Tutorial for EasyPubPlot

PCA/PLS-DA Scores Plot

Step 1: Prepare the Input Data

1. Prepare the input data file with columns of PCs and rows of sample names.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1		PC1	PC2	PC3	PC4	PC5	PC6	PC7	PC8	PC9	PC10	PC11	PC12	PC13	
2	C126	-2.5672	5.5404	1.7257	-1.831	0.67347	-3.3714	2.7031	-0.33016	1.853	-0.08743	2.7316	0.32416	-2.57E-15	
3	C132	-1.4291	5.6798	1.6342	1.3839	1.39	4.4081	-3.3997	-1.8444	1.3685	-0.1636	0.045095	-0.19257	2.30E-15	
4	C152	9.8425	3.2665	-4.0284	-1.2067	2.4641	-0.18291	0.39152	-0.056	-2.082	1.9663	-0.082	-0.53847	-1.31E-14	
5	C153	0.61538	2.8167	-3.7068	-0.54344	-6.9167	0.017108	-0.70333	1.3799	0.7068	-0.74869	-0.65962	0.03615	1.39E-15	
6	C127	-5.8597	1.3255	-0.70983	4.5108	0.89851	0.80902	3.6458	1.1911	-0.75092	0.58059	-1.9261	-1.7402	1.39E-15	
7	C135	-1.1653	1.0327	3.7007	-1.0013	0.73813	-1.2317	-1.0538	2.3779	-1.0516	0.99118	-2.3749	3.4032	1.02E-15	
8	C138	-1.9439	-0.97578	0.8147	1.8415	0.34581	-4.4083	-3.8613	-0.05883	-2.1069	-1.1884	0.60605	-2.0239	-4.66E-16	
9	C160	1.299	-3.9749	2.9311	1.1702	-3.0145	-0.31147	0.4086	-3.0627	0.28336	3.741	0.33719	-0.05942	2.08E-15	
10	C163	5.3928	-2.3116	4.4967	0.32043	-0.98601	2.9897	1.3781	2.2271	-1.4572	-1.9265	2.1087	-0.49074	-4.14E-15	
11	C167	6.5384	-3.1193	-0.60883	2.4016	1.5316	-1.6575	0.49599	-0.92248	3.4164	-2.2906	-1.6113	0.67017	8.53E-16	
12	C144	-4.2809	-2.1855	-3.537	-0.05328	0.30189	1.0164	1.0039	-2.8895	-2.4345	-1.8862	0.94857	2.5747	7.85E-15	
13	C148	-2.6679	-2.3276	0.88478	-6.5421	0.67068	0.8113	0.51837	-0.91512	0.26234	-0.76997	-2.0472	-2.1479	3.30E-15	
14	C150	-3.774	-4.7669	-3.597	-0.45063	1.9031	1.1116	-1.5274	2.9032	1.9927	1.7823	1.9239	0.18468	8.20E-16	
15															

Note: The name of columns could be “PC1, PC2,...” or “Comp 1, Comp 2, ...”

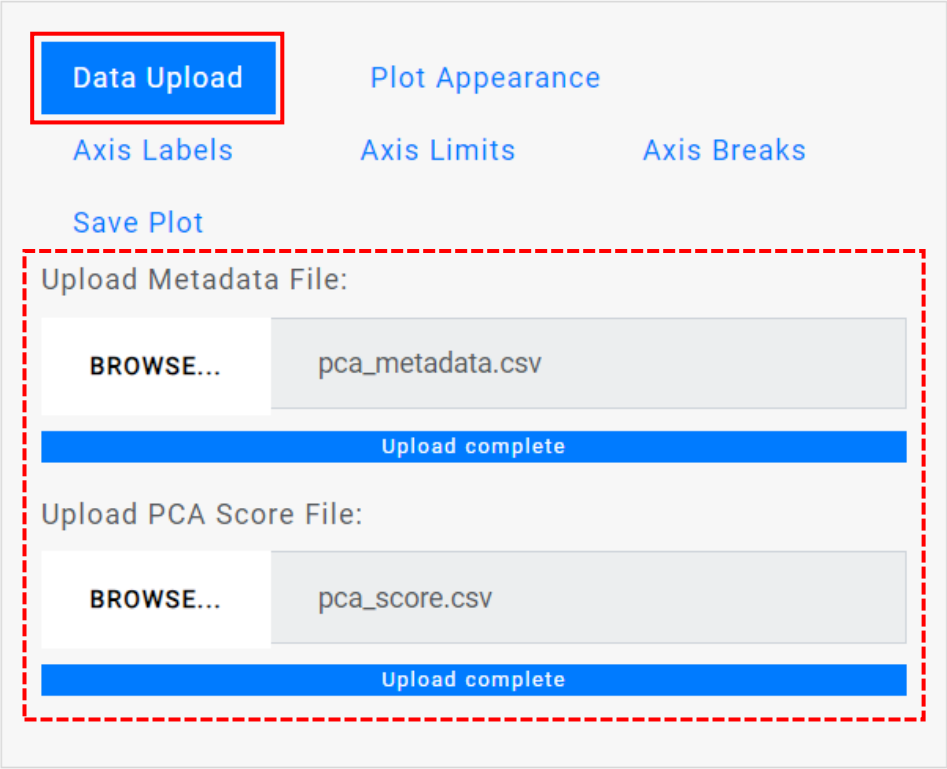
Step 1: Prepare the Input Data

2. Prepare the metadata file with two columns (**“Sample”** and **“Group”**).

	A	B	C
1	Sample	Group	
2	C126	Group_1	
3	C132	Group_1	
4	C152	Group_1	
5	C153	Group_1	
6	C127	Group_2	
7	C135	Group_2	
8	C138	Group_2	
9	C160	Group_2	
10	C163	Group_2	
11	C167	Group_2	
12	C144	Group_3	
13	C148	Group_3	
14	C150	Group_3	
15			

Step 2: Upload the Data

1. Select tab “Scores Plot”.
2. Select subtab “Data Upload”.
3. Upload the metadata file and PCA/PLS-DA scores file.



Step 3: Modify the Scores Plot

Data Upload | Plot Appearance | Axis Labels | Axis Limits | Axis Breaks | Save Plot

Select and Order Group Levels

Group_1 Group_2 Group_3

Color for Group_1 Group:

#386CB0

Color for Group_2 Group:

#FDB462

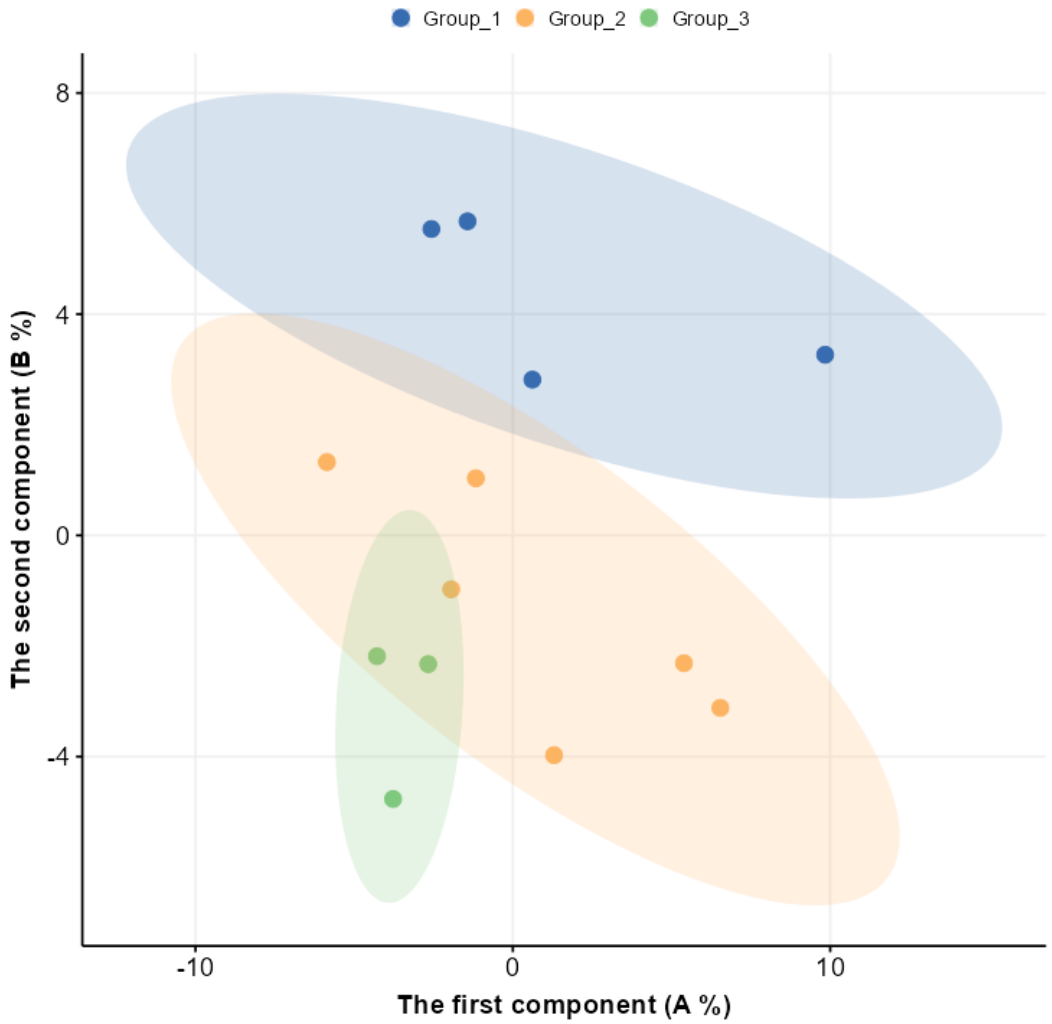
Color for Group_3 Group:

#7FC97F

Legend label for Group_1 Group:

