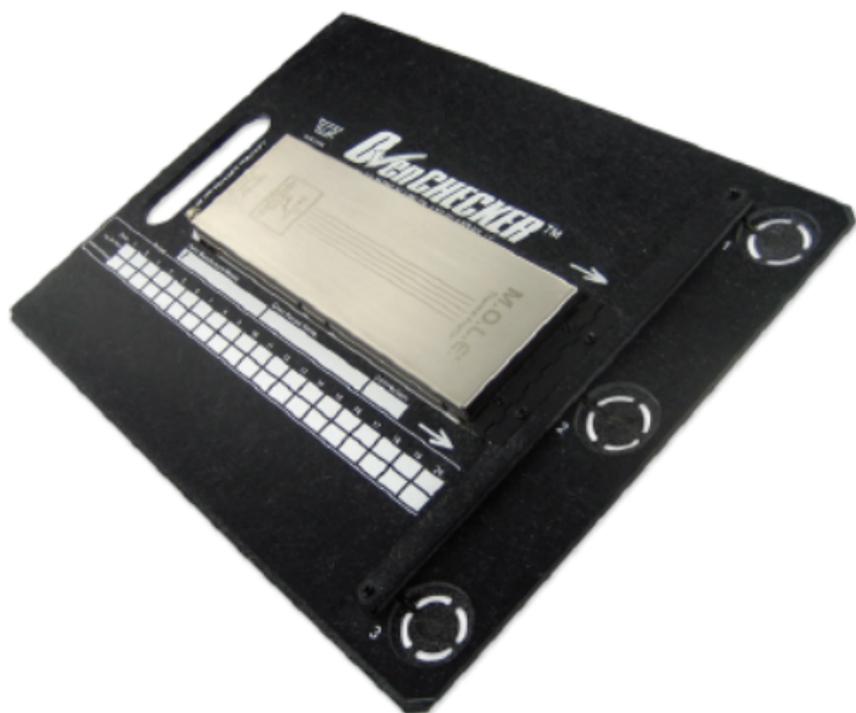


OvenCHECKER™

QUICK
REFERENCE
GUIDE



ECD®
SINCE 1964

INTRODUCTION

This Quick Reference Guide helps the user through a wizard to create a Target 10 Specification using an OvenCHECKER™ data run. This can then be used to verify that machine performance is the same in the future.



The OvenCHECKER™ can only be used with the V-M.O.L.E.® Profiler.

There are two primary modes of operation for the MAP software on the V-M.O.L.E.® Profiler:

- To “Engineer”
- To “Verify”

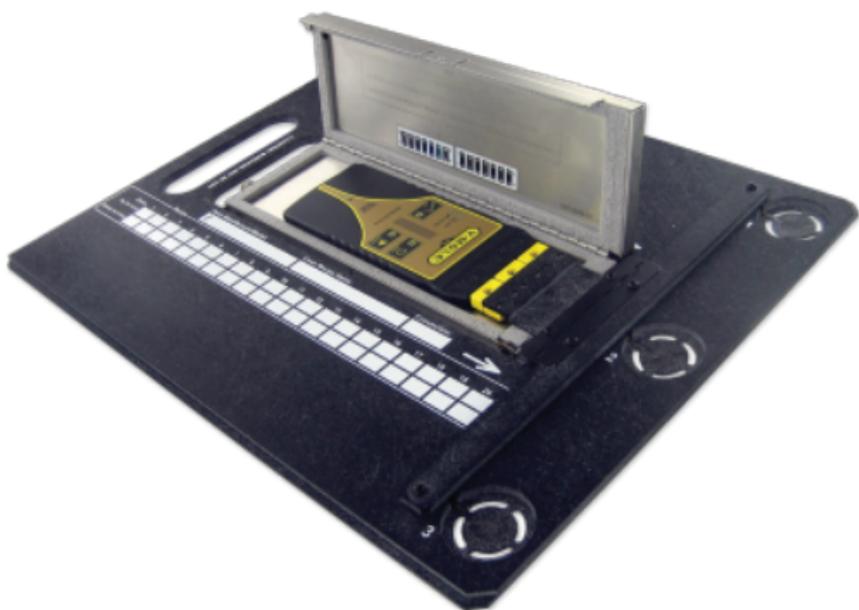
Using the Engineer mode in the MAP software, you can create a Target 10 specification file from a OvenCHECKER™ thermal profile. Once this file has been created, it can be used to verify a process along with the V-M.O.L.E.® Profiler OK button.



