How to Use DSC OIT Tester software

Description

DSC OIT Tester

OIT measurement

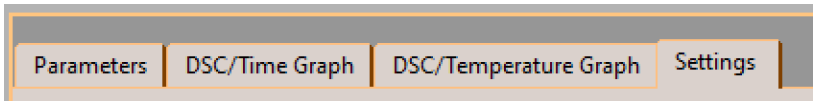
After installation of driver:

Driver Installation

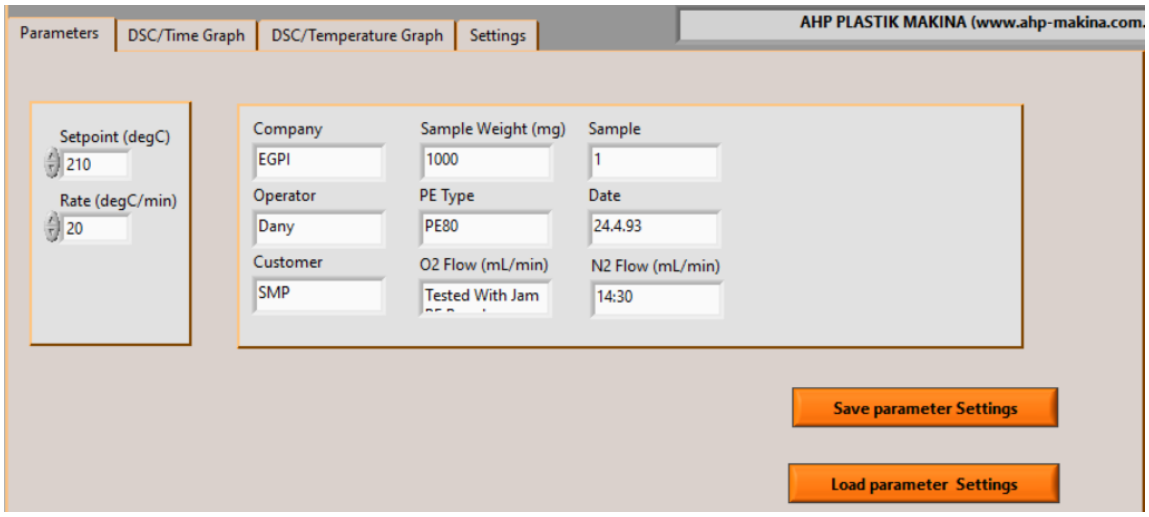
And installation of the software:

Software Installation

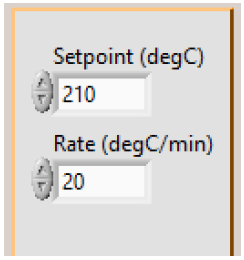
Main panel of software has 4 pages:



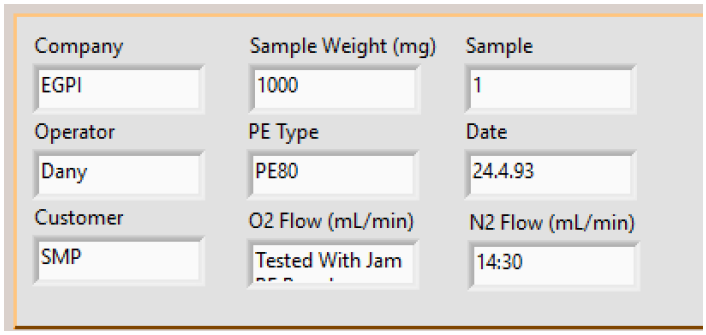
First of all set the parameters for OIT test as below (got to “parameters Tab”):



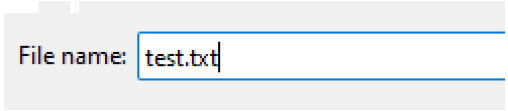
For OIT measurement you need to set two main parameters of “Setpoint(degC)” and “Rate(degC/min)”.



