

CakeOMETER™

Quick Reference Guide | A61-2266-16 REV: 1.0.0



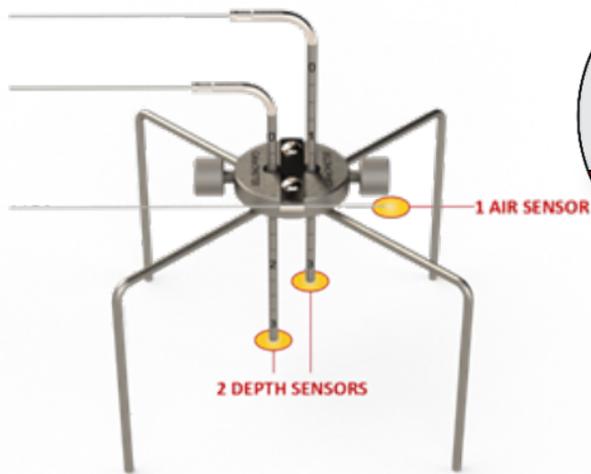
CakeOMETER™

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EQUIPMENT

This section offers brief descriptions for the CakeOMETER™ probe components.



ECD's new CakeOMETER™ tool resolves the dilemma of accurate temperature sensor placement and stability within cake batter, allowing cake bakeries of all sizes to generate reliable in-oven temperature data for high-quality, repeatable cake production.

FEATURES

One size fits all pans:

- The innovative CakeOMETER design allows bakery adaptability to accommodate all pans – whether circular or rectangular – for operational flexibility no matter the cake product.
 - Compatible with round and rectangular pans measuring from 6” and up.
 - Balanced four-pronged leg design provides stability throughout the cake baking process.

Light weight, fast-cooling:

- CakeOMETER’s light construction is easy to handle and store.
- Fast cooling allows near-immediate redeployment to other product ovens.
- Base Legs and Insertion Probes are made of Stainless Steel, easier to clean immediately after obtaining data.

OPERATORS SAFETY INFORMATION

The safety information in this section is for the benefit of operating personnel. Warnings and Cautions will also be found throughout the manual where they apply.

Hardware changes or modifications to the components are not expressly approved by ECD and could void the warranty of the product.



The warranty will not cover damage caused by neglect or abuse of this product. To maintain the safety features incorporated in this product, operation must be in strict compliance with the requirements specified herein.

For protection of the components, observe the following:



- **NEVER** permit the CakeOMETER™ probe to exceed the specified operating temperature range 482°C (900°F) as permanent damage may result.
- **NEVER** subject the CakeOMETER™ probe to sharp impacts.
- **NEVER** excessively stress the wiring harness.
- **NEVER** expose the CakeOMETER™ probe and components to corrosive environments.

SETUP

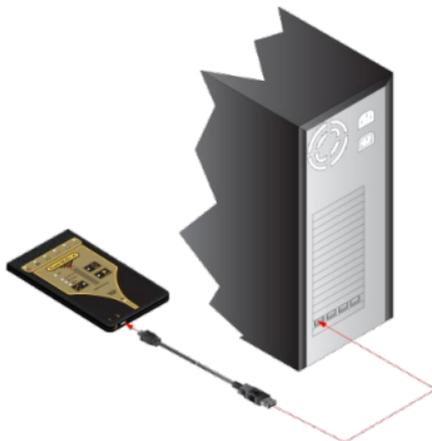
CHARGING THE POWER PACK

Because the M.O.L.E. Profiler is powered by a rechargeable Power Pack, it is important that it is charged and operating properly prior to performing every experiment.

To charge the internal Power Pack:

- 1) Insert the USB computer interface cable into a computer USB Port and the other end into the Data/Charging Port.

i A completely discharged Power Pack takes about 8 hours to be fully charged. For quick charges, it can be charged for 15 minutes allowing one 10 minute data run to be performed.



COMMUNICATIONS SETUP

Prior to operation the M.O.L.E. Profiler must be configured to properly communicate with the M.O.L.E.® MAP Software.



The M.O.L.E.® MAP software must be installed prior to communications setup. (Refer to [Installation Registration](#) for more information).

To connect the M.O.L.E. Profiler:

- 1) Insert the USB computer interface cable into a computer USB Port and the other end into the Data/Charging Port.



- 2) During installation of the device driver, when prompted to select the location of the device driver, select ***“Install the software automatically”***. Follow the remaining wizard instructions closely.



- 3) During installation of the USB driver a message box appears, select the ***Continue Anyway*** command button and the driver will be successfully installed.

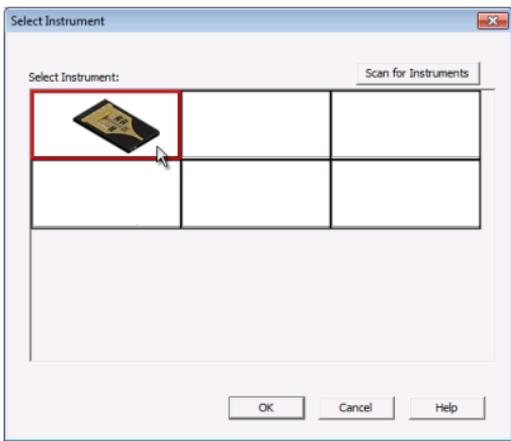


4) After M.O.L.E. Profiler is connected to a computer, the software must be configured so they can communicate. Start the software program by either double-clicking the M.O.L.E.® MAP software icon or selecting it from the ECD program sub-menu.



5) On the **M.O.L.E.** menu, click the **Select Instrument** command.

6) Select the desired instrument from the dialog box. If there are none displayed, click the **Scan for Instruments** command to detect all available instruments.



If the software does not detect a M.O.L.E. Profiler, using the communication cable connect it to the computer and click the ***Scan for Instruments*** command button to search again. M.O.L.E.® MAP software allows multiple instruments to be connected to a computer at one time. Selecting the ***Scan for Instruments*** command button will detect all instruments and display them in the dialog box. If no instrument is detected the software displays all the Demonstration thermal profilers to select from.

- 7) Click the ***OK*** command button to accept or ***Cancel*** to quit the command.

QUICK START GUIDE

The following section will guide the user through a typical operation process. Portions of this section may require the referencing M.O.L.E. Profiler hardware and software sections for additional information.

STEP 1: M.O.L.E. SOFTWARE SETUP

This Wizard guides the user through a typical process on how to set a M.O.L.E. Profiler up for performing a data run with the CakeOMETER™ probe.



This is available when in MAP is in Engineer Mode.

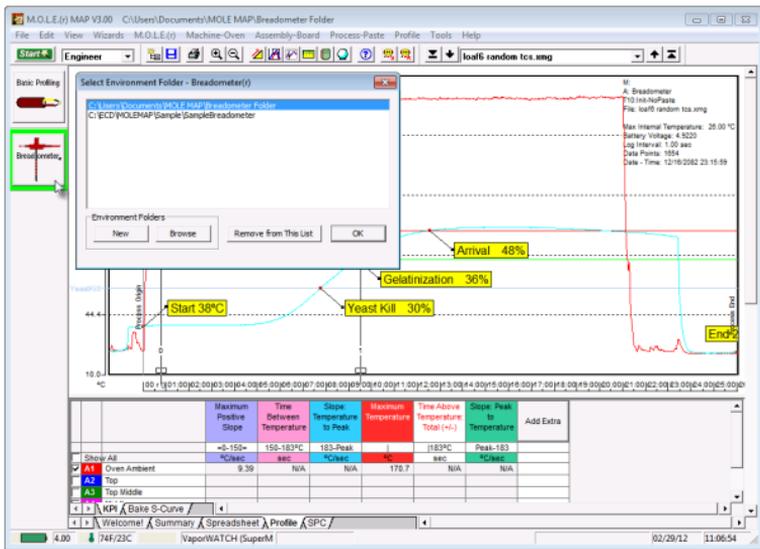
To set an instrument up:

- 1) Connect the M.O.L.E. Profiler to the computer. Refer to the ***Communications Setup*** topic for your specific M.O.L.E. Profiler for more information.
- 2) Connect the CakeOMETER™ probe to the M.O.L.E. Profiler.

- 3) Set an Breadometer® Environment which is closely related for the type of experiment that is being performed. Either open an existing Environment Folder or create a new one.



If the desired Environment is not displayed on the *Environment Sidebar*, the user can enable it from the *Preferences* dialog.



- 4) On the **M.O.L.E.** menu, click **Setup Instrument** and the workflow wizard appears.



When navigating through the wizard, the step list on the left uses a color key to inform the user of the current step, steps that have been completed and remaining steps.



Current



Completed



Remaining

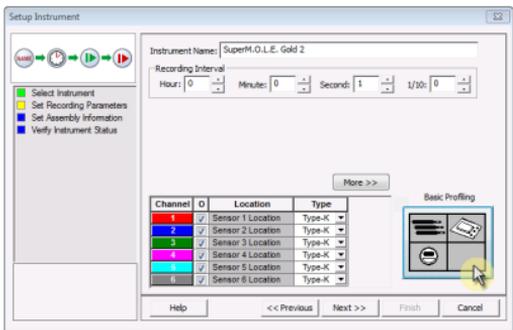
- 5) Select the desired instrument from the dialog box. If there is none displayed, select the **Scan for Instruments** command button to detect all connected instruments.

If the software does not detect a M.O.L.E. Profiler, using the communication cable connect it to the computer and click the **Scan for Instruments** command button to search again. M.O.L.E.® MAP software allows multiple instruments to be connected to a computer at one time. Selecting the **Scan for Instruments** command button will detect all instruments and display them in the dialog box. If no instrument is detected the software displays all the Demonstration thermal profilers to select from.

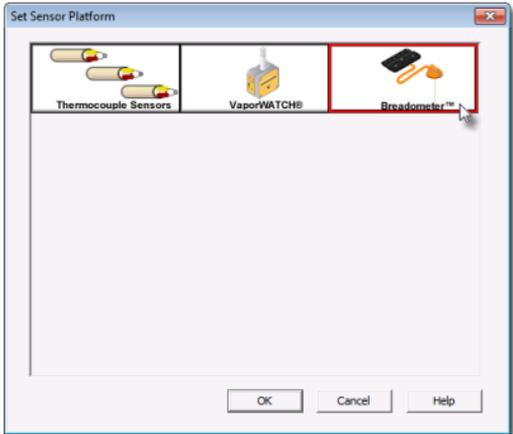
- 6) Select the **Next** command button.



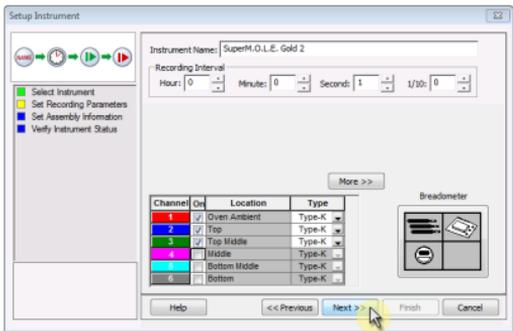
- 7) Set **Instrument Name** and then **Sensor Platform** button.



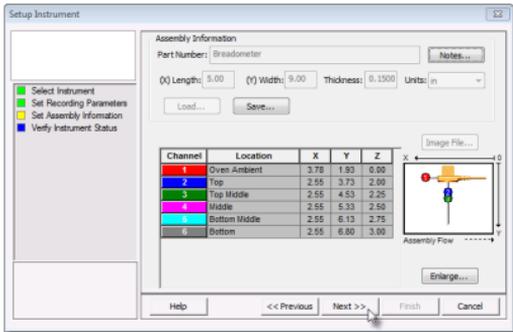
- 8) Select the Breadmeter® probe then the **OK** command button to proceed.



