BIOS™ Professional

Fryer Oil Tester DT136

Thank you for purchasing the BIOS Professional™ Fryer Oil Tester. Please read this manual carefully in its entirety before you use the device for the first time.

Technical Specifications

Function	Parameters
Temperature Measurement Range	30°C to 200°C (89°F to 392°F)
TPM	0.5 to 40%
Temperature Accuracy	±1.5°C
TPM Accuracy	±3% (30.0°C to 190.0°C)
Measurement Materials	Olive oil, palm oil, rapeseed oil, canola oil, peanut oil, soybean oil, sesame oil, vegetable oils and animal fats
Power Supply	2 x AAA batteries (included)
Battery Life	~25 hours continuous use (~500 measurements)
Temperature Sensor	PTC Sensor
TPM Sensor	Capacitive sensor
Operating Temperature	0°C to 50°C (32°F to 122°F)
Storage Temperature	-20°C to 70°C (-4°F to 158°F)
Display	LCD, 2 line display
Weight	185 g
Case Material	ABS
Protective Class	IP 65

Interpretation of the Measured Values

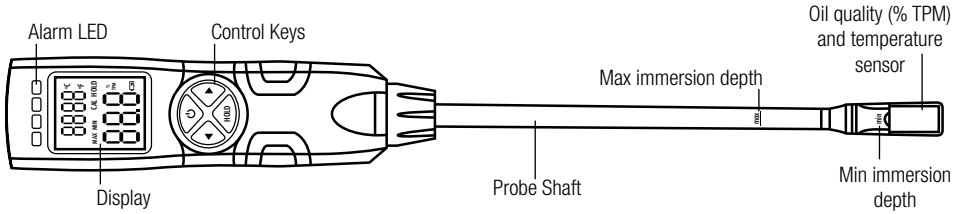
The DT136 displays oil quality as a percentage of Total Polar Materials (% TPM). The LED indicator colour reflects the current oil condition:

Oil Status	TPM %	LED Colour
Oil is new and good to use.	0 - 18.5%	**Green**
Oil quality is critical. Partial or full replacement recommended.	19 - 24%	**Blue**
Oil must be replaced immediately. Threshold exceeded.	>24 %	**Red**

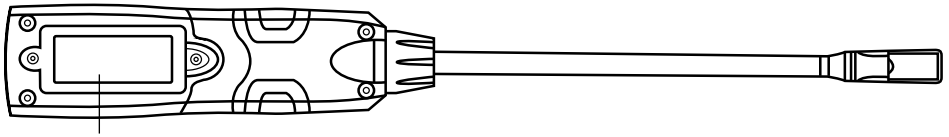
Note: LED light indicators will adjust if alarm values are changed. See Set the High and Low Alarm section for details.

Device Description

Front



Back



Start Measuring

1. Press and release the **Power** button to switch on the device.
2. The temperature display will show “Lo”.
3. The LCD display will show “0.0% TPM” if the oil temperature is below 30°C.
4. Insert the sensor into the hot oil so that the oil level is between the minimum and maximum lines on the metal shaft.

Note: Stir the probe slowly in the oil to help prevent uneven temperature readings.

5. The device will automatically hold the reading once the TPM value is stable. Press the **HOLD** button to restart the measurement.
6. Press the **HOLD** button again to deactivate the hold function.
7. If the temperature display flashes and shows “HI”, the oil/fat is too hot and exceeds the upper measurement limit of 200°C (392°F).
8. If the temperature display flashes and shows “Lo”, the oil/fat is too cold and is below the lower measurement limit of 30°C (86°F).
9. If the TPM display flashes and shows “Lo”, the oil/fat is not suitable for testing with the **DT136**.

Auto Hold Function

The Auto Hold function automatically locks the reading when a stable TPM value is detected:

1. The oil temperature must be within the measurement range (30°C to 200°C).
2. When the probe is inserted into hot oil, the blue LED will flash.
3. The probe temperature and TPM stability time is approximately 20 seconds.
4. After 20 seconds, if the TPM fluctuation is less than 0.2 across four consecutive readings (~4 seconds), the measurement is considered stable and the hold is triggered automatically.

Tips for Best Accuracy

- Clean the probe before each measurement. Wash the probe with a mild soap and dry it with a soft towel. **Do not** use harsh chemicals or abrasives as this could scratch the sensor and affect the reading.
- **Do not** measure while food is in the oil. After removing fried items, wait at least 5 minutes before taking a reading.
- If using an induction cooker, switch it off before measuring, as the electromagnetic field can affect results.
- Briefly stir the oil with the probe to help ensure an even temperature.
- Keep at least 1 cm (0.5”) of distance from metal objects such as cooking pots or frying baskets to avoid interference.
- Replace the oil when the TPM value reaches 24%. It is recommended to replace the oil before reaching this threshold.