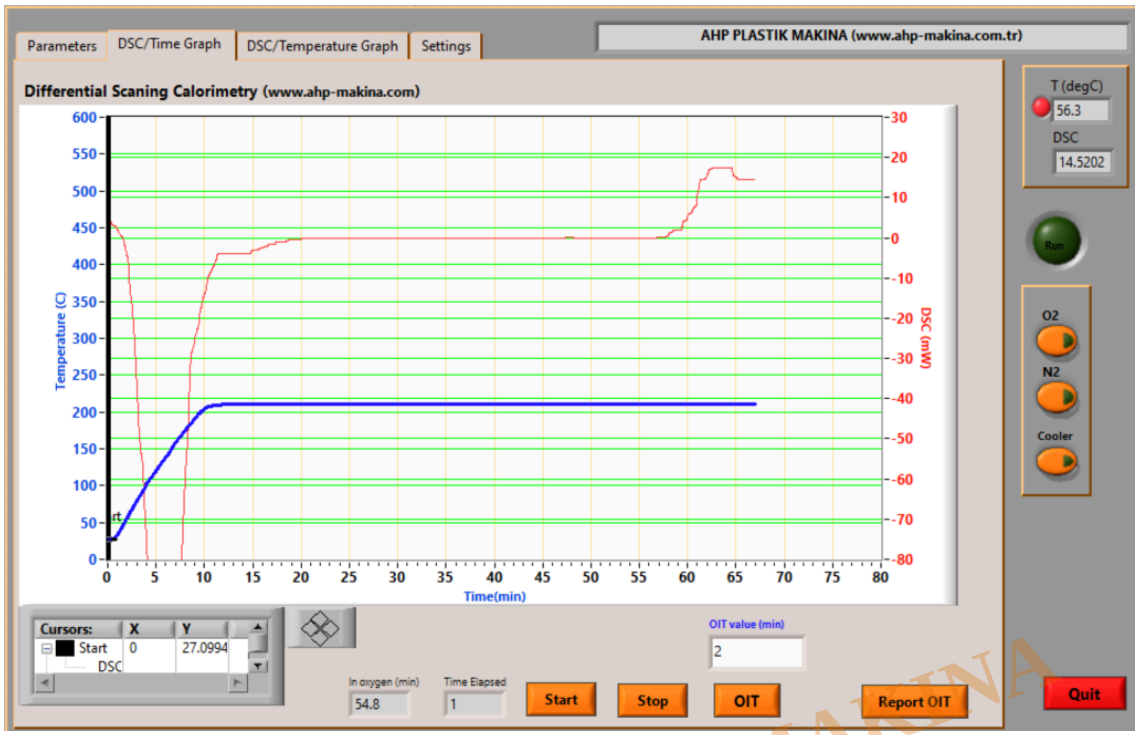
For example for PE OIT measurement temperature is 200C or 210C and rate is 20. Then you have settings for general parameters of the sample as below:



you can also save these general settings as “.txt” file and then load it when needed. Don’t forget to add .txt at the end of file name.