OPERATION - CREATE

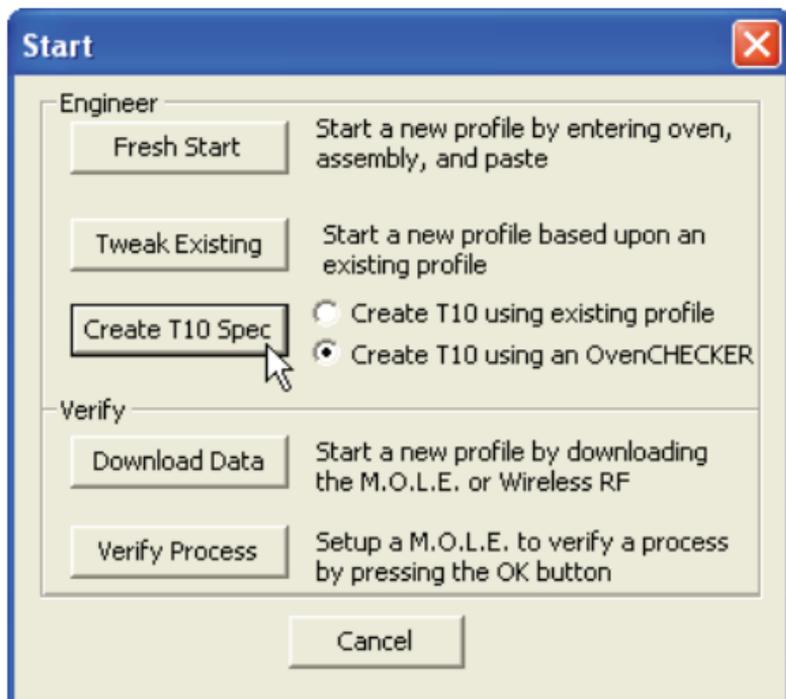
Create Target 10 File

- 1) Connect the V-M.O.L.E.® Profiler to the OvenCHECKER™ Thermocouple bridge.
- 2) Connect the V-M.O.L.E.® Profiler to the computer with the USB cable provided.



OPERATION - CREATE

3) On the **File** menu, click **New**. The Start dialog box appears with the five workflow wizard options.



4) On the **Start** dialog box, select the **Create T10 using an OvenCHECKER** option.

5) Then click the **Create T-10 Spec** command button and the workflow wizard appears.

OPERATION - CREATE



When navigating through the wizard, the step list on the left of the dialog box uses a color key to inform the user of the progression through the wizard.



Current

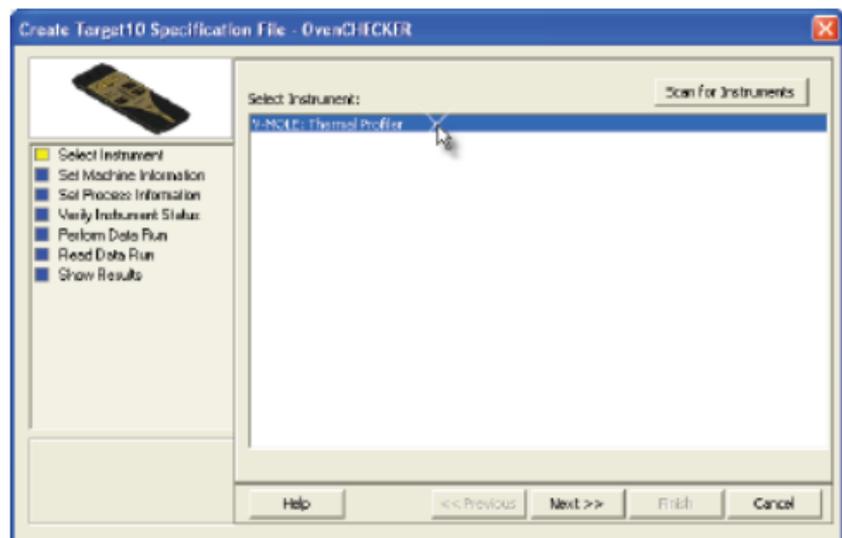


Completed



Remaining

6) Select the desired V-M.O.L.E.[®] Profiler from the list box. If a V-M.O.L.E.[®] Profiler has already been selected during a different process, the software automatically selects the V-M.O.L.E.[®] Profiler connected to the COM port previously used.



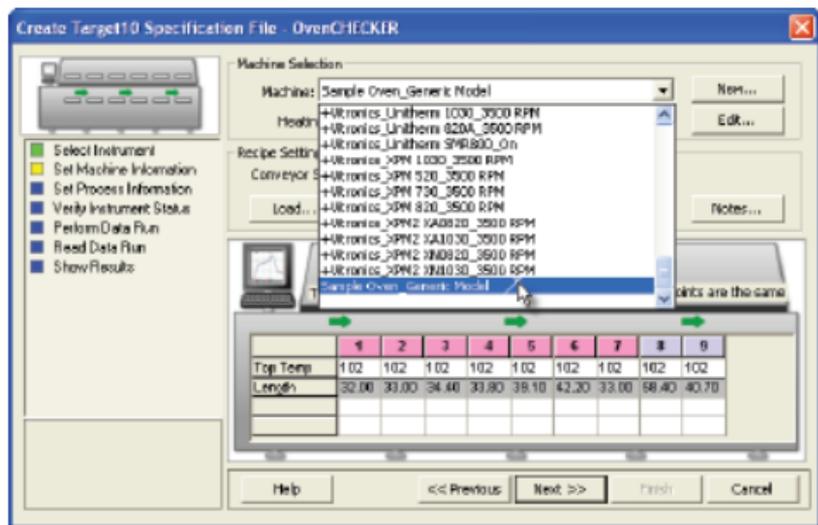
7) Click the **Next** command button.



OPERATION - CREATE

8) Select a machine from the drop-down list. If the desired machine does not appear in the list, click the **New** command button to create a new machine.

9) Set the machine recipe settings such as Conveyor Speed, Zone Temperatures and Temperature units.

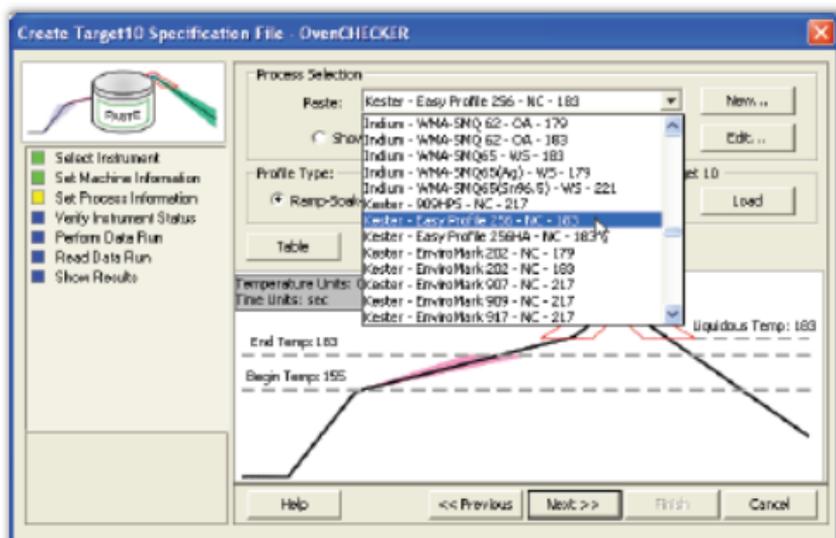


The software includes features to save and load machine recipe setting files (*.OVS) These files are helpful so the user can quickly recall machine information and ensure it is always the same.

10) Click the **Next** command button.

OPERATION - CREATE

11) Select your process specification by selecting a Paste from the database or previously created Target 10 Specification. If your Paste does not appear in the database list click the New command button to create a new one.

