Intensities

The Intensities option allows for intensity scaling or threshold-based manipulations to be applied to the data.

Intensity Scaling

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. Values can also be linearly scaled using the Input Maximum and Minimum scale options.

Modifying Image Data Type

Changing the image data type can reduce the size of the data on disk. In this example, a microCT data set has a data type of Float. The size of the image data when loaded into AnalyzePro 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 when loaded.
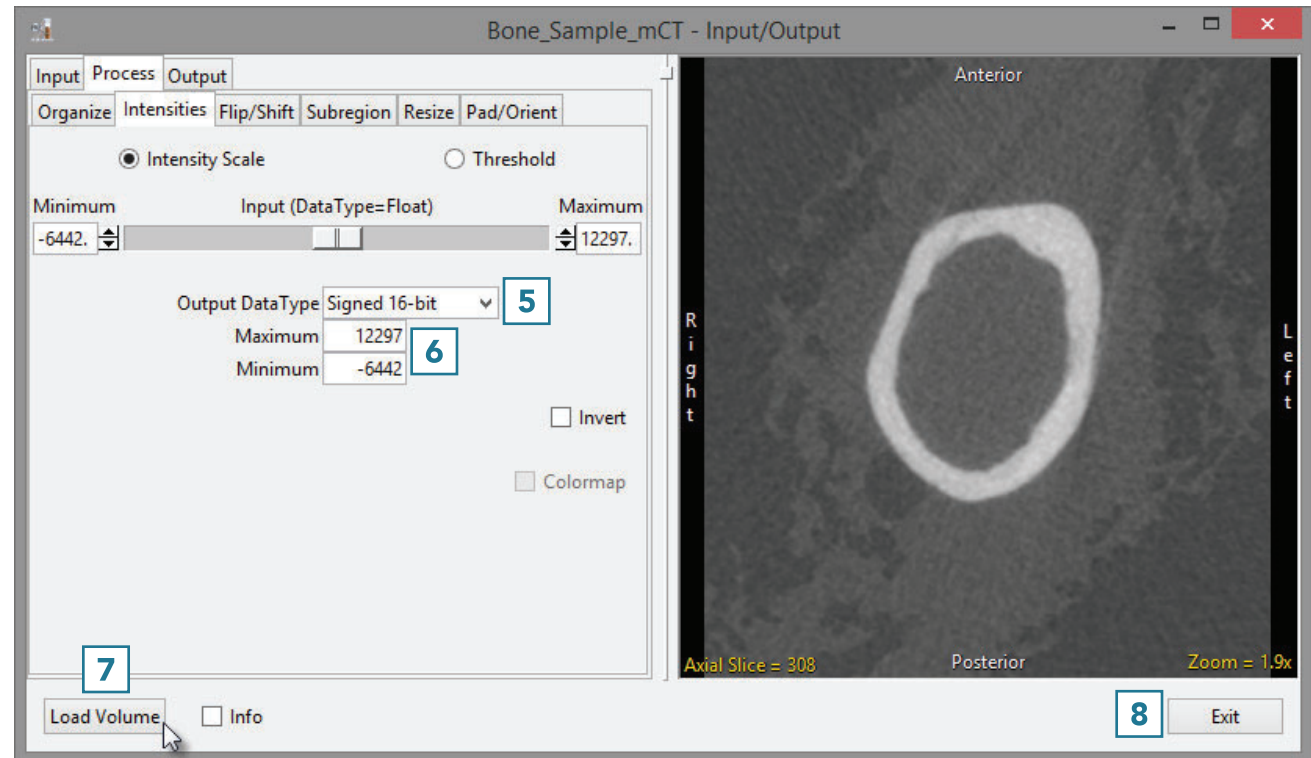
Intensities (continued)

- Open Input/Output.
- Navigate to and select the data set you wish to load and transform.
- Select Process [1] and Intensities [2].
- Make a note of the Input Maximum and Minimum values [3].
- Select Load Volume. [4]. This will load the volume to the workspace as a Float data set.

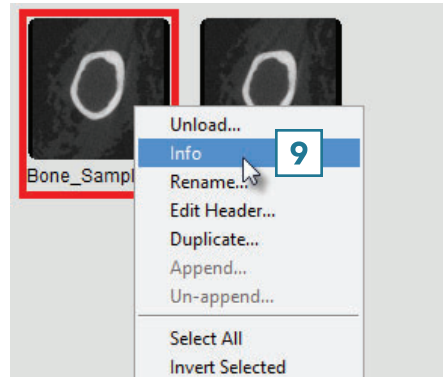Download the Bone_Sample_mCT data set to follow along
http://analyzedirect.com/data/

Intensities (continued)

- Set the Output DataType to Signed 16-bit [5].
- Enter the Output Maximum and Minimum values [6] by copying the input maximum and minimum values and rounding to the nearest whole number.
- Select Load Volume [7] and select Create New when prompted.
- Exit Input/Output [8].

Intensities (continued)

- Right-click on the first data set and select Info [9]. Repeat for the second data set.
- In the info panel beneath the data, note the size of the original and scaled data set.

Bone_Sample_mCT	Bone_Sample_mCT0

FileName=C:\temp\APRO\Michael\Bone_Sample_mCT.mmap
DataType=AVW_FLOAT (32-bit float)
 	
Width=190
Height=208
Depth=615
 	
NumVols=1
 	
Size=92.71 Mb
 	
Info:
    0002|0002="1.2.840.10008.5.1.4.1.1.2"
    0002|0003="2.16.756.5.23.5050.67.3003.3.2014
    0002|0010="1.2.840.10008.1.2.1"
    0002|0012="2.16.756.5.23.1.2"
    0002|0013="SCANCO_V1.2a"
    0008|0008="ORIGINAL\PRIMARY\AXIAL"
    0008|0016="1.2.840.10008.5.1.4.1.1.2"
    0008|0018="2.16.756.5.23.5050.67.3003.3.2014
    0008|0020="20140107"
    0008|0021="20140107"
    0008|0023="20140107"
	FileName=C:\temp\APRO\Michael\Bone_Sample_mCT0.mmap
	DataType=AVW_SIGNED_SHORT (16-bit signed)
	
	Width=190
	Height=208
	Depth=615
	
	NumVols=1
	
	Size=46.35 Mb
	
	Info:
	    0002|0002="1.2.840.10008.5.1.4.1.1.2"
	    0002|0003="2.16.756.5.23.5050.67.3003.3.2014
	    0002|0010="1.2.840.10008.1.2.1"
	    0002|0012="2.16.756.5.23.1.2"
	    0002|0013="SCANCO_V1.2a"
	    0008|0008="ORIGINAL\PRIMARY\AXIAL"
	    0008|0016="1.2.840.10008.5.1.4.1.1.2"
	    0008|0018="2.16.756.5.23.5050.67.3003.3.2014
	    0008|0020="20140107"
	    0008|0021="20140107"
	    0008|0023="20140107"