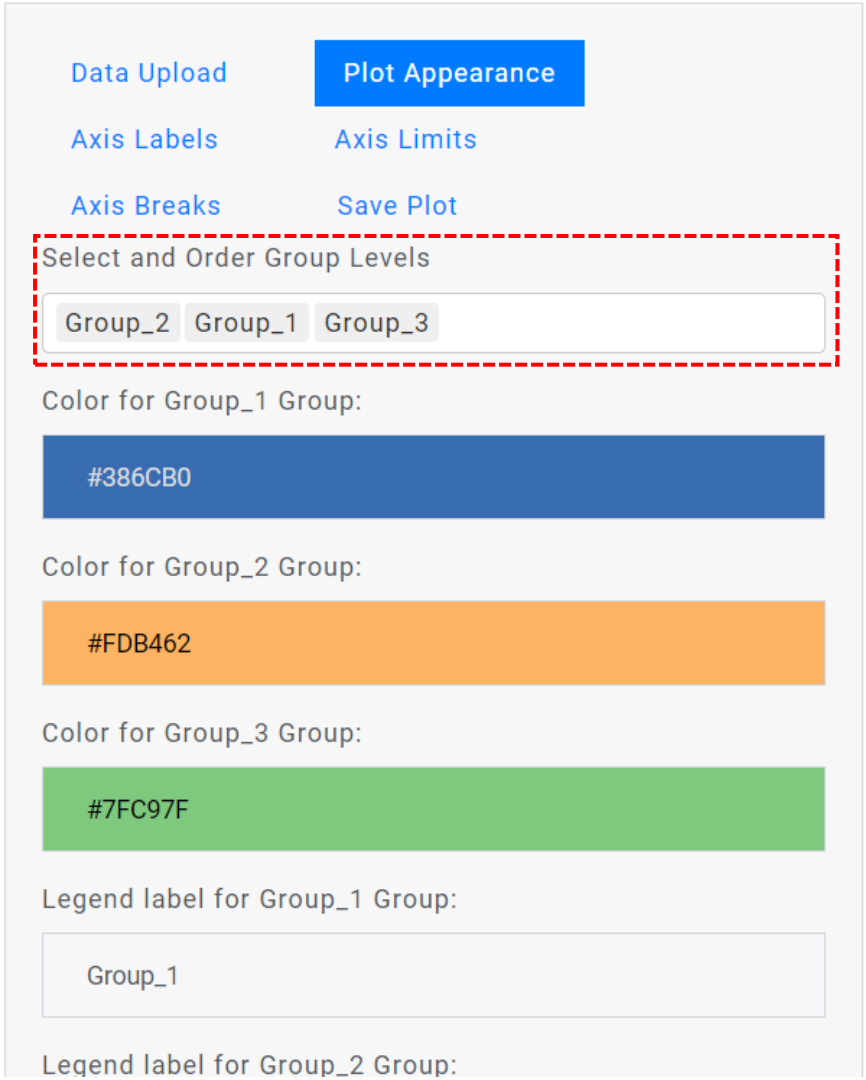
Group_1

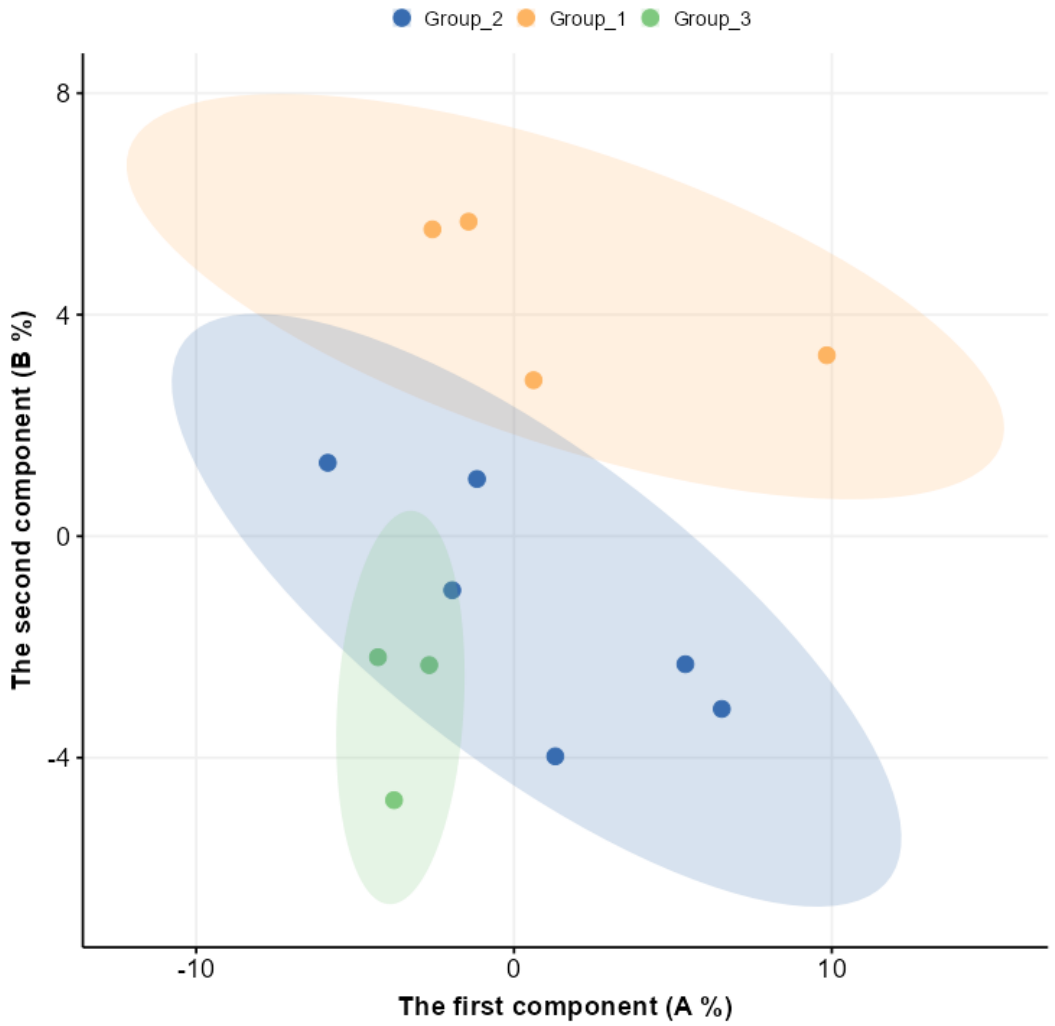
Legend label for Group_2 Group:



Step 3: Modify the Scores Plot

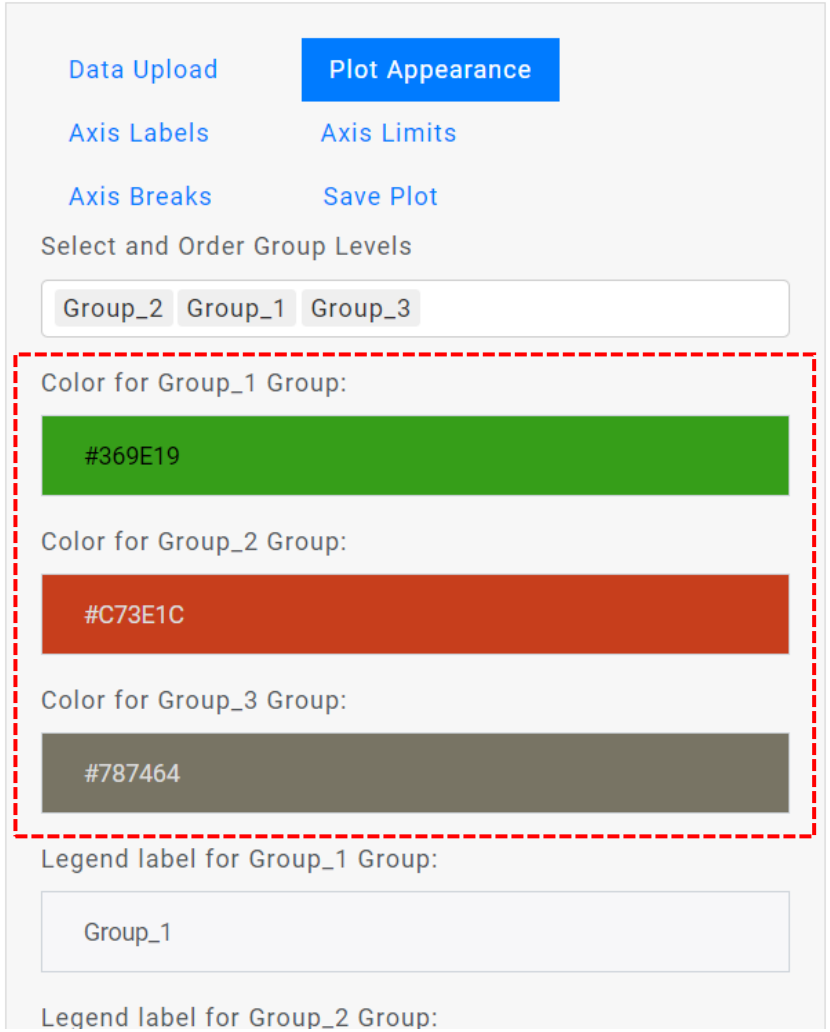
1. Select subtab “Plot Apperance”.
   - ➢ Select the option “Select and Order Group Levels” to modify the group order.