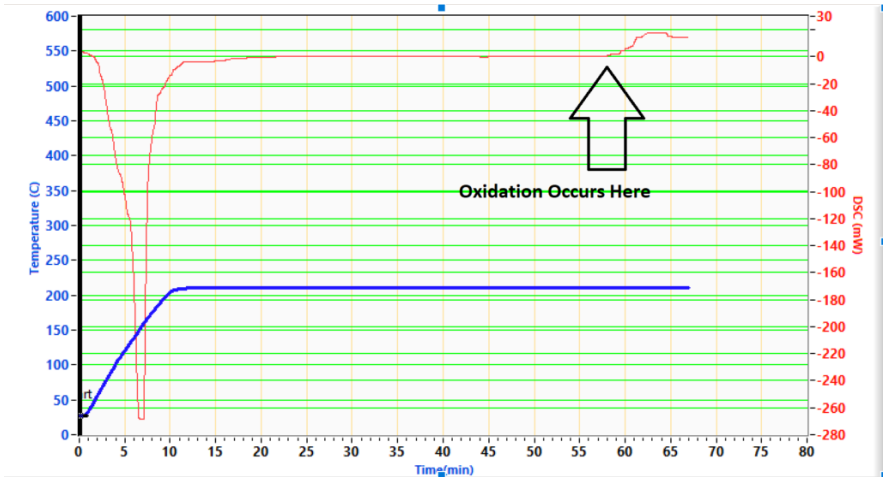


Next page is DSC-Time graph.



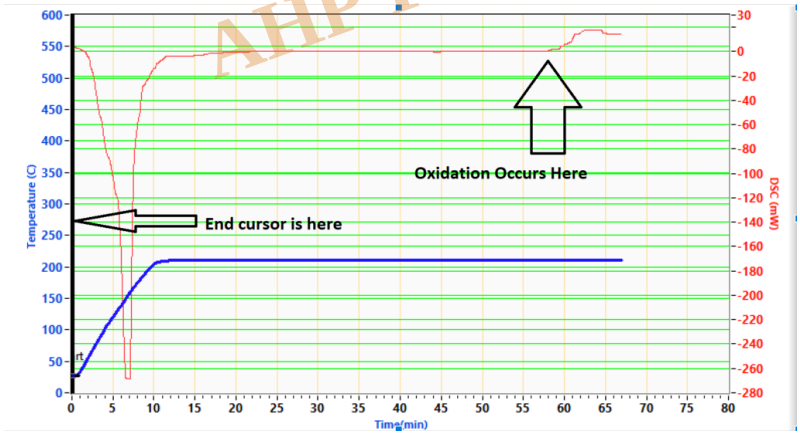
After setting the parameters in the first page now you can start the test. Click on “Start”. When you click start you will hear sound of solenoid valve for N2 gas. It will be opened automatically after clicking on Start. When the temperature reaches set value, a timer will be start counting. This is the timer that after passing this time N2 gas will be switched automatically to O2 gas. This time can be set in setting page with the name of “Delay(Sec)”.

When this delay time passes , N2 gas will be switched to O2 gas. Then DSC graph line will be continue as straight line till breakage occurs in this graph upward. This is where the oxidation occurs in the sample.

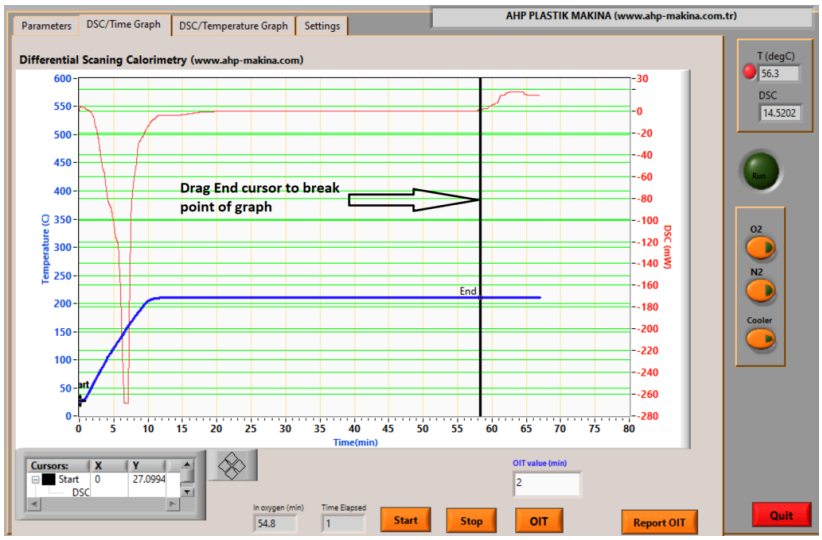


After oxidation occurs “Stop” the test and drag the “End” cursor to the break point. This process can be automatically done when you export data to “Advantage” software. After you dragged end cursor to break point click on “OIT” key and oxidation time will be calculated.