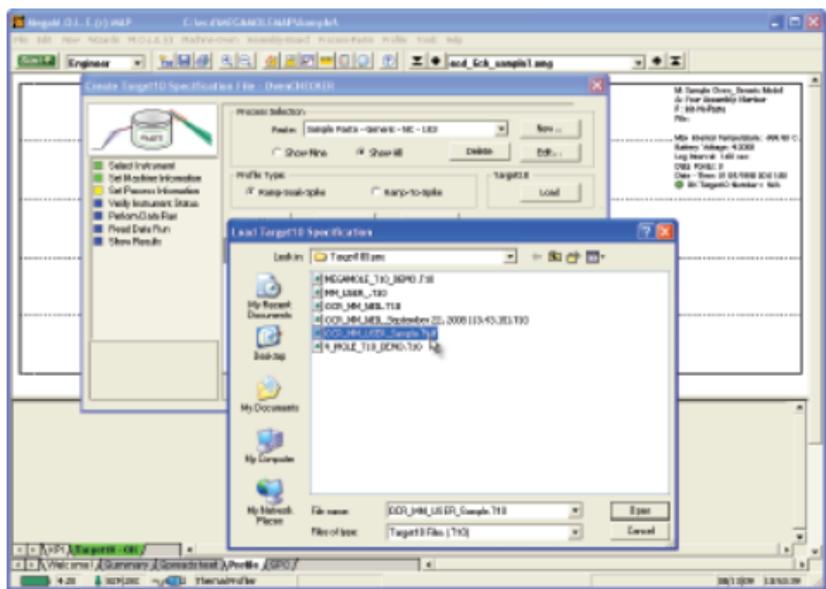


The OvenCHECKER™ uses the begin temp, end temp and liquidous temp to measure the initial slope, soak, TAL (time above liquidous), peak parameters from the selected Paste or Target 10 Specification. Then based on the range of the parameters taken from the 3 OvenCHECKER™ sensors, automatically calculates the USL (Upper Specification Limits) and LSL (Lower Specification Limits).

OPERATION - CREATE



When the user selects a paste from the database, they can use the radio buttons below the drop down box to filter the user created pastes from the master paste specifications.



If the user decides to use a previously created Target 10 Specification, selecting the **Load** command button displays a list of Target 10 Specification Files (*.T10).

12) After selecting a process specification, click the **Next** command button.

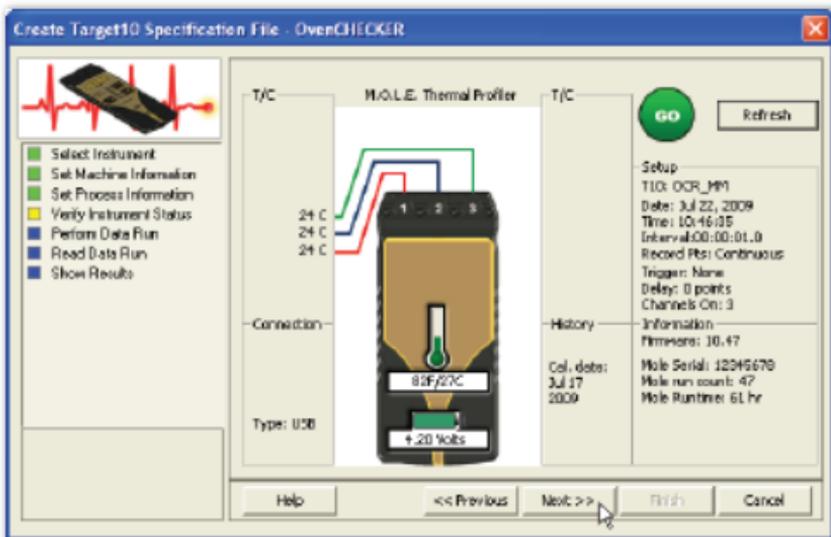


OPERATION - CREATE

13) Verify the instrument status. This dialog box displays the health of the V-M.O.L.E.® Profiler such as battery charge, internal temperature, Oven-CHECKER™ sensor temperatures and connectivity.



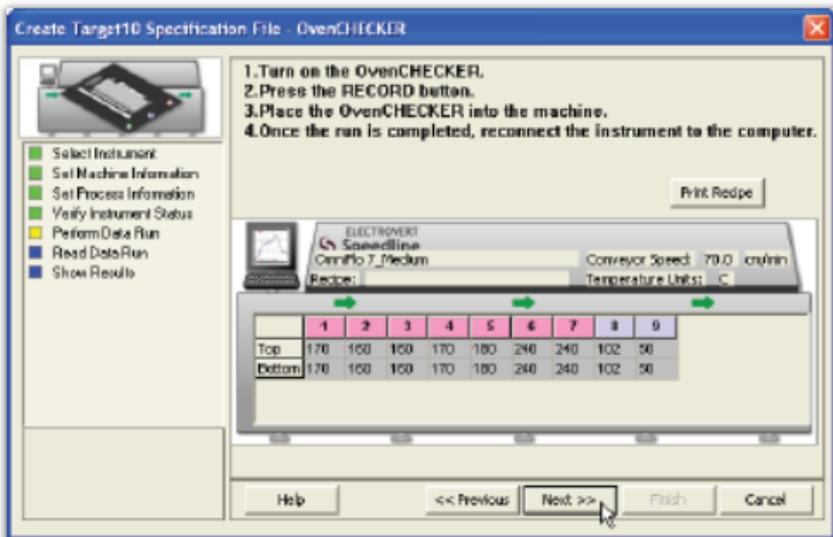
If everything is **OK**, the dialog box displays a **GREEN** sign. If there are any items that may prevent the user from collecting good data, they are highlighted and a **RED** sign is displayed.



14) Click the **Next** command button.

OPERATION - CREATE

15) Review the machine settings and click the **Next** command button to continue.



1. Turn on the OvenCHECKER.
2. Press the RECORD button.
3. Place the OvenCHECKER into the machine.
4. Once the run is completed, reconnect the instrument to the computer.

Print Recipe

ELECTROVERT
Speedline
CenFlo 7_Medium
Recipe: Conveyor Speed: 70.0 in/min
Temperature Unit: C

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|----|
| Top | 176 | 160 | 150 | 170 | 180 | 240 | 240 | 102 | 50 |
| Bottom | 176 | 160 | 150 | 170 | 180 | 240 | 240 | 102 | 50 |

Help << Previous Next >> Finish Cancel

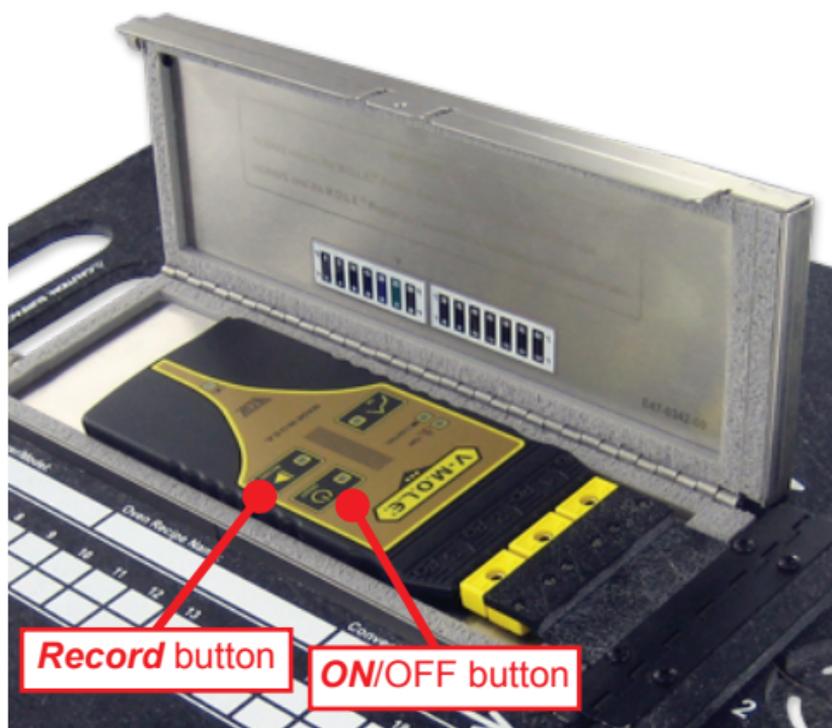


Never permit the V-M.O.L.E.® Profiler to exceed the absolute maximum warranted internal temperature, as permanent damage may result. The warranty will not cover damage caused by exceeding the maximum specified internal temperature.

OPERATION - CREATE

16) After the oven stabilizes:

- Press the **ON/OFF** button.
- Press the **Record** button.
- Close the thermal barrier.



17) Pass OvenCHECKER™ through the machine.

OPERATION - CREATE



It is highly recommended that protective gloves are used when retrieving the thermal barrier from the oven and when opening the thermal barrier.

18) As the V-M.O.L.E.® Profiler and OvenCHECKER™ emerge from the machine, carry it to a table or flat surface.



If the V-M.O.L.E.® Profiler is removed from the OvenCHECKER™ before has stopped recording data, the data for the sensors will show as OPEN.