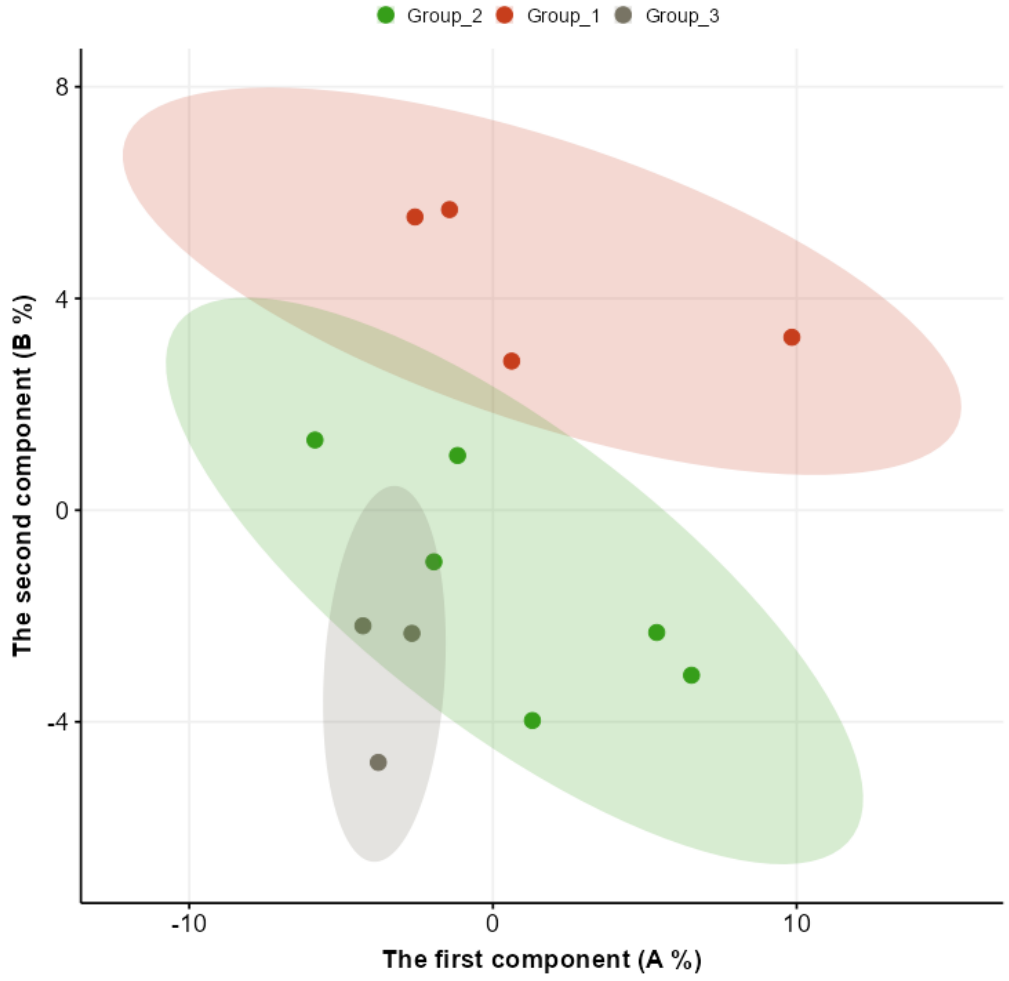




Step 3: Modify the Scores Plot

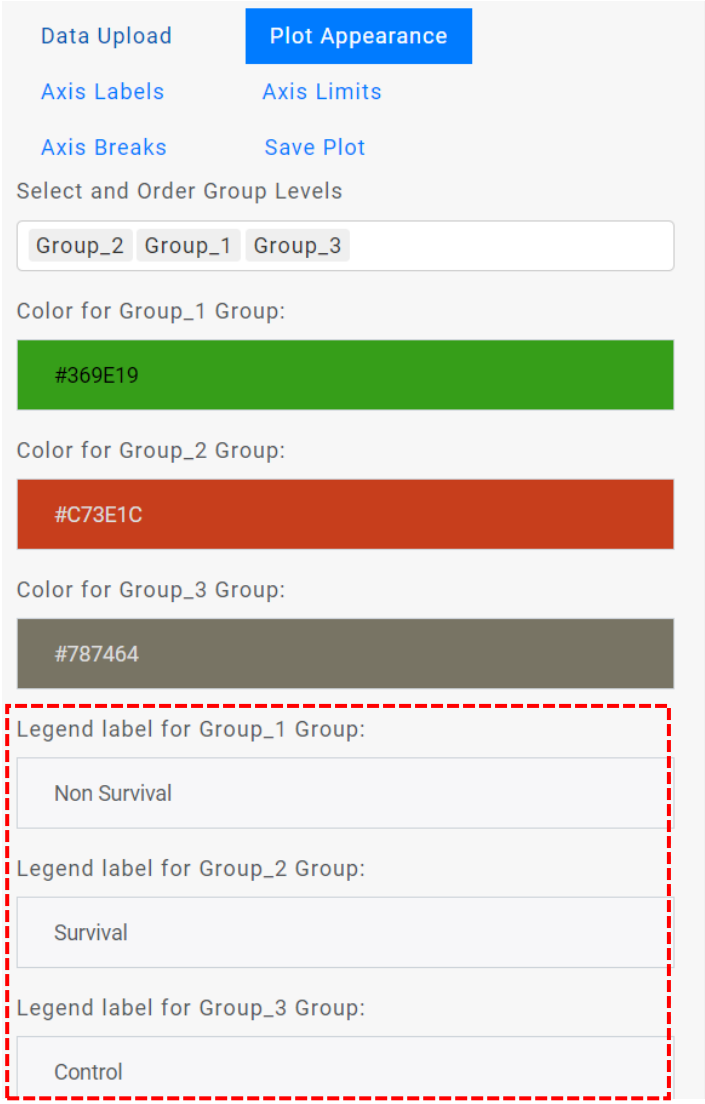
1. Select subtab “Plot Apperance”.
   - ➢ Select the option “Color for Group” and select the approriate color for each group.

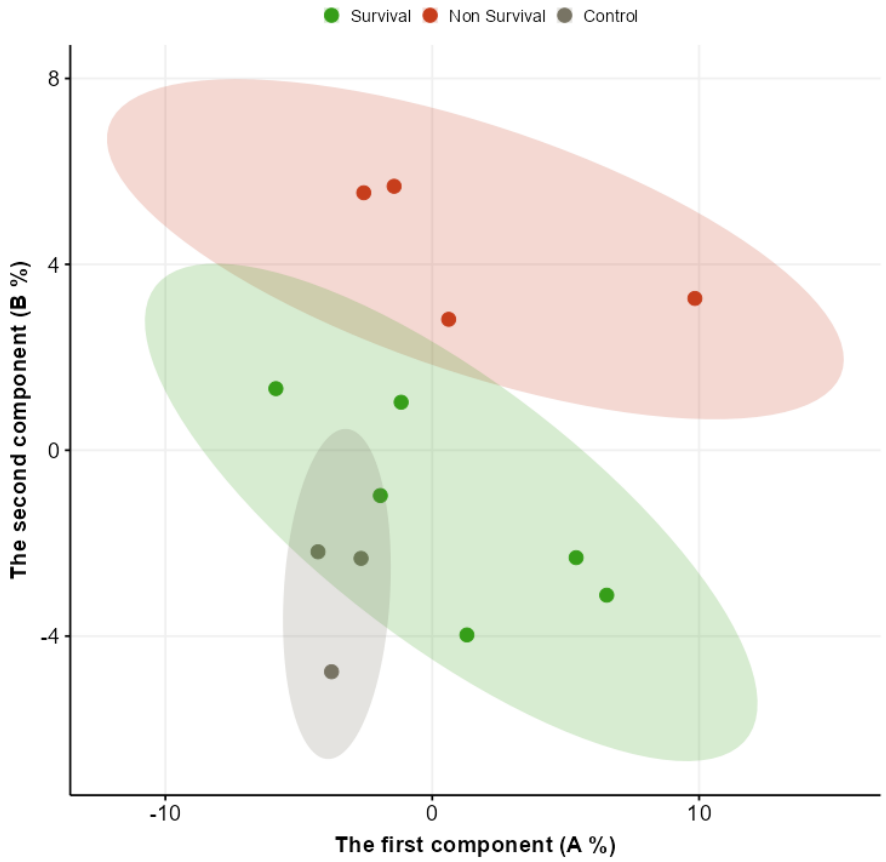




Step 3: Modify the Scores Plot

1. Select subtab “Plot Apperance”.
   - ➢ Select the option “Legend label for group” and modify the name for each group.

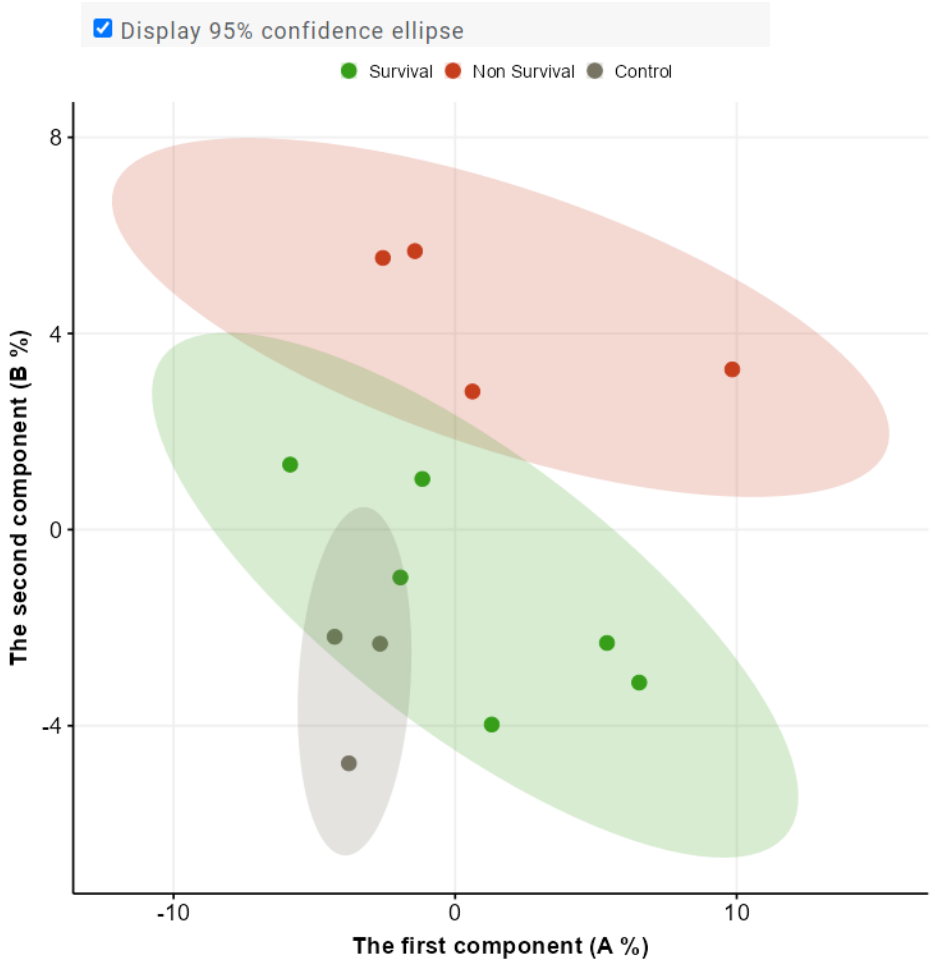


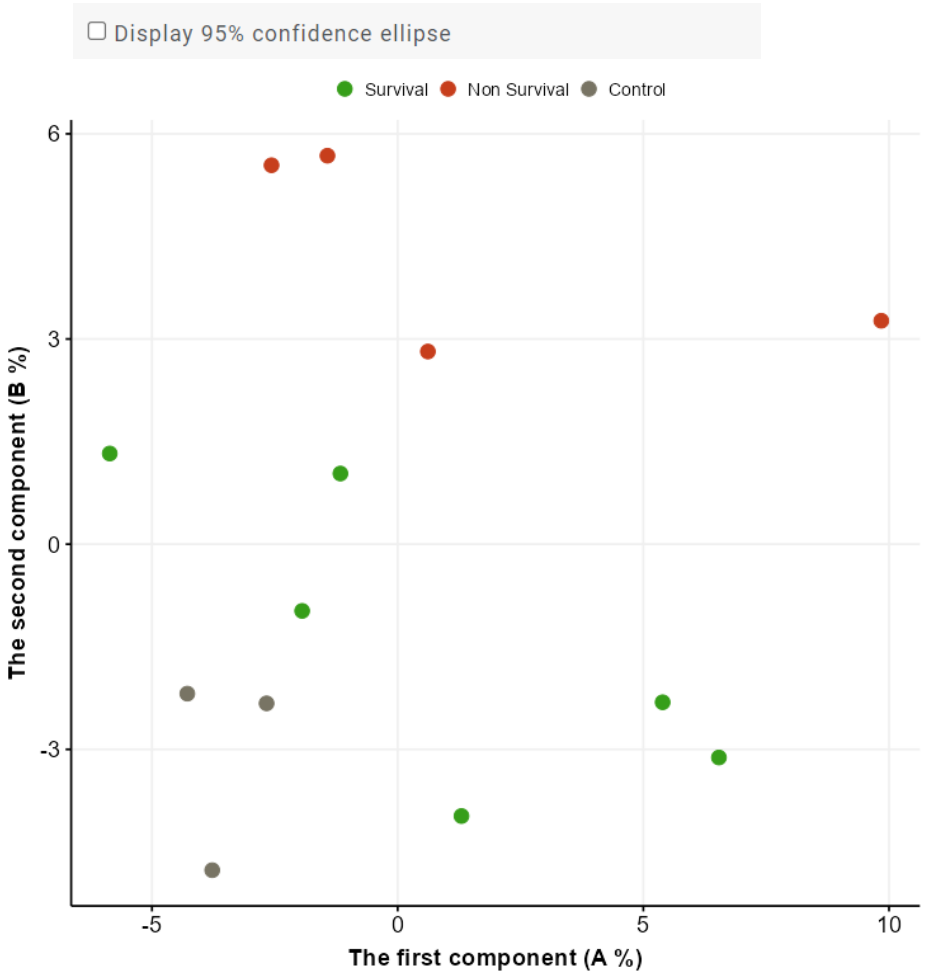


Note: Legend label could contain the space.