End cursor is shown in the picture below:



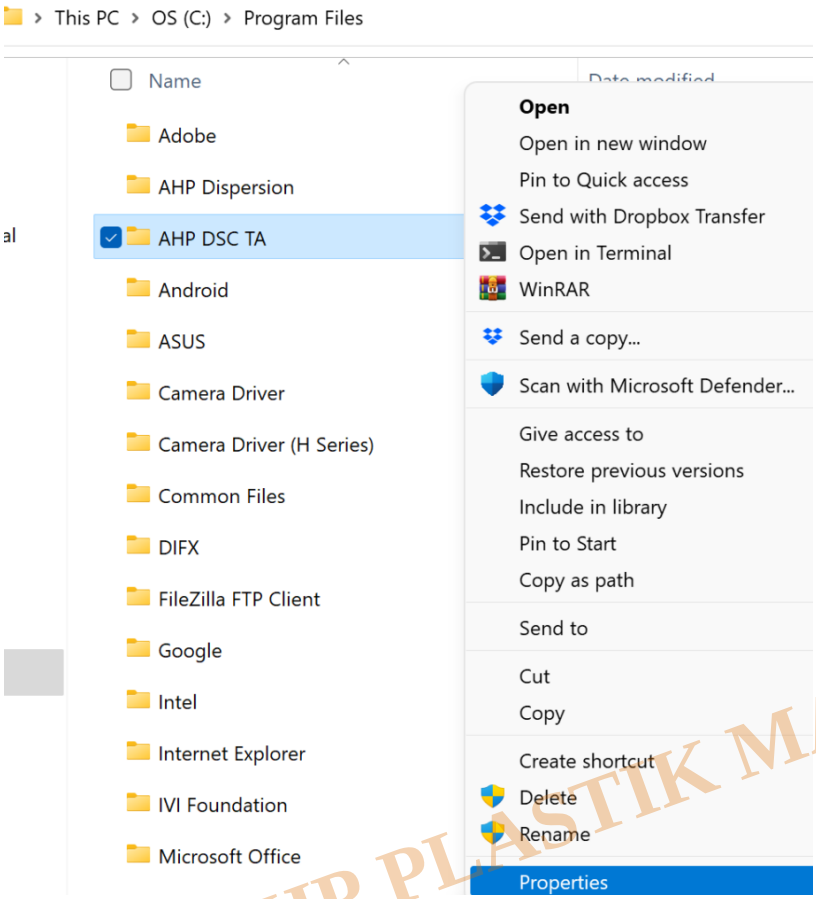
Drag end cursor as below graph:

