

HI83730

Photometer for the Determination of Peroxide Value in Olive Oils

- **Built-in timer**
 - Display of time remaining before a measurement is taken. Ensures that all readings are taken at the appropriate reaction intervals for the test being performed.
- **Zero key**
 - A simple press of the zero key on the face of the meter will account for the color and imperfections in the oil sample before reagent addition.
- **GLP**
 - Review of the last calibration date.
- **Auto shut-off**
 - Automatic shut-off after 15 minutes of non-use when the meter is in measurement mode. Prevents wastage of batteries in the event the meter is accidentally left on.
- **Battery status indicator**
 - Indicates the amount of battery life left.
- **Error messages**
 - Messages on display alerting to problems including no cap, high zero, and standard too low.
- **Units of measure**
 - Appropriate unit of measure is displayed along with reading.

The HI83730 portable photometer is for the determination of peroxide value in edible oils. Hanna's portable photometers feature an advanced optical system; the combination of a special tungsten lamp, a narrow band interference filter, and silicon photodetector ensure accurate photometric readings every time. The exclusive cuvette locking system ensures that the cuvette is inserted into the measurement cell in the same position every time to maintain a consistent path length.



Oil Peroxides Content

<10 meq O ₂ /kg	excellent conservation
10-15 meq O ₂ /kg	good conservation
<10 meq O ₂ /kg	refined oil
>20 meq O ₂ /kg	rancid oil



Supplied in a rigid carrying case

Significance of Use

Over time, edible oils may degrade and spoil. The primary cause of edible oil degradation is oxidation; as oil oxidation occurs, flavors and odors can change, resulting in a product that is undesirable to consumers. The unsaturated fatty acids found in oils react with oxygen, creating peroxide as an unwanted byproduct. This oxidation reaction is more likely to occur under certain conditions, including exposure to light, the presence of metal ions, the introduction of oxygen, or when storage temperatures are not maintained. In order to determine oil quality and the onset of oxidation, peroxide value is determined. Peroxide value is defined as the amount of peroxide oxygen per kilogram of oil, which is reported in units of milliequivalents or meq. A lower peroxide value indicates higher quality edible oil.

Specifications	HI83730
Range	0.0 to 25.0 meq O ₂ /kg
Resolution	0.5 meq O ₂ /kg
Accuracy @25°C (77°F)	±0.5 meq O ₂ /kg
Light Source	tungsten lamp
Light Detector	silicon photocell with narrow band interference filter @ 466 nm
Method	adaptation of EC 2568/91 method and following amendments
Environment	0 to 50°C (32 to 122°F); RH max 95% non-condensing
Power Supply	1.5V AA batteries (4) / 12 VDC adapter
Auto Shut-off	after 15 minutes of non-use
Dimensions	224 x 87 x 77 mm (8.8 x 3.4 x 3")
Weight	512 g (18 oz.)
Ordering Information	HI83730-01 (115V) and HI83730-02 (230V) are supplied with reagents for 10 tests, 1 mL syringes (4), scissors, vial wiping cloth, batteries, AC adapter, instructions and a rigid carrying case.
Reagent Sets	HI83730-20 peroxide in olive oil reagents kit (21 manual tests)



HI83730-20