Step 3: Modify the Scores Plot

1. Select subtab “Plot Apperance”.
   - ➢ Select or Remove select the option “Display 95% confidence ellipse” to display or remove the 95% confidence ellipse of groups.

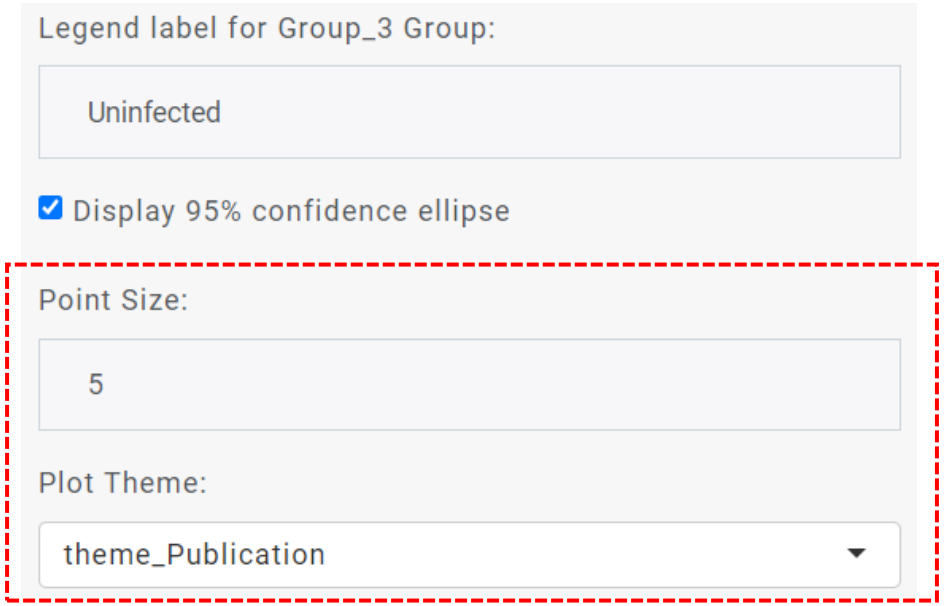


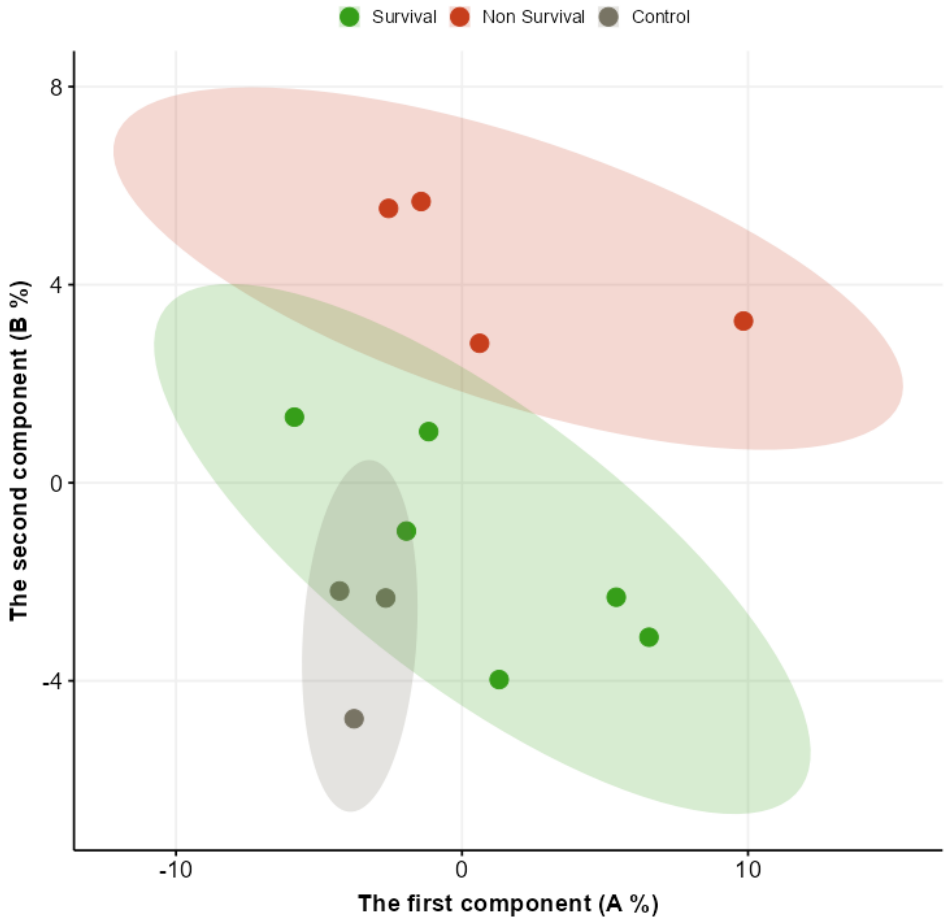


Note: The 95% confidence ellipses are displayed as a default setting.

Step 3: Modify the Scores Plot

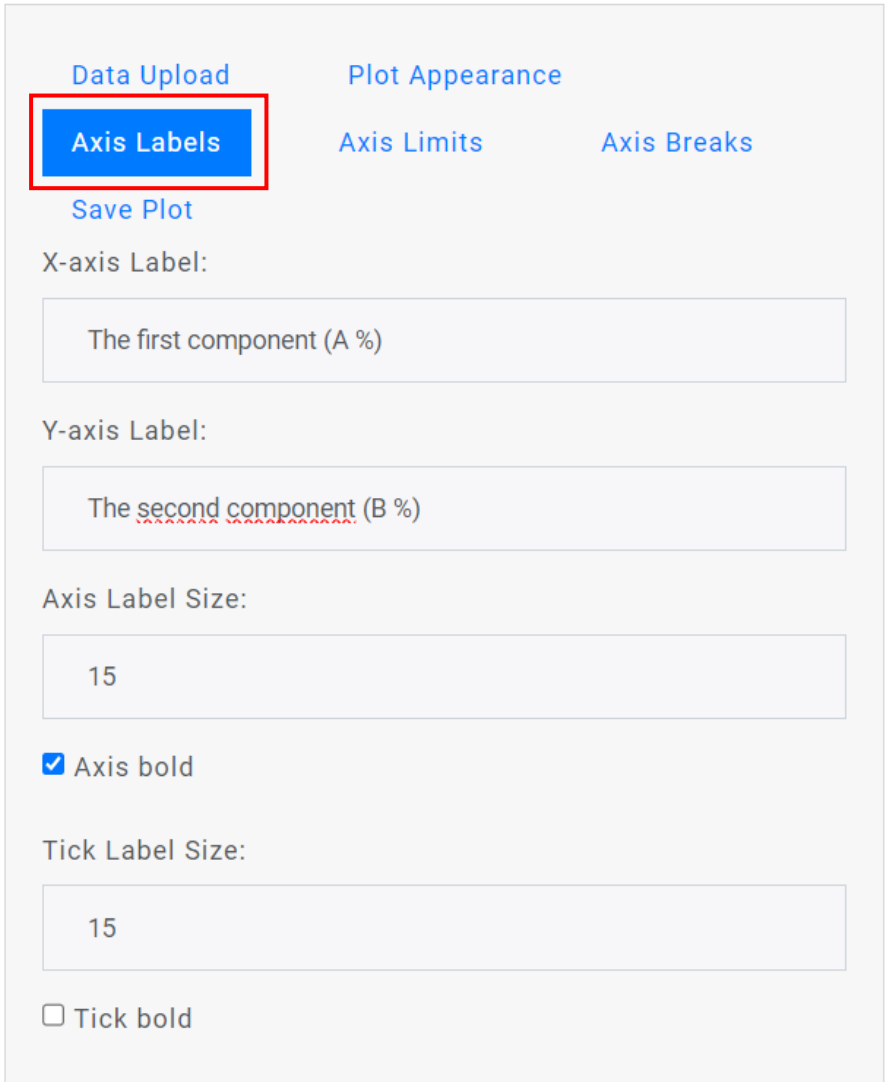
1. Select subtab “Plot Apperance”.
   - ➢ Select option “Point Size” to resize the point size.
   - ➢ Select option “Plot Theme” to select the approriate theme.

