GET ACCURATE! GO DIGITAL!

View Our Digitals!

Using the correct tools, including quick response, accurately calibrated thermometers, is an essential component of any basic HACCP plan.

Bi-metal thermometers have a dial display and are used to measure the temperature of liquids or relatively thick foods. They are not appropriate to measure the temperature of any food less than 3" thick, such as hamburger patties. Bi-metal thermometers generally have longer response times and a lower accuracy.

Digital thermometers are highly accurate and can measure temperature of thin and thick foods. Cooper-Atkins' digital thermometers have a thin probe tip and a fast response time (<6 seconds) due to their advanced thermistor technology. They feature large, easy-to-read digital displays and have an anti-microbial additive in the unit body and protective sheath.

When choosing a thermometer, the following points need to be considered:

1. **Temperature Range & Resolution**
2. **The Sensing Element & Insertion Point**
3. **Accuracy & Calibration**

Thermometer Specifications

1246 (BI-METAL)	FEATURE	DFP450W (DIGITAL)
1246-01: 40° to 180°F 1246-02: 0° to 220°F 1246-03: 50° to 550°F	Temperature Range	-40° to 450°F (-40° to 232°C)
±2°F / ±5°F	Accuracy	±2°F (1°C)
2° / 5°	Resolution	0.1°
15 SECONDS	Response Time	LESS THAN 6 SECONDS
THICK FOODS ONