

frottino alpha-2, information and instructions for use



With every use, frying fat loses quality, it spoils. This rate of degradation depends on the temperature of the frying bath and on what has been fried.

The condition of cooking oil is measured based on the percentage of polar parts. frottino alpha-2, held in the oil of the deep fryer, measures this percentage. The condition of the cooking oil is displayed digitally.

The level of spoilage of fatty substances cannot be assessed without a measuring device. In Switzerland a limit value of 27% applies to the hospitality industry, in some other countries: 24%. frottino alpha-2 takes the needs of food inspectors into account.

Frying oils:

Different frying oils are consumed depending on the country. Animal and vegetable fats are also used. Up to eight types of oil are pre-programmed on frottino alpha-2. You also have the possibility to program your own oil (Oil-2). The factory calibration is based on peanut oil. The device can be reset to factory calibration at any time. The selected setting is displayed during the measurement: see corresponding

Oil additives:

The life of deep-frying oils can be extended with additives. At the same time, the oil temperature can be reduced. By using frottino alpha-2 it is now possible to manage the oil in such a way that the amount of polar parts is kept at an optimal level.

Instructions for use:

Preparation:

The frottino probe must be clean (see p. 3, cleaning). Should there be oil residues in the probe area, the measurement may deviate by a few percent.

The frying oil can have a temperature of 20 to 180 degrees. For security reasons, however, we recommend to measure up to max. 60 degrees Celsius only. Too high or low temperature of the device or the presence of water in the probe is indicated by an error code.

Pressing the button activates the device and the results of the last measurement appear: first the polar parts in %, then the measured oil temperature. This data is deleted as soon as a new measurement takes place. If the conditions for a new measurement are met, the message "Test<<<<" appears on the display. Only now the frottino alpha-2 is held in the oil to be measured. Should another text show, see chart.

Test<<<<	The conditions for measurement are met, you may go on
Bat low	Please change the battery
HOT	Warning for your safety: the sensor is hot, it should not be touched. The measurement is still possible
Sens	The probe is wet (water), no measurement is currently possible
Temp	The device is too cold or too warm, measurement is currently not possible

Measurement:

As soon as the message "Test<<<<" appears on the display, the frottino alpha-2 can be held in the oil.

- If the oil or fat has not been used for a long time - stir before measuring
- Switch off the heating of the deep fryer, no food in the deep fryer during the measurement
- The 4 ventilation holes must be completely covered
- The measuring stick must be held in the oil at an angle of approx. 45 degrees, so that any air bubbles can escape
- Hold the stick still, do not stir in the oil during the measurement
- Hold the device in the frying oil until the result is displayed
- Rinse with warm soap solution after the last day's use

Edible fat that is used for deep-frying can also be tested for polar components. The fat must be liquid and stirred before the measurement.



The most accurate results are achieved between 20° and 60° approx. If in doubt, take a sample with a cup and measure in the cup.

The result is displayed after approx. 5 seconds and saved until the next measurement. Then the oil type to which the device is calibrated is also displayed: the preprogrammed oil or oil-2 (customer-specific oil). If "Standard" is selected, no oil type is displayed after the measurement.

If the limit of 27% has been exceeded, the result is shown flashing with an exclamation mark.



The display goes out, a Countdown "----, ---, --, -" shows the progress of the measurement.

The result is displayed after approx. 3 - 10 seconds: picture 1: polar parts in %
picture 2: measured temperature

Should you have doubt about the results of the measurement: measure fresh oil – a value of 3 to 8% must get displayed. If not, please contact Syntec's customer service: info@syntec.ch.

Menu:

In the menu, the following settings and information can be accessed:

- Oiltype: up to 8 pre-programmed oil types plus a customer-specific choice (Oil-2), as well as "standard"
- Calibration: calibration for an oil that has not yet been programmed
- Language: choice of two languages
- Battery: condition of the battery
- Tests: Number of tests performed followed by the software version (e.g. V7.1)

The menu can be accessed by holding down the push button for approx. 4 seconds when switching on the device. The device confirms this with the expression "**Menu**". By letting go off the button, the confirmation "**ok**" appears and the various submenus are now displayed one after the other: **Oiltype – Calibration – Language – Battery – Tests**.

Pressing the button during the corresponding display leads into the submenus:

- Oiltype: Sequence of pre-programmed oil types with Oil-2 (customer spec.) and "**standard**". When an oil type is selected, it remains saved until the next change and is displayed after measurement. If "**standard**" is selected, an average calibration value is used which corresponds to the values of most oils
Important for food inspectors: with this choice, no oil type is displayed after the measurement.
- Calibration: Calibrate the device to your own oil
- Language: Two pre-programmed languages can be selected
- Battery: State of the battery in volts
- Tests: Number of tests performed, followed by the software version

Incorrect measurements:

Er 2 - TEMP	device too hot for a measurement
Er 3 - TEMP	electronics in the device are too hot for a measurement
Er 4 - TEMP	the temperature of the oil is too cold
Er 5 - TEMP	oil temperature is over 200 ° C
Er 6 - SENS	water in the sensor area
Er 8 - SENS	error during the measurement phase
Er 9 - SENS	error in the sensor area
Er 10 - SENS	result outside the measuring range of the polar parts (approx. 0 to 45%)

Factory calibration:

The device is factory calibrated for peanut oil. This calibration is saved and can be reset at any time via the menu selection "**Oiltype**". The factory calibration is indicated by the expression "**peanut**" after the measurement.

2/3



Calibration:

- The calibration is done with fresh oil. Select "Calibration" in the menu, the message "**Test<<<<**" appears as with normal measurement
- The (fresh) oil you want to calibrate gets measured, the type of oil selected in the menu is not relevant
- After measurement the display show: "**-ok- -öl-2**"

The device is now calibrated to this oil under "Oil-2" and the calibration values are saved. Even after using an oil from the pre-programmed list, this customer-specific oil can also be reverted to. This customer-specific programming can be changed as often as required.

Battery change:



The device works with a 1.5V type AAA battery.
Use only leak-proof alkaline or lithium batteries.
Do not use rechargeable batteries

- Unscrew the cap on the back and pull it out
- Replace the battery (pay attention to the polarity)
- Put on the screw plug and the bracket, then tighten

Cleaning:

Not dishwasher-safe.

frottino alpha-2 must be rinsed with warm soap solution after the last measurement of the day.
After cleaning, hang up the device to dry.

Don't poke into the sensor tube.

Do not use any brush, scouring pad, wooden or metal sticks.



Technische Daten:

All accessible materials are safe in terms of food technology.

Battery:	1x1.5 V type AAA alkaline or lithium, please do not use rechargeable batteries
Lifespan:	approx. 200 measurements
Display:	LED color code
Accuracy:	resolution 0.4% polar parts
Temperature:	Temperature in degrees Celsius for both frottino devices and this paper