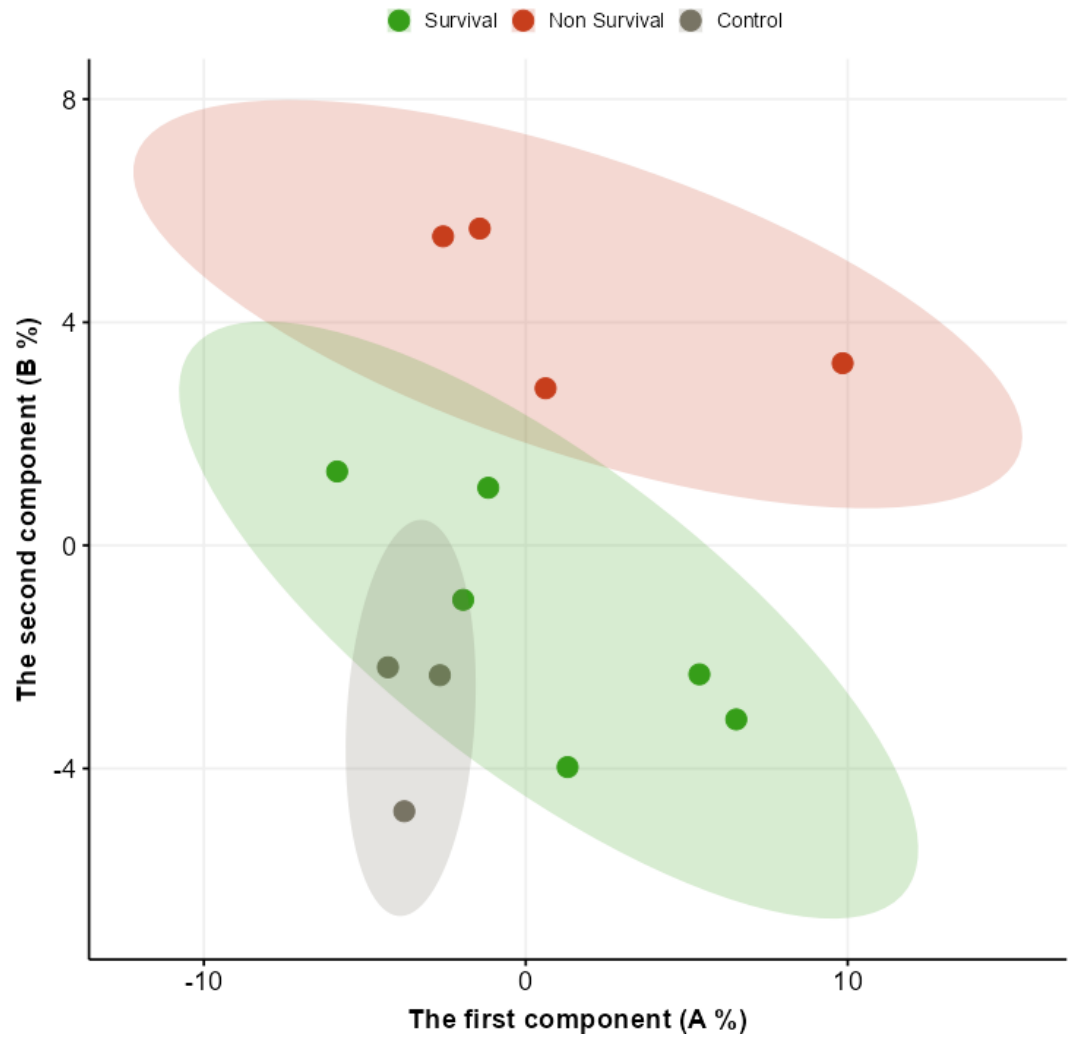




Step 3: Modify the Scores Plot

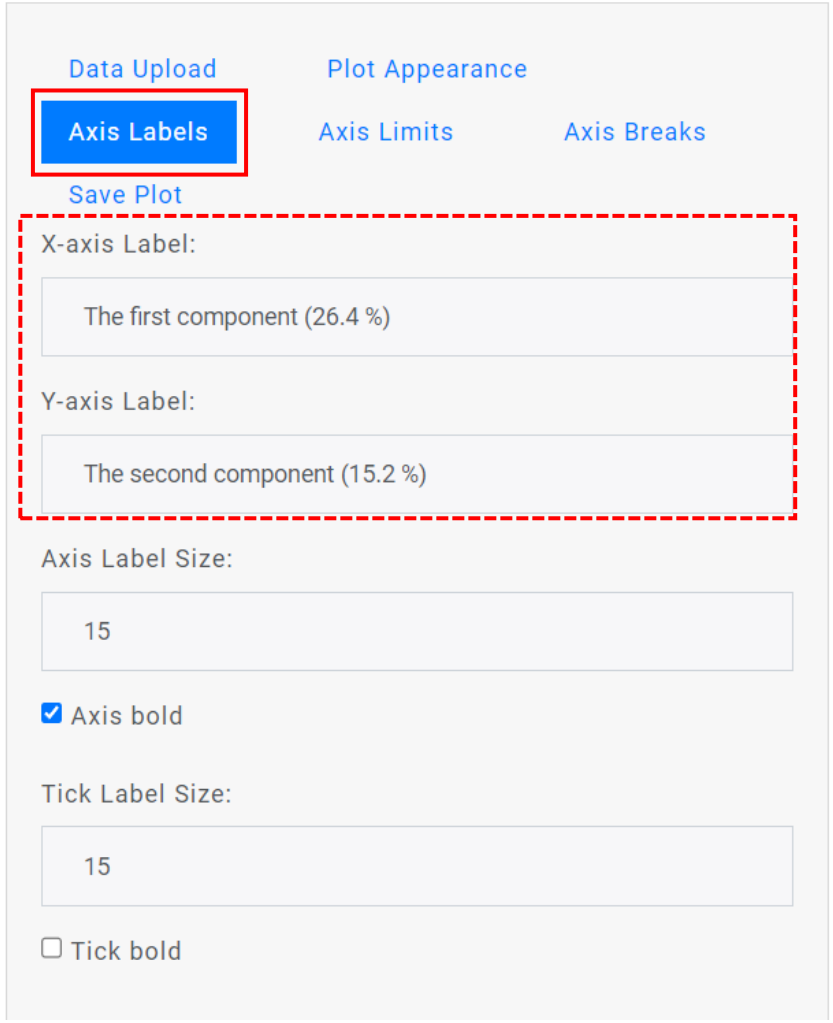
2. Select subtab “Axis Labels”.

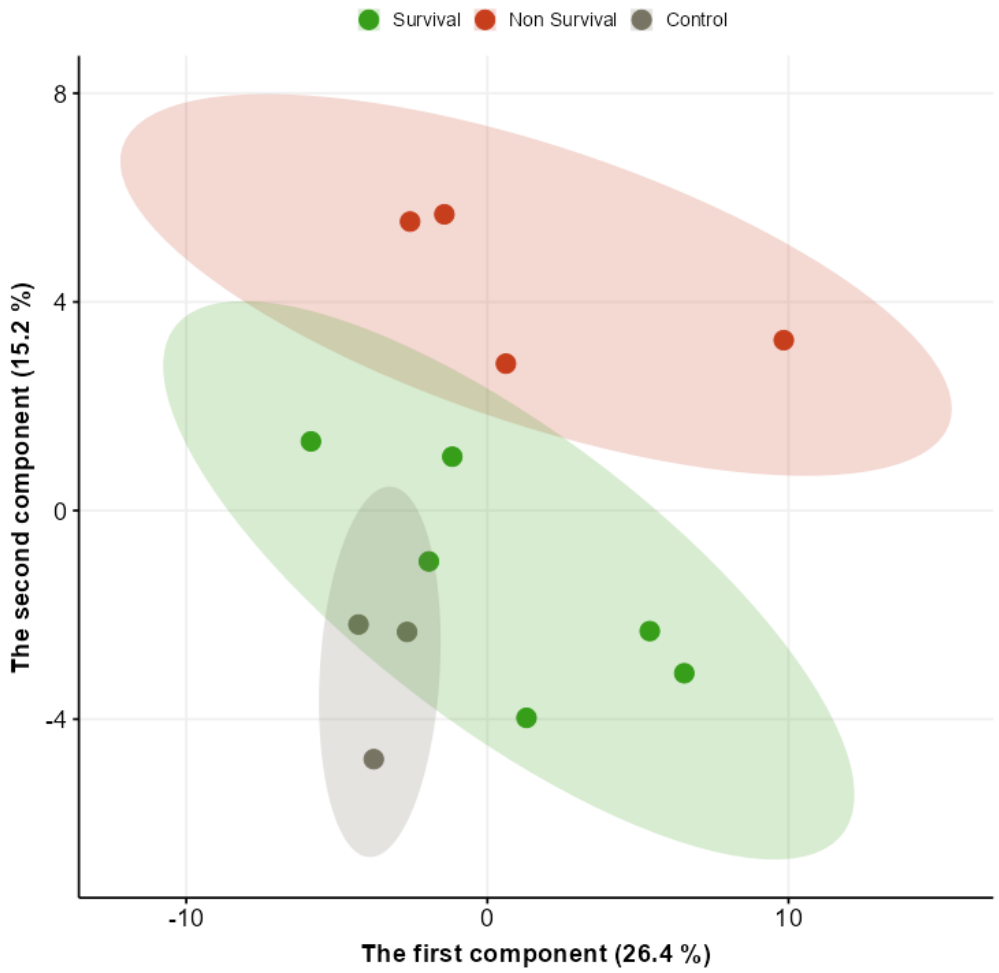




Step 3: Modify the Scores Plot

2. Select subtab “Axis Labels”.
   - ➢ Input the % variance of PC1 and PC2 to “X-axis Label” and “Y-axis Label”, respectively.