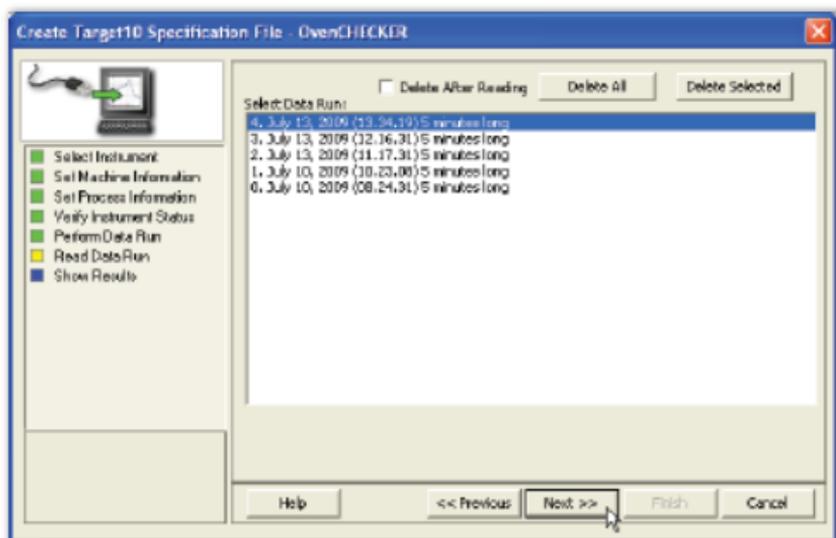
19) Open the thermal barrier and if the **Record LED** is still flashing this means the V-M.O.L.E.® Profiler is still recording and it must be stopped by pressing the **Record** button.

20) Remove the V-M.O.L.E.® Profiler from the thermal barrier. Handle it carefully, as the case may still be warm. Since you are creating a new Target 10 Specification, the OK button on the V-M.O.L.E.® does not need to be pressed at this time as contains an old Target 10 Specification.

OPERATION - CREATE

21) Connect the V-M.O.L.E.® Profiler to the computer and click the **Next** command button.

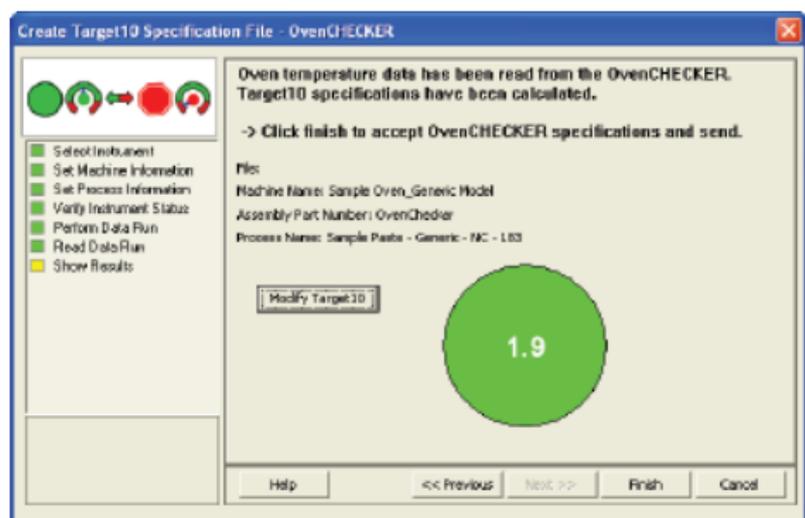
22) Select the desired data run and then click the **Next** command button to read the data run from the V-M.O.L.E.® Profiler.



On this step of the wizard, the user has the ability to remove a selected data run from the V-M.O.L.E.® Profiler by either selecting the **Delete After Reading** check box or selecting the **Delete** command button and removing it before downloading.