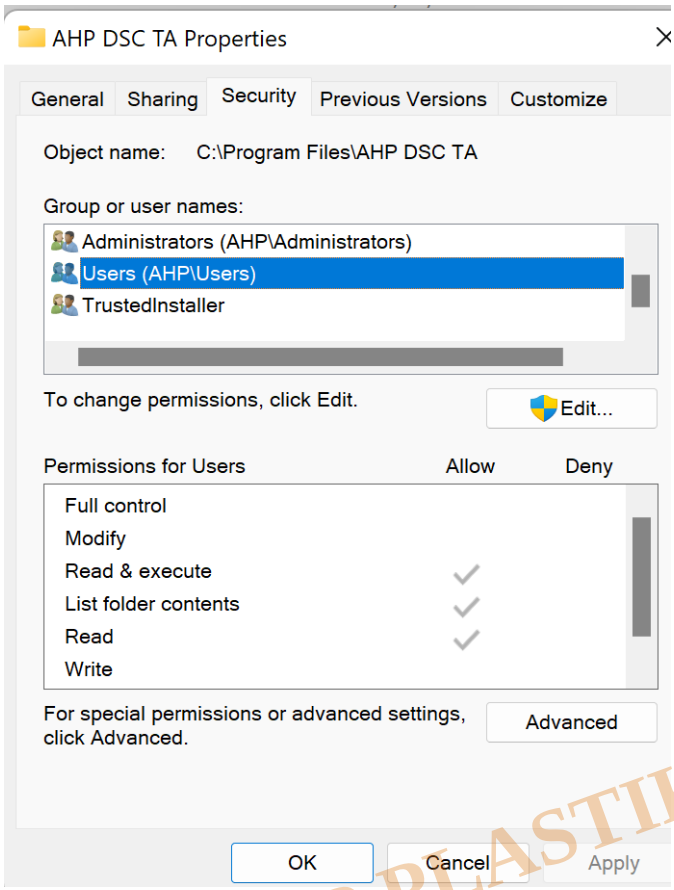


After OIT is calculated you can click on “Report” key to have report in MS WORD. you need to have MS WORD installed in the PC.

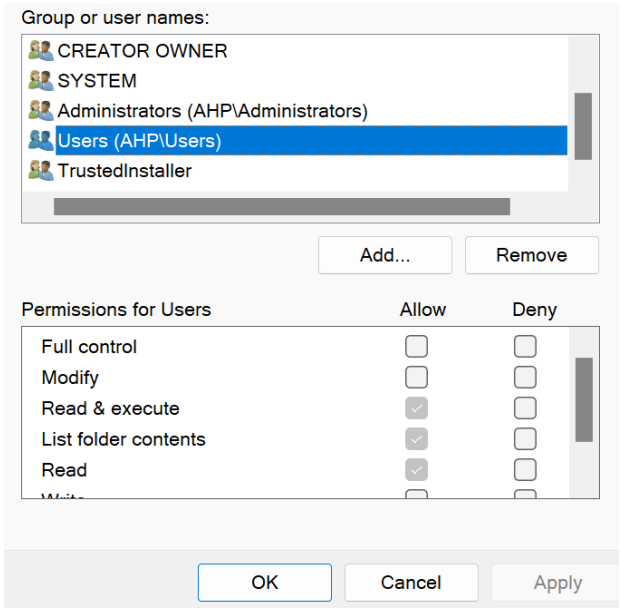
Above steps are easy steps to have OIT measurement. When you have clicked on “Report OIT” and table data is not filled in the report you need to open the security to the software folder as below guide:

Go to “C:\program files” find the folder of “AHP DSC TA” right click on it:





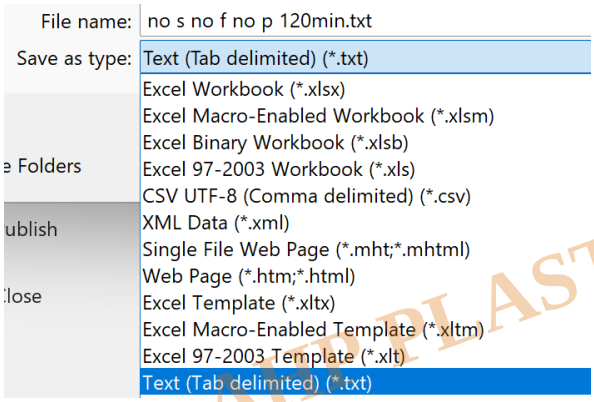
Click on “Users (….)” on “Group or user names” then click on “Edit”:



Again click on “Users (…..)” and then in the “Permissions for users” in front of “Full control” click on “Allow”. In this way when you click on “Report OIT” in the software the table data on the template in report file will be filled automatically. This is only very easy way to measure OIT of materials. Other functions of the software is in other posts in “Info Center” of the website.