Settings/Configuration Mode

To enter configuration mode, press the **HOLD** button and the left arrow [<] button simultaneously for 3 seconds. Navigate through submenus using the arrow buttons, and confirm each setting by pressing **HOLD**. The next submenu will open automatically. Press the Power button to exit configuration mode.

Set temperature unit

1. Enter configuration mode (hold **HOLD** + [<] for 3 seconds). °C or °F will appear on the display.
2. Use the [<] [>] buttons to select the desired unit.
3. Press **HOLD** to confirm.

Audible alarm (ALA)
1. In configuration mode, navigate to ALA.
2. Use the [<] [>] buttons to switch the audible alarm on or off.
3. Press **HOLD** to confirm.

Auto Power Off (OFF)
1. Navigate to the **OFF** submenu.
2. Use the [<] [>] buttons to enable or disable Auto Power Off.
3. Press **HOLD** to confirm.

Alarm LED
In configuration mode, navigate to the LED option, use [<] [>] to turn it on or off, and press **HOLD** to confirm.

Calibration Mode (CAL)
In configuration mode, navigate to CAL, use [<] [>] to switch it on or off, and press **HOLD** to confirm.

Background Lighting (BL)
In configuration mode, navigate to BL, use [<] [>] to turn it on or off, and press **HOLD** to save and exit.

Reset to Factory Settings (RST)
In configuration mode, navigate to RST, use [<] [>] to select On, and press **HOLD** to save and exit.

Set the High and Low Alarm

Set the TPM Alarm Cap (High Alarm)
1. With the device on, hold down the left arrow [<] button for approximately 3 seconds until the LED turns red.
2. Use the [<] [>] buttons to set the desired alarm value.
3. Press **HOLD** to save and exit, or press the Power button to exit without saving.

Set the TPM Alarm Limit (Low Alarm)
With the device on, hold down the right arrow [>] button for approximately 3 seconds until the LED turns green Use [<] [>] to set the alarm value. Press **HOLD** to save and exit, or Power to exit without saving.

Calibration
1. Heat the calibration oil to 50°C (122°F).
2. Wipe the sensor clean and immerse it into the calibration oil. Make sure the oil level is between the Min and Max lines on the sensor shaft.
3. Enter configuration mode by pressing the **HOLD** button and the left arrow [<] button at the same time for 3 seconds.
4. Navigate through the submenus until you reach Calibration mode (CAL).
5. Use the left [<] and right [>] arrow buttons to switch CAL to ON.
6. Press the **HOLD** button to confirm.
7. Press the **HOLD** button until you reach the calibration screen.

On the calibration screen:
- The upper LCD display will flash between the temperature reading and a numbered value.
- The lower display will show the TPM value with CAL displayed above it.

Note: If HOLD is displayed beside CAL, repeat the steps from the beginning until you return to the calibration screen and the display shows only the TPM value with CAL above it.

- Once the reading has stabilized, use the left [<] and right [>] arrow buttons to adjust the displayed TPM value so that it matches the value printed on the calibration oil label.
- When the displayed TPM value matches the calibration oil value, press HOLD to save.

Note:To reset calibration to factory settings: open the RST menu item via configuration mode, then press the right arrow [>] and the HOLD button at the same time.

Warnings

Read all warnings before use. Failure to follow these instructions may result in personal injury or damage to the device.

- The probe can become very hot during use and may cause burns.
- **Do not** touch the hot parts of the unit.
- Allow the unit to cool completely before cleaning.
- Once cooled, wash the probe with soap and water only.
- **Do not** use an abrasive sponge, scouring pad, or any harsh cleaning material, as this may damage the probe.
- Use only a soft cloth or other non-abrasive material to clean and dry the probe tip.
- Dry the probe with a soft towel after washing.

Warranty

The Fryer Oil Tester carries a 1 year warranty against manufacturing defects in materials and workmanship under normal use by the original owner. If the product becomes inoperable due to a defect, return it with all components and proof of purchase to the address below.

Ship the unit prepaid and insured (at owner's option) to:

Thermor Ltd.
Returns Department
16975 Leslie Street
Newmarket, ON L3Y 9A1
Email: thermor@thermor-ins.com
Telephone: 1.866.517.2970

Paper
Papier

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