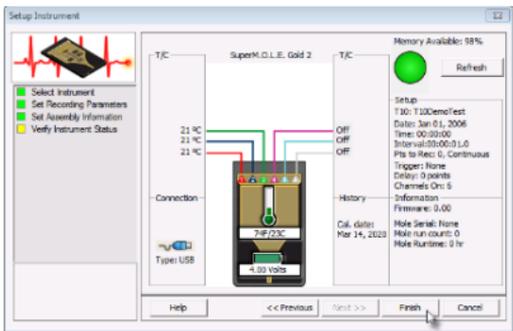
- 9) Deactivate channels 4-6 and then select the **Next** command button.



- 10) Select the **Next** command button to send the settings to the instrument.



- 11) Verify the instrument status. This dialog box displays the health of the M.O.L.E. Profiler such as battery charge, internal temperature, thermocouple temperatures. If the user selects the **Show Critical** command



button the dialog box will only display items that will prevent the user from completing a successful data run.

- 12) Select the **Finish** command button to complete the Setup Instrument wizard.

STEP 2: CAKEOMETER™ SET UP INSTRUCTIONS



1) Sensor Placement:

- Loosen the two thumb screws and insert Channel 2 and 3 depth gage sensors into the CakeOMETER™ base unit.
- Place 4-legged Probe base such that channel 2 (Depth Gage) is in the center of the pan.
- Lower Channel 2 depth gage probe so it touches pan bottom, lift it slightly above the pan, then tighten the thumbscrew.

2) With batter in the pan, adjust Channel 3 Depth Gage to a higher position which you know will become submerged during the bake cycle. Tighten that thumbscrew.

3) Track and verify oven ambient temperature consistency with the Channel 1 Thermocouple.

- Insert Channel 1 Thermocouple sensor (Ambient) through the holding clip and extend the tip past the side of the pan.



CakeOMETER™ pan and depth positions need not be altered for back-to-back thermal profiling in the same batter and pan.

Never permit the M.O.L.E. Profiler and CakeOMETER™ probe 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.

4) Connect the 3 CakeOMETER™ probe channels to the 3 or 6 channel M.O.L.E. Profiler.

5) Insert the CakeOMETER™ probe into the test batter.

6) Press the M.O.L.E. Profiler “ON” button.

7) Place the M.O.L.E. Profiler in the appropriate Thermal Barrier and press the “Record” button.



- 8) Close the Thermal Barrier making sure the sensor wire does not get pinched.
- 9) Pass the thermally protected M.O.L.E. Profiler, CakeOMETER™ and test product through the process.



When retrieving the M.O.L.E. Profiler and sensor use caution as it may be warm.

- 10) As the M.O.L.E. and CakeOMETER™ emerge from the process, remove the CakeOMETER™ from the test product and lay the Thermal Barrier on a table or flat surface.



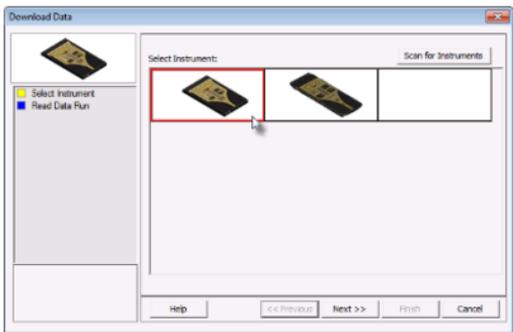
- 11) Open the Thermal barrier and if the Record button is still flashing this means the M.O.L.E. Profiler is still logging and it should be stopped.
- 12) Remove the M.O.L.E. Profiler from the Thermal Barrier and wait a few minutes for the M.O.L.E. Profiler to cool. Handle it carefully, as the case may still be warm.
- 13) Disconnect M.O.L.E. Profiler from the CakeOMETER™ and place it near the PC that has the software installed on it.



