



Intensity Scale

Intensity scaling allows for the adjustment of the voxel value information in the data. Image data can be scaled by adjusting the output data type.

Available options include the following:

Input: Reports the input data type and minimum and maximum intensity values.

- **DataType:** Display the input data's data type.
- **Maximum:** Displays the input data's maximum intensity value. Note, this value can be adjusted to accurately report the maximum value in the input volume.
- **Minimum:** Displays the input data's minimum intensity value. Note, this value can be adjusted to accurately report the minimum value in the input volume.

Output: Allows users to adjust the output data type and minimum and maximum intensity values. The following options are available:

- **DataType:** The DataType drop down menu allows users to select from the available data types, including; unsigned 8-bit, signed 8-bit, unsigned 16-bit, signed 16-bit, unsigned 32-bit, signed 32-bit, Float, RGB, and Double.
- **Maximum:** Displays the output data's maximum intensity value. This value can be adjusted.
- **Minimum:** Displays the output data's minimum intensity value. This value can be adjusted.

Intensity Scale Volume: Scales the data based on the intensity scaling parameters set.

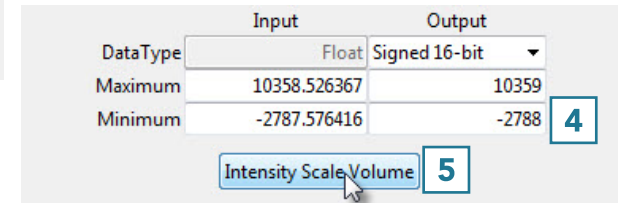
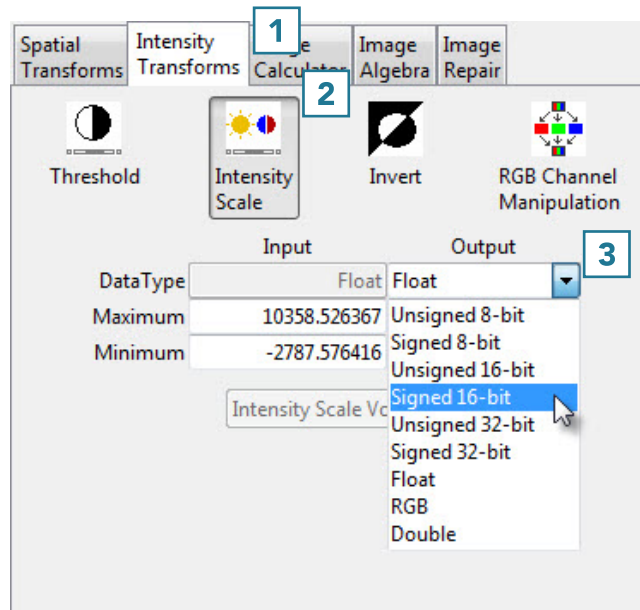
Using the Intensity Scale Tool

Modifying Image Data Type

Changing the data type can reduce the size of the data on disk. In this example, a microCT data set has a data type of Float and the size of the image data is 92.71 MB. Changing the data type to signed 16-bit reduces the size of the data set by about 50% to 46.35 MB without having a significant effect on the voxel intensities.

To follow along, download the Bone_Sample_mCT data set from analyzedirect.com/data and load into Analyze using Input/Output.

- Select the data set to scale and open Transform.
- Navigate to Intensity Transforms [1].
- Select the Intensity Scale tool [2].
- Select the Signed 16-bit data type from the Output drop-down menu [3].



The maximum and minimum values will be set to the default values for the signed 16-bit data type.

- Change these values to match the maximum and minimum input values, rounding to the nearest whole number [4].
- Click Intensity Scale Volume [5] to apply the changes.

Using the Intensity Scale Tool (continued)

- Click Save Volume [6] to save the scaled data set.



- In the Save Transformed window, choose to create a new workspace volume [7].
- Rename the file [8].
- Click Save Volume [9].
- Close Transform.