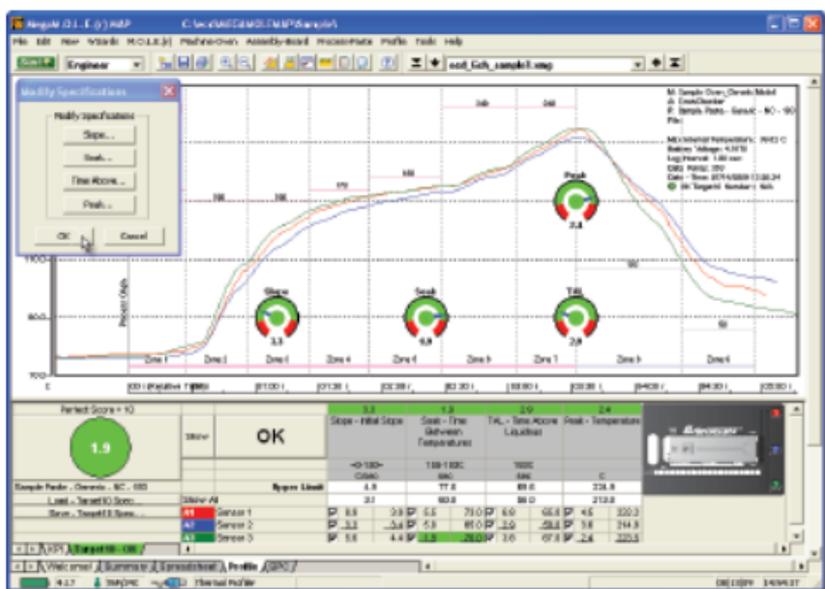
OPERATION - CREATE

23) Once the OvenCHECKER™ data run is downloaded, review the calculated results of the Target 10 specification. The user can then decide if they wish to accept these or make final modifications to the Slope, Soak, Time Above and/or Peak parameter..

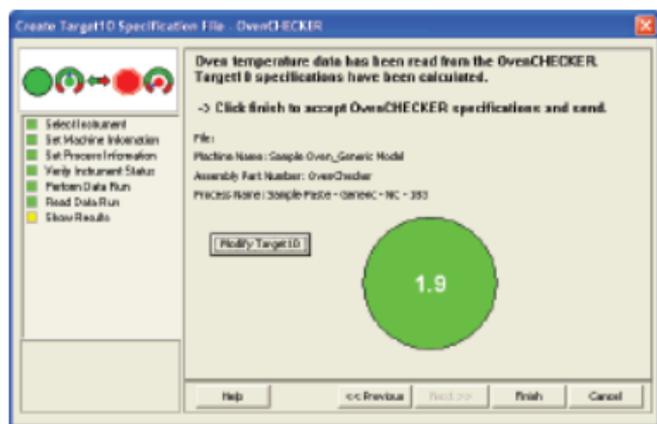


If the user decides to make modifications, click the **Modify Target10** command button and the the Target 10-OK tab is displayed. Make the desired modifications to the Slope, Soak, Time Above and/or Peak parameter specifications. If any of the parameter specifications are changed the **OK** button will inform the user by displaying (**OK Modified**).

OPERATION - CREATE

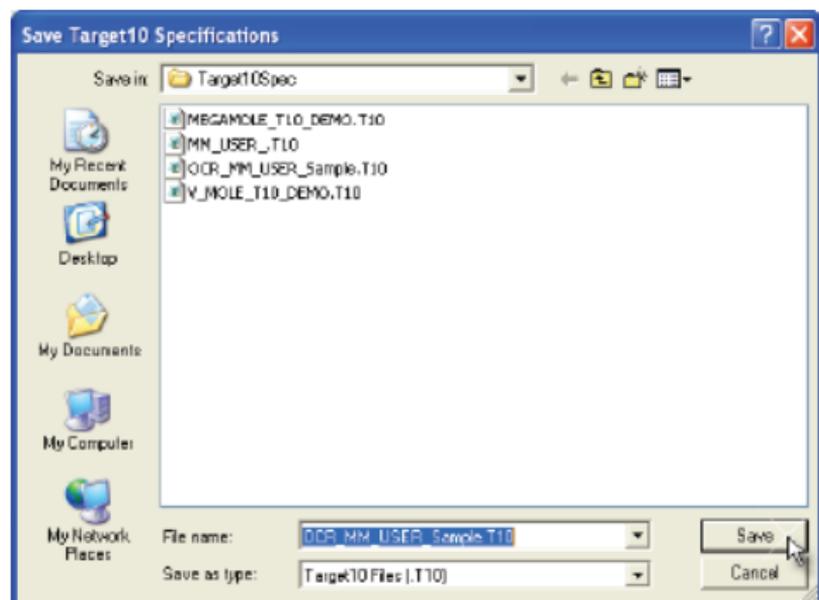


24) Click the **OK** command button on the **Modify Specifications** pallet to accept the specifications or **Cancel** to discard them and return to the workflow wizard.



25) Click the **Finish** command button and the software prompts the user to save the Target 10 Specification file (*.T10).

OPERATION - CREATE



26) When finished naming the file, click the **Save** command button to complete the workflow wizard. This step saves both the Target 10 Specification file (*.T10) and the downloaded data run M.O.L.E.® MAP and is displayed on the Target10-OK tab.



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