


**Example: Grain Size Analysis - Automatic Line Method**

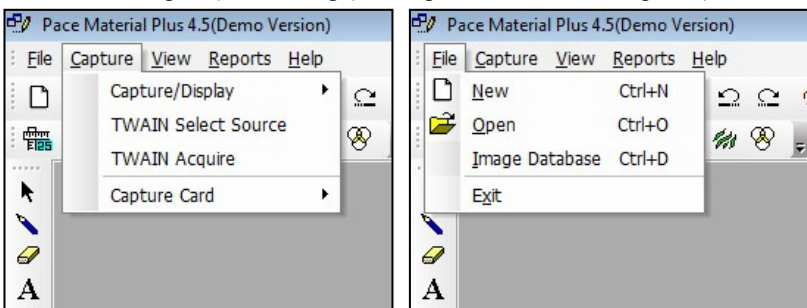
Automated Line grain size analysis is a fast and convenient method for grain boundaries that are well defined through proper polishing and etching.

**PROCEDURE:**

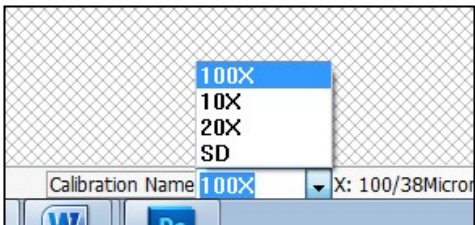
1. Load the image for grain size measurement.
2. Select the appropriate saved calibration scales from the drop down list at the bottom of the Window
3. Click on the Grain Size icon  either from the Toolbar or from the Menu-bar
4. Grain Size Measurement dialogue box will open. Select AUTOMATICLINE ASTM method.
5. Click on SET THRESHOLD. A new platform with two scroll bars will appear. Move both scroll bars until all of the boundaries are properly pseudo colored (filled in red). Click OK.
6. Click MEASURE. Several lines will be drawn automatically and the software will perform the calculations.
7. If the number of lines has to be increased or decreased for your application, go to No. of Lines and change the number.
8. The angle of the lines can also be changed from 1 to 90 degrees. This may be required for elongated grains.
9. Click ADD to place in grid.
10. To save the report, click on REPORT.
11. A sample information window will appear. Fill the required information. Click on "Save Data For Report Tool"
12. 12. Click on "TO EXCEL" to see the result in Excel.


**EXAMPLE of Grain Size – AUTOMATICLINE ASTM Method**

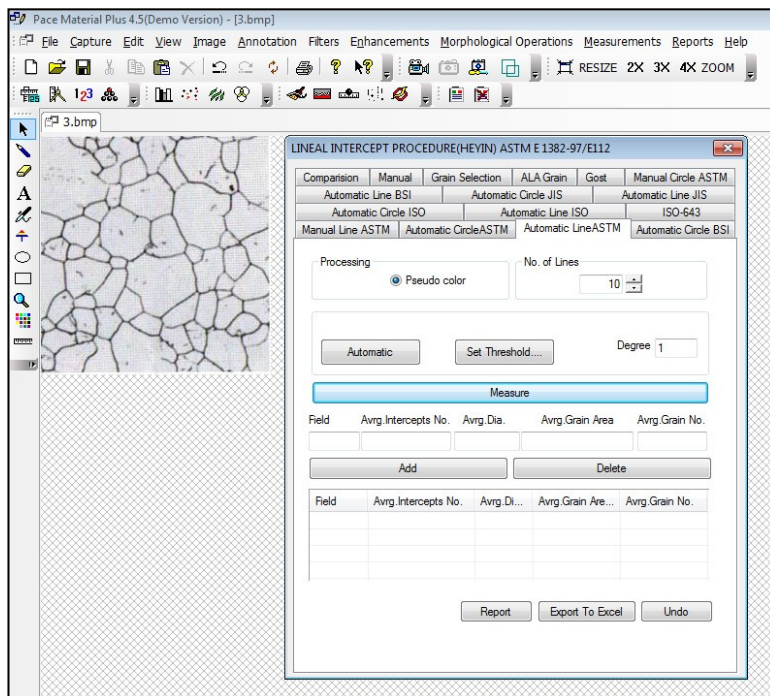
1. File > Open (select image) or Capture > TWAIN Acquire (for live image)



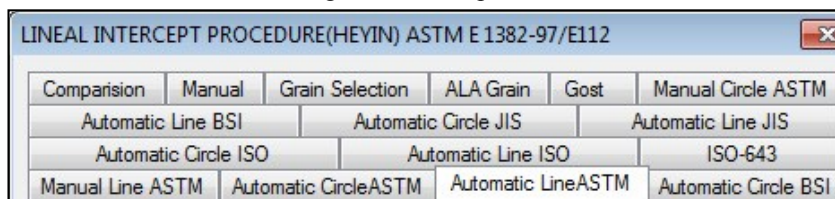
2. Select Calibration scale at bottom of the Window



