Click “Yes”, and the colours assigned to each m/z in the superimposed image will be applied to the main image.
Click “No”, and the main image will remain as it is.

Add the main image to the MS image list



The superimposed image is added to the list of MS images.
The information about superimposition is recorded as a comment.
The superimposition method is displayed as a compound name. In this example, the method is "Blend".

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



The colours change to those used in the superimposition.