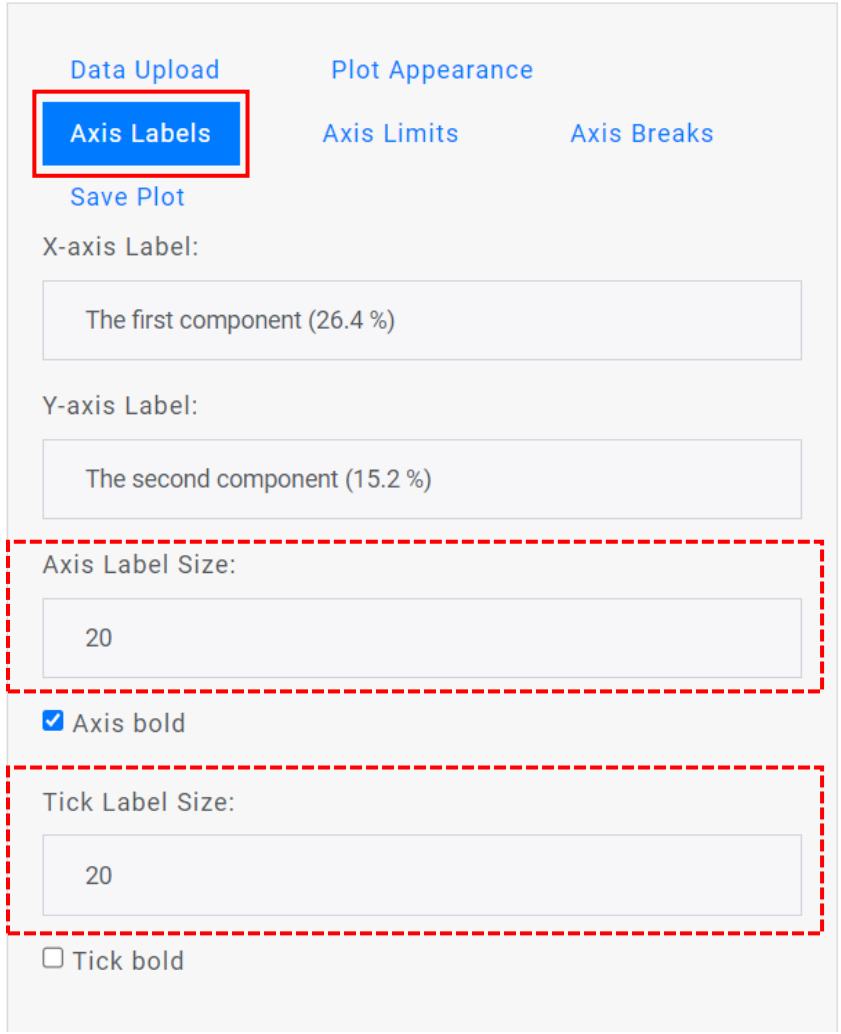


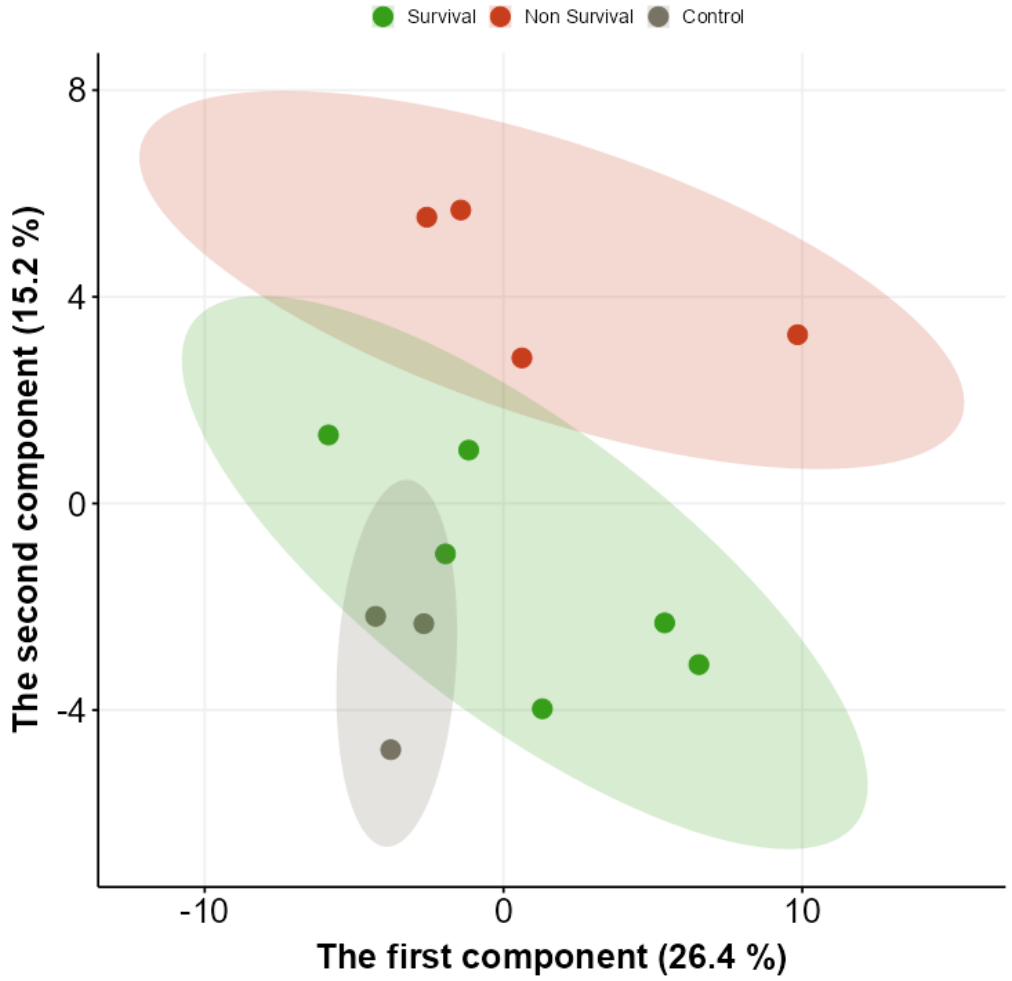


Note: The % variance of PC1 and PC2 were visualization output from e.g., MetaboAnalyst and NetworkAnalyst.

Step 3: Modify the Scores Plot

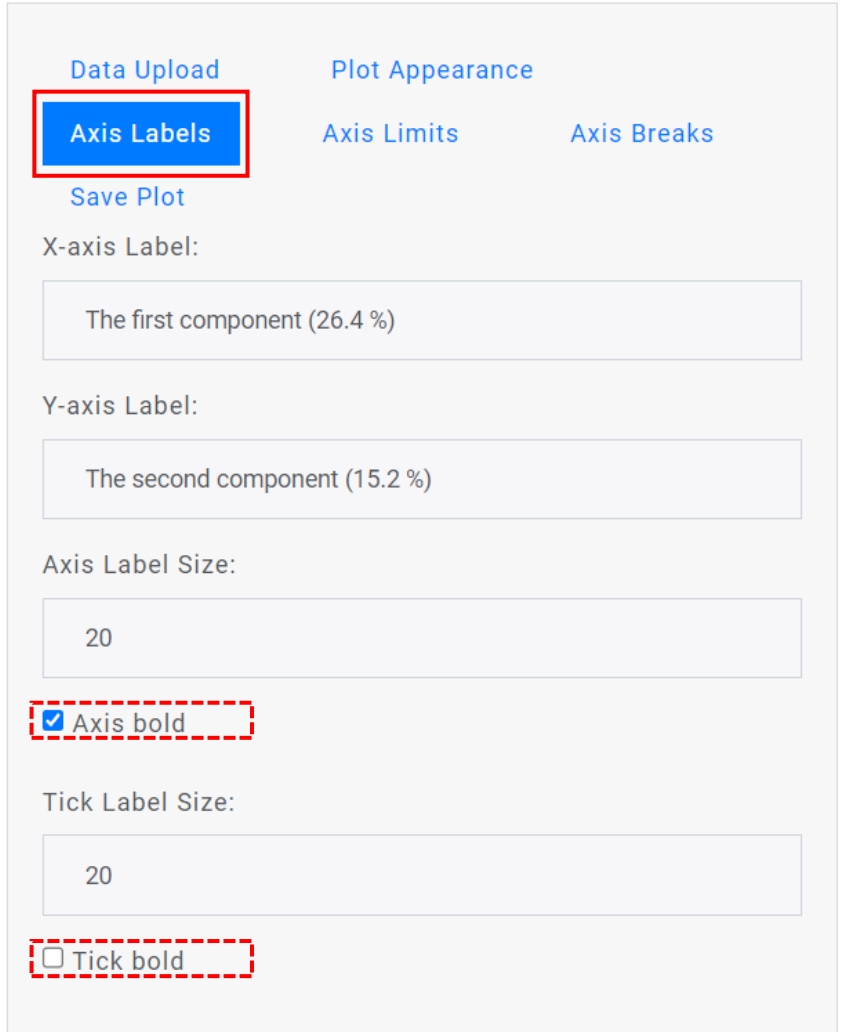
2. Select subtab “Axis Labels”.
   - ➢ Modify the sizes of axis labels and tick labels in “Axis Label Size” and “Tick Label Size”, respectively.

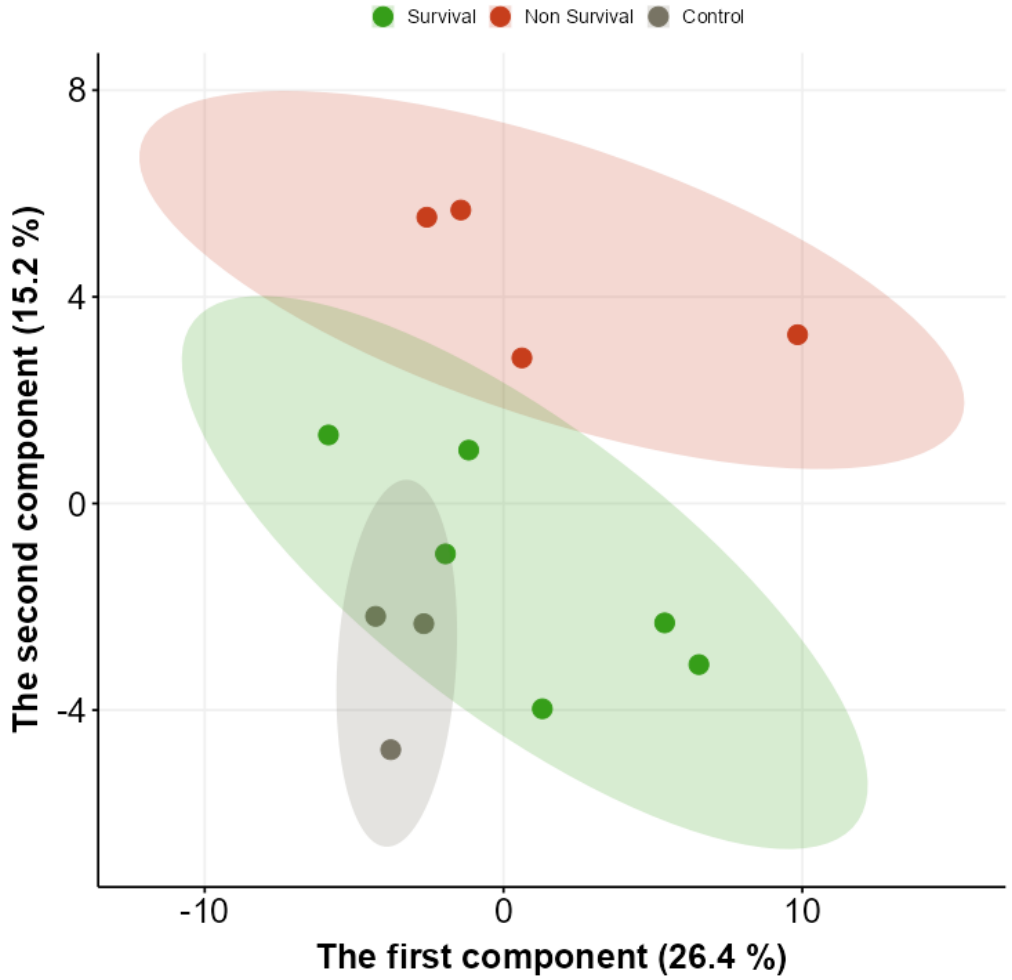




Step 3: Modify the Scores Plot

2. Select subtab “Axis Labels”.
   - ➢ Modify the format (bold or not) of axis labels and tick labels at “Axis bold” and “Tick bold”, respectively.