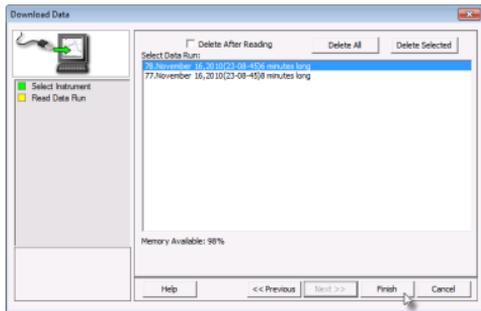
If you remove CakeOMETER™ probe before the M.O.L.E. Profiler has stopped collecting data, it may cause the data to become distorted.

STEP 3: DOWNLOAD DATA

- 1) Connect the M.O.L.E. Profiler to the computer. Refer to the **Communications Setup** topic for your specific M.O.L.E. Profiler for more information.
- 2) On the **M.O.L.E.** menu, click the **Download Data** command button and the workflow wizard appears.
- 3) Select the instrument from the dialog box that was used with the CakeOMETER™ probe. If a M.O.L.E. Profiler has already been selected during a different process, the software automatically selects the M.O.L.E. Profiler connected to the COM Port previously used.
- 4) Click the **Next** command button.



- 5) Select the desired data run and then click the **Finish** command button to complete the wizard and read the data run from the M.O.L.E. Profiler.



This step of the wizard allows the user to remove a selected data run from the 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.



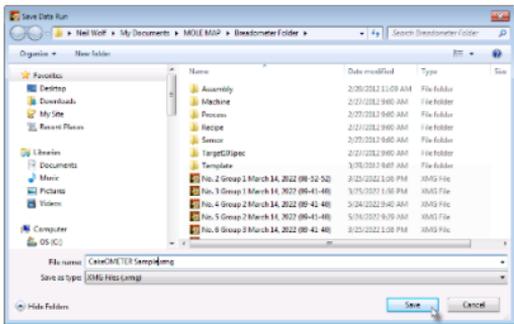
The software allows the ability to download multiple data runs at one time. For consecutive data runs, click the first data run in the list, press and hold down the SHIFT key, and then click the last data run in the list. For data runs that are not consecutive, press and hold down the CTRL key, and then click each data run that you want to import.

- 6) When the data run has been downloaded, the software prompts the user to specify new file name (*.XMG).

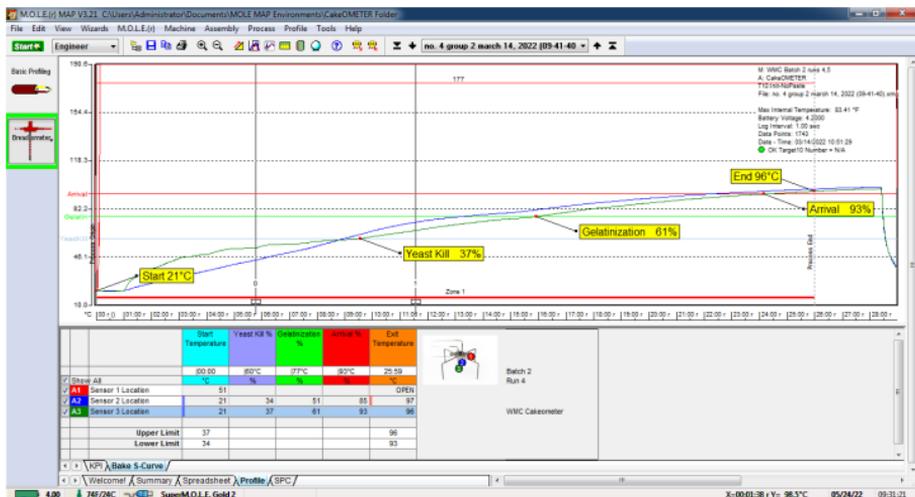


If a data run (*.XMG) is saved in a different Environment Folder other than the currently selected, the software automatically activates the new Environment Folder. This process does not delete any data run files in the previously set Environment Folder and can be quickly accessed using the [Recent Environment Folders](#) on the **File** menu.

- 7) When finished, click the **Save** command button to complete the process.



The information is automatically saved in the data run file (.XMG) and the experiment data can now be analyzed with the software tools.





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