

Sample Trace(s)

The Sample Trace(s) tool provides all the functionality of the Sample Line(s) tool, while allowing the user to define a freehand trace. Available options are as follows:

Sample Options: Provides users with access to the following trace sampling options:

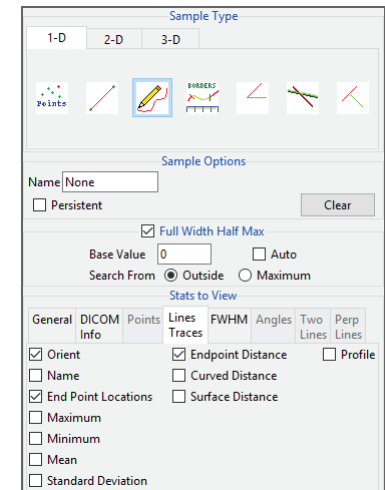
- **Name:** Allows users to assign a name to the defined trace when reported to the log file.
- **Persistent:** When selected prevents previously defined traces for being cleared from the image.
- **Clear:** Clears all traces from the image.

Full Width Half Max: The Full Width Half Max (FWHM) option can be enabled for the Sample Line(s) and Sample Trace(s) tool. For additional information refer to the FWHM description under Sample Line(s) tool.

- **Base Value:** Allows users to specify the value used in the FWHM calculation.
- **Auto:** When enabled, the base value is automatically calculated by computing the mean of the nine-point neighborhoods around each endpoint of the line or trace
- **Search from:** Allows users to specify the search mode for FWHM measurement. The following options are available:
 - **Outside:** Specifies that search begins at the ends of the profiles.
 - **Maximum:** Specifies that search begins at the maximum value and proceeds to the left and right for the two half max values.

Stats to View

- **General:** Allows users to report general image data parameters in the stats log file. See General under Sample Point(s) > Stats to View for a full description of available options.
- **DICOM Info:** Allows users to report DICOM tag information if the data is in the DICOM format. See the DICOM Info under Sample Point(s) > Stats to View above for a full description of available options.
- **Lines Traces:** Allows users to report an array of information about the trace. See Lines Trace under Sample Lines(s) > Stats to View above for a full description of available options.
- **FWHM:** Allows report an array of information for Full Width Half Max measurements. See FWHM under Sample Lines(s) > Stats to View above for a full description of available options.



Making Freehand Trace Measurements using Sample Trace(s)

Here we use the Sample Trace(s) tool to make freehand trace measurements.

Download the MRI_3D_Head.avw data set from analyzedirect.com/data to follow along.

- Open Input/Output and load MRI_3D_Head.avw into Analyze. Select MRI_3D_Head and open Measure.
- Select the 1-D Sample Type [1] and choose Sample Trace(s) [2].
- Check any of the measurements required from the Lines Traces tab [3].
- Define a freehand trace on the data [4].
- The measurements selected will be returned to the Stats review area [5] once tracing is completed.
- If the Auto Log Stats [6] checkbox is selected, the measurements will be added to the Lines log [7] which can be saved as a .CSV file.

The screenshot shows the Analyze 14.0 software interface. The 'Sample Type' dropdown is set to '1-D'. The 'Sample Options' panel is open, showing various checkboxes for measurements. The main image window displays an axial MRI slice with a freehand trace. The 'Lines' table at the bottom shows the following data:

Index	Orient	X1	Y1	Z1	X2	Y2	Z2	Endpoint Distance
1	Axial	52	81	127	60	149	127	68.68