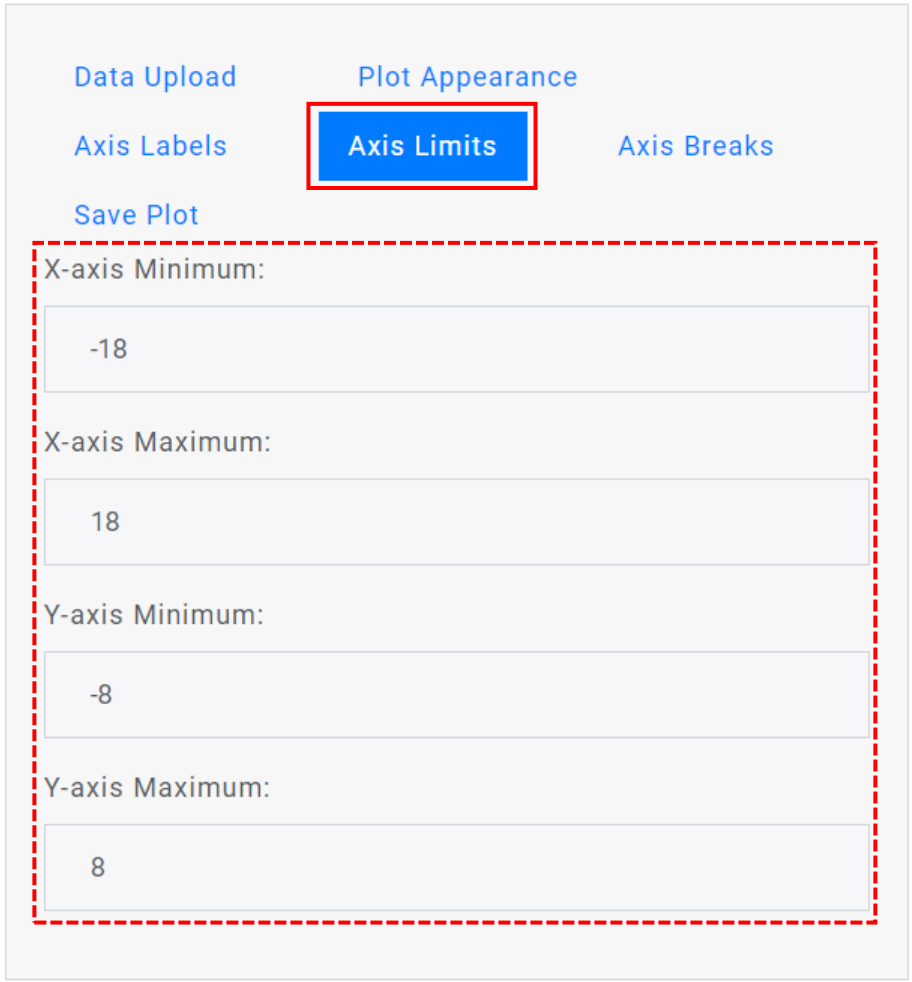


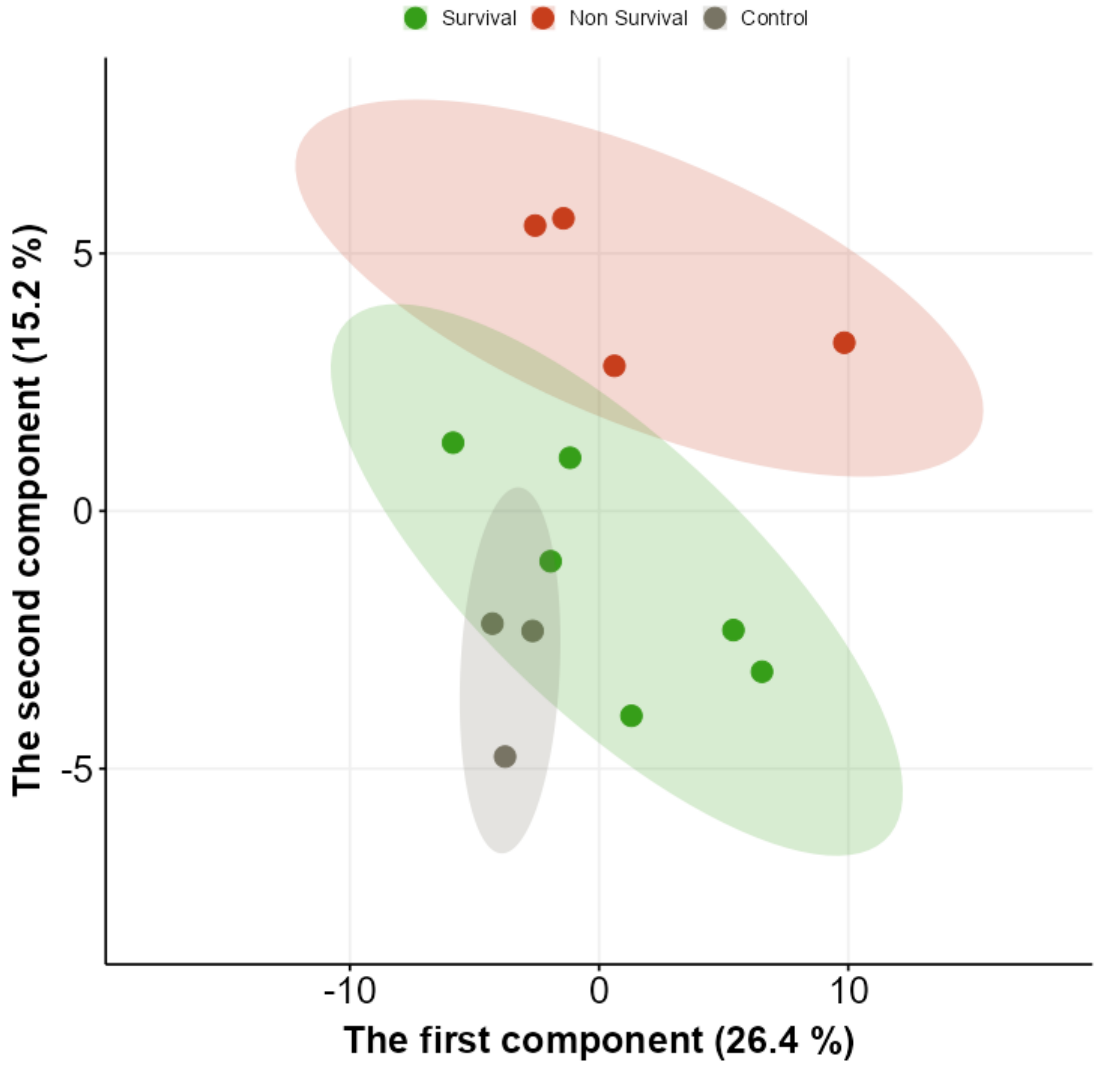


Note: The default setting of Axis label is bold and for the tick label size is not bold.

Step 3: Modify the Scores Plot

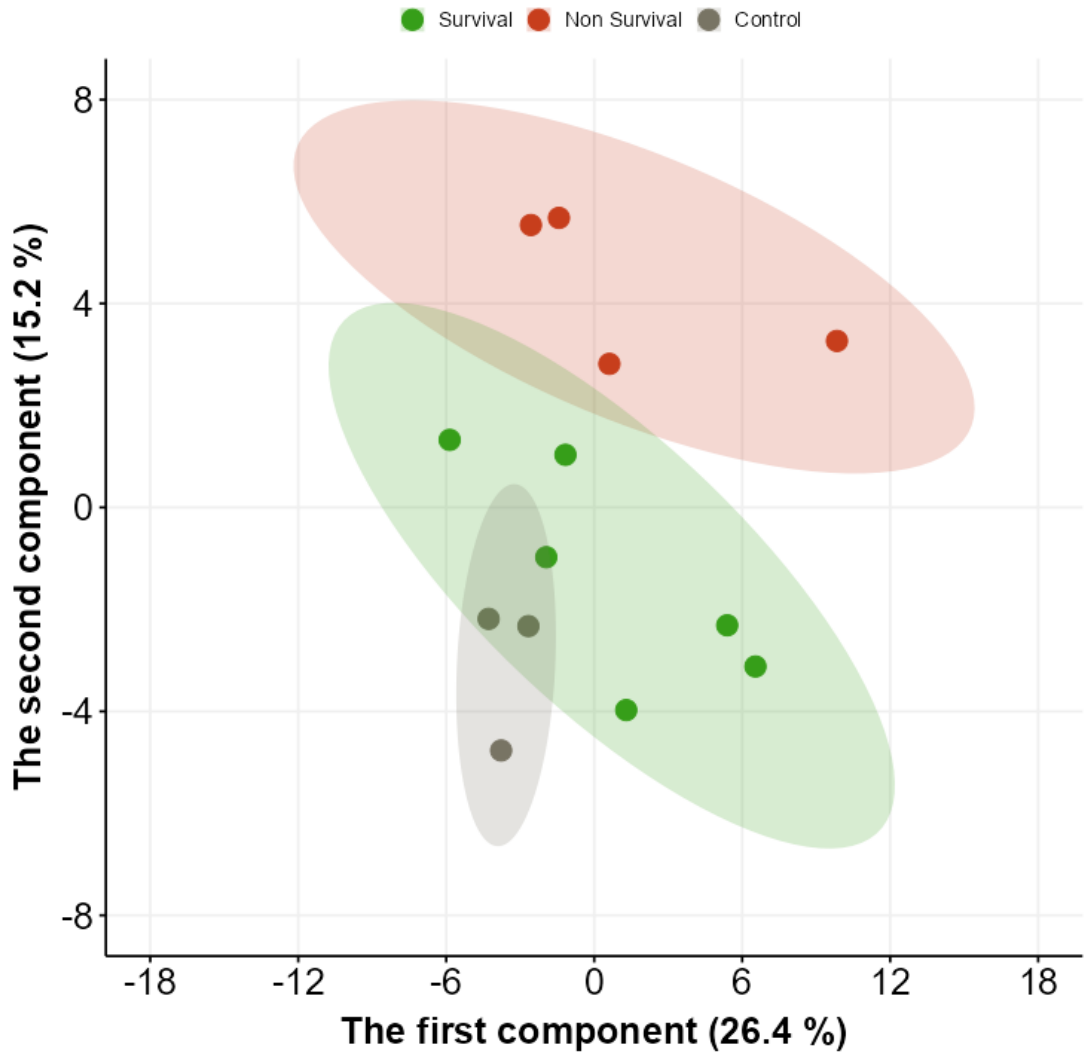
3. Select subtab “Axis Limit” to modify the limits of each axis.