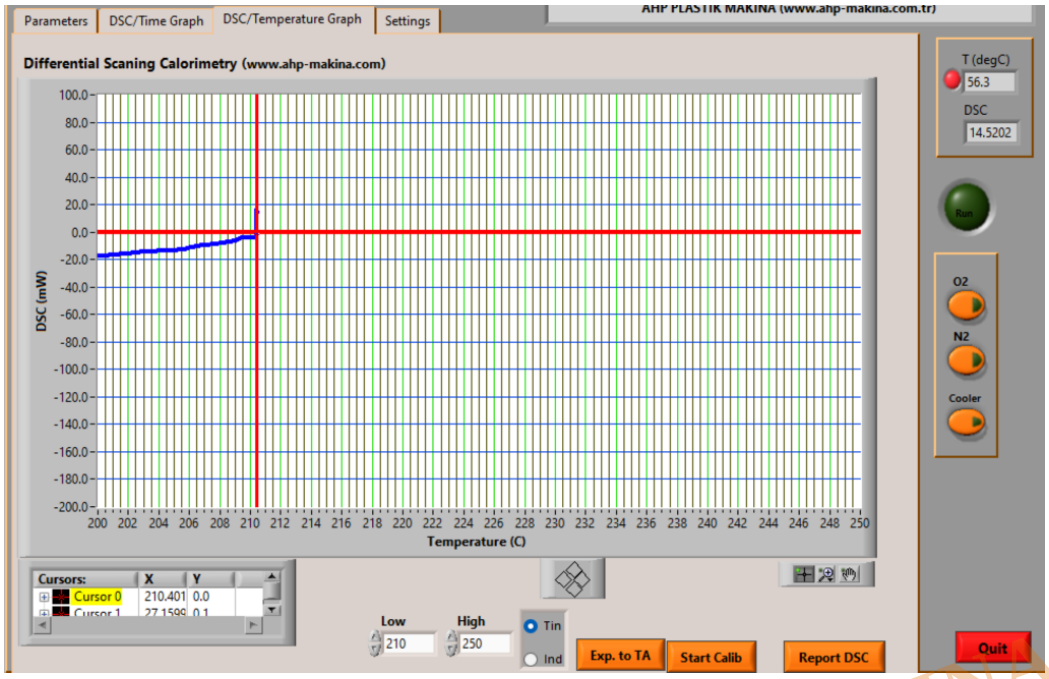
Export of data to be analyzed in advantage software

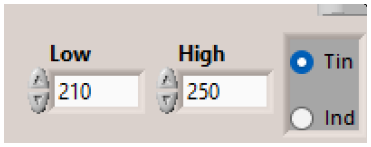
When you are doing material analysis or doing melting point analysis and need to analyze DSC-Temp graph data you need to export data to “Advantage” software. For this purpose after finishing data logging in the software stop it and click on “Export to TA”. Then wait for all data to be opened in MS EXCEL and save theses data as “Text(tab delimited)”. now you can open this data in “Advantage” software for analysis of Tg, Melting point, peak, integral analysis, ….



Checking of Tin and Ind Melting Point for Calibration checkout

Prepare sample of Tin or Ind based on working temperature needed. Melting point of Ind is 156.6C and Tin is 231.9C. After sample prepared put sample to left sensor and empty pan to right sensor and close the lid. Select Tin or Ind in the DSC-Temp page:





Then based on this selection, the range for 1C/min rate of software as per standard will be chosen automatically. now yo can click on “Start Calib”. between Low and High the temperature increase rate will be automatically set to 1C/min as per standard.

when you are testing Tin , set the temperature to 240 and when doing test on Ind set the temperature to 210C. After set temperature reached you can click “stop” and the click “Export to TA”.

wait for data to be opened in MS EXCEL and then save as “Text (tab delimited)”.

Note: Before turn off the machine don’t forget to click “Quit”. unless last settings of the valves and CPU will be remained.

Category

1. Software Guide