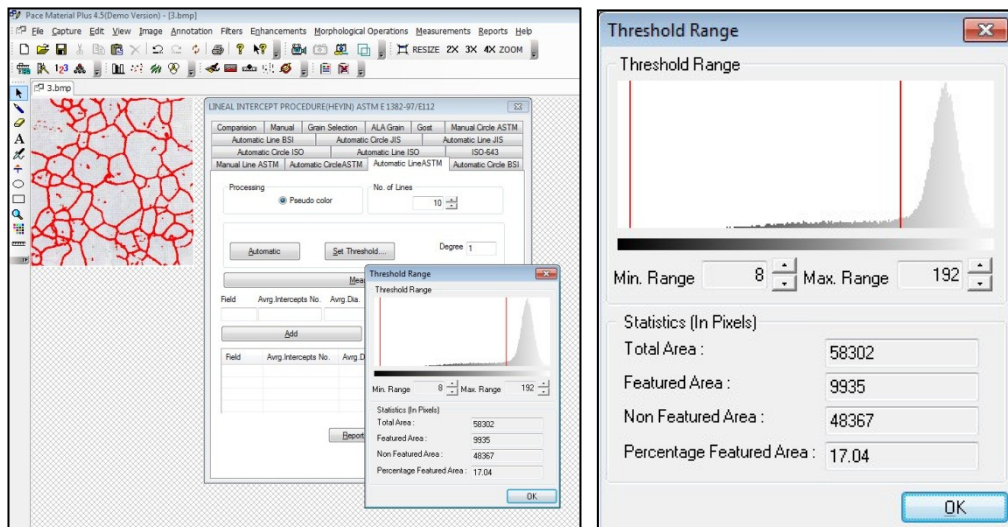
3. Click on the Grain Size icon  either from the Toolbar or from the Menu-bar



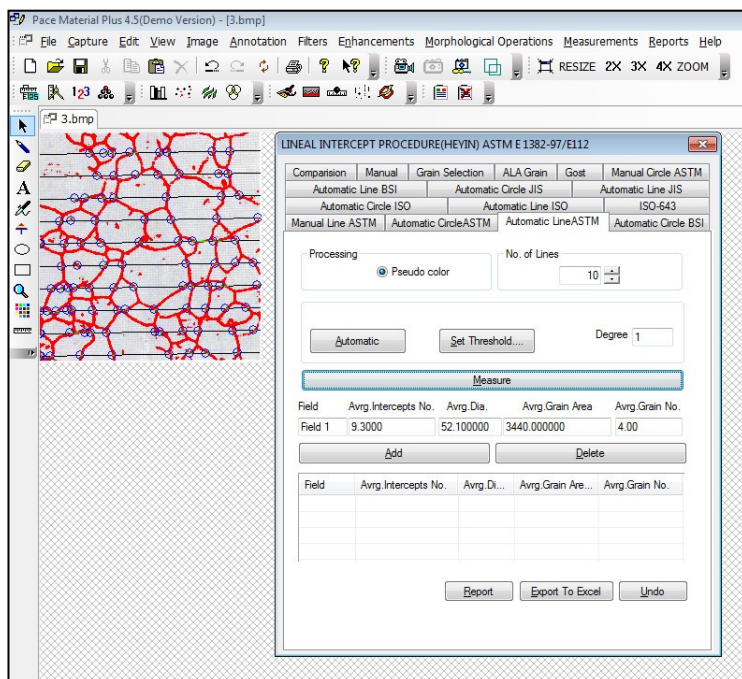
4. Grain Size Measurement dialogue box will open. Select AUTOMATIC LINE ASTM method.



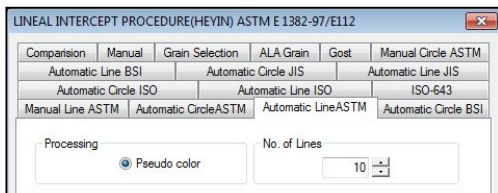
- Click on SET THRESHOLD. A new platform with two scroll bars will appear. Move both scroll bars until all of the boundaries are properly pseudo colored (filled in red). Click OK.



- Click MEASURE. Several lines will be drawn automatically and the software will perform the calculations.



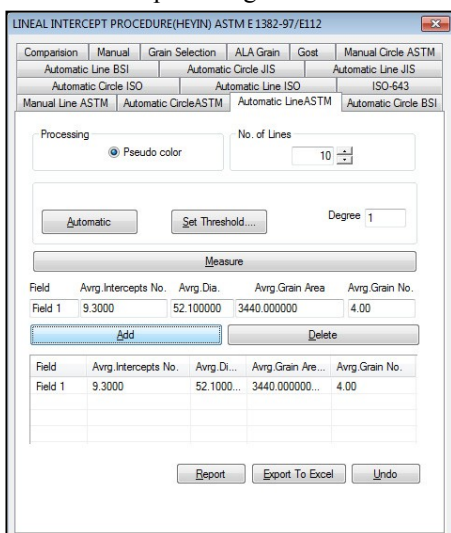
7. If the number of lines has to be increased or decreased for your application, go to No. of Lines and change the number.



8. The angle of the lines can also be changed from 1 to 90 degrees. This may be required for elongated grains.



9. Click ADD to place in grid.



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 12. Click on “TO EXCEL” to see





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