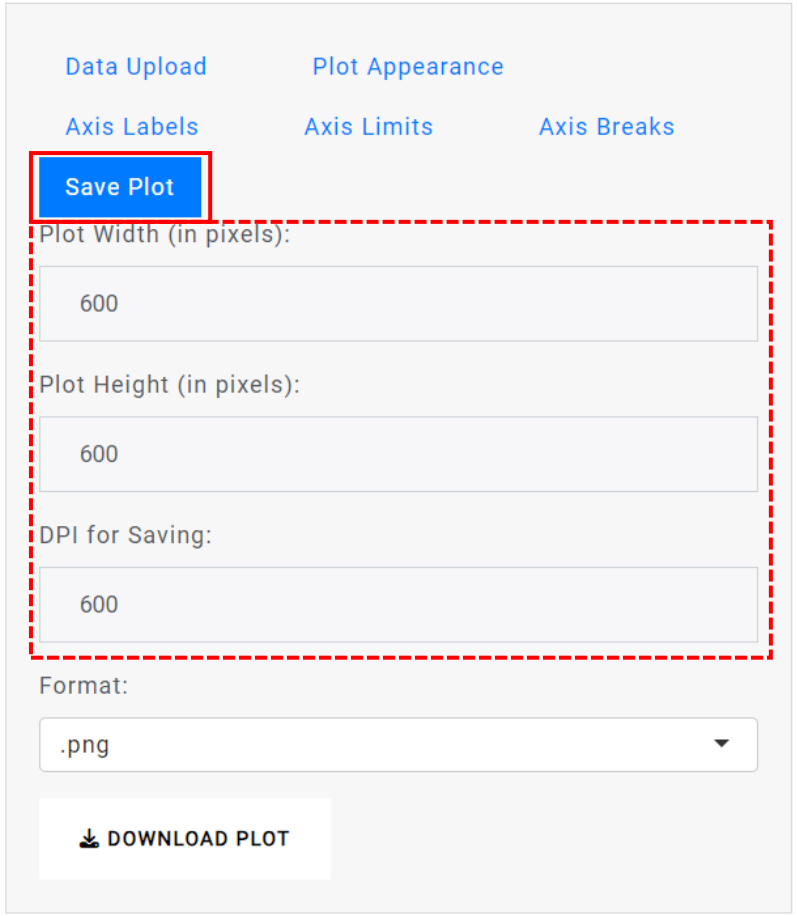
Step 3: Modify the Scores Plot

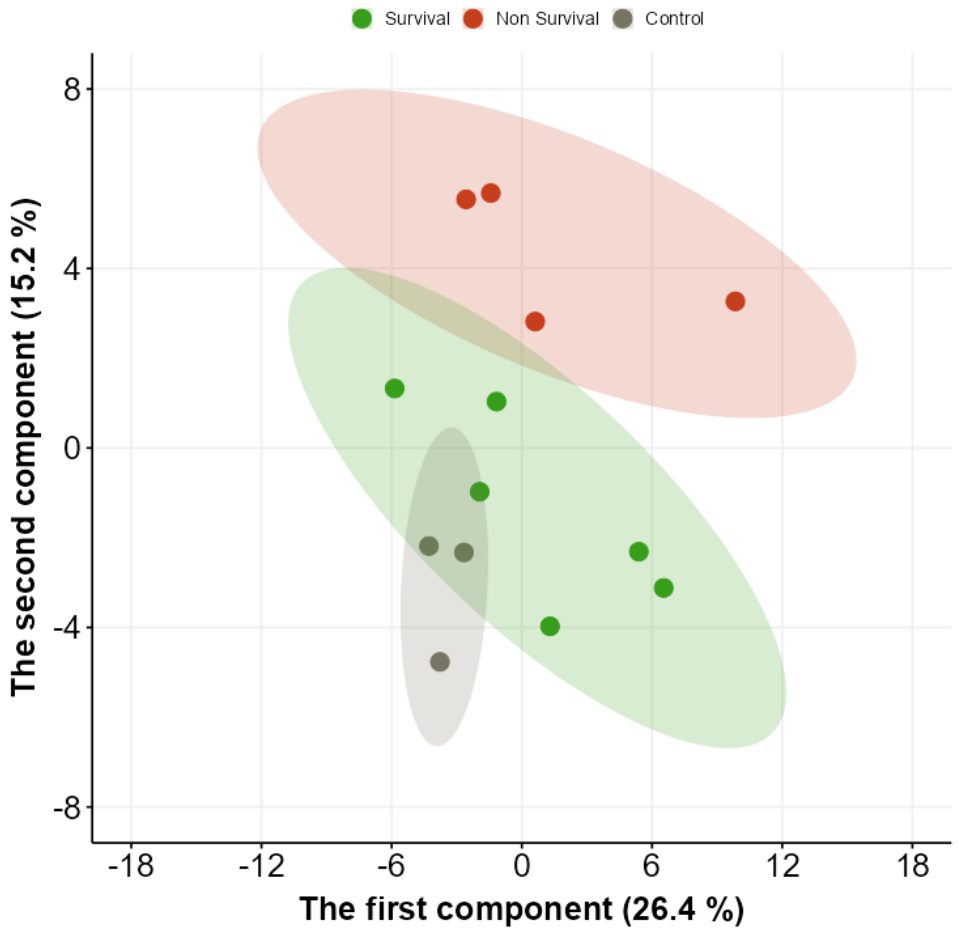
4. Select subtab “Axis Break” to modify the break of each column.



Step 4: Export the Scores Plot

1. Select subtab “Save Plot”.
2. Select the appropriate sizes (**Plot Width and Plot Height**) and resolution for the figure.

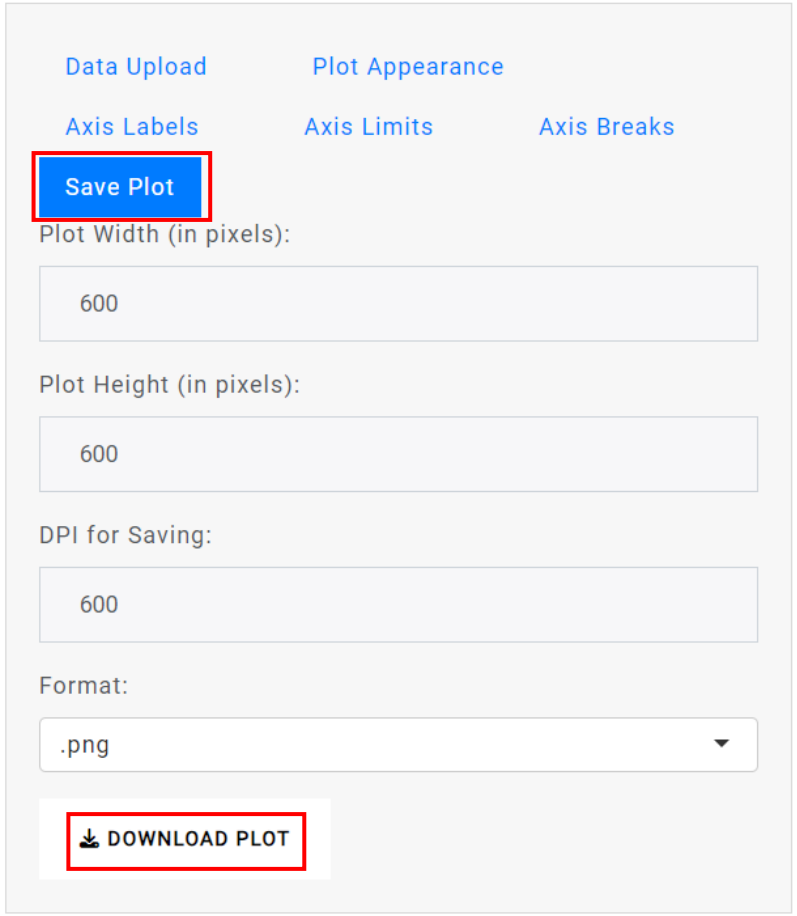


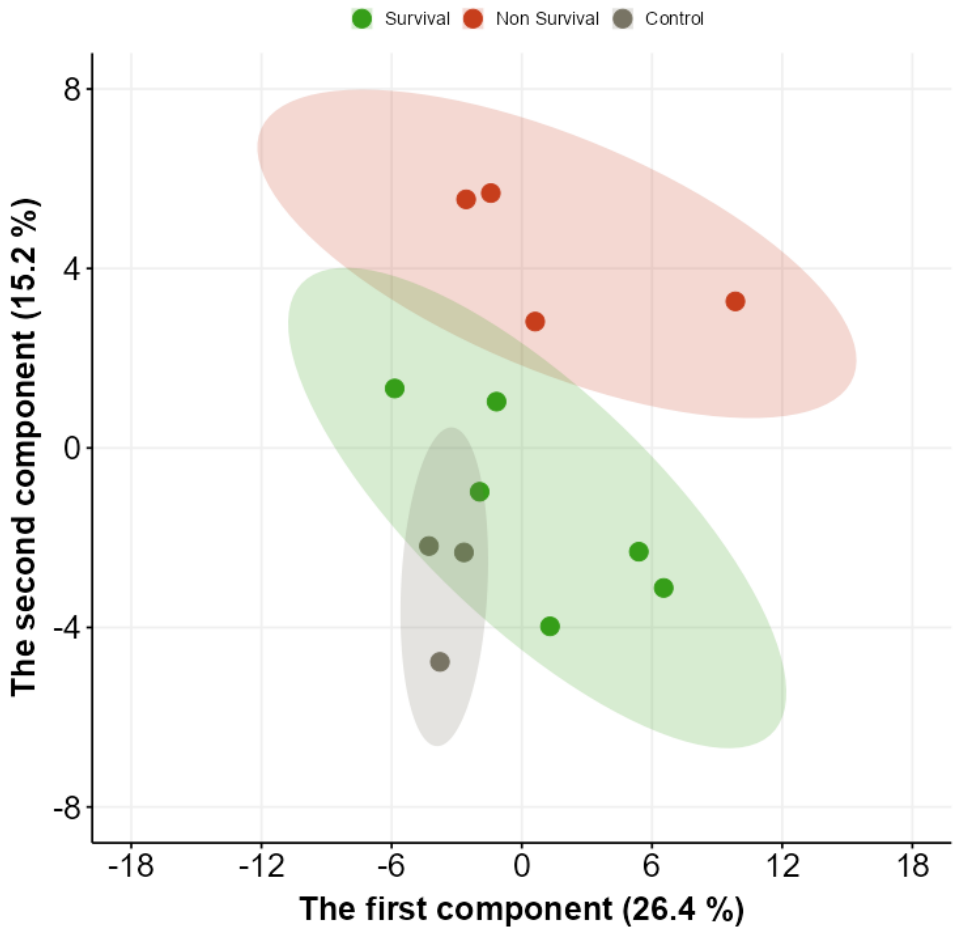


Note: Figure should be exported at 300 dpi or higher.

Step 4: Export the Scores Plot

3. Select figure format for the exported figure (.png, .tiff, .pdf, .svg).
4. Select option “Download Plot” to export the figure.





Note: The .svg format could be further processed with an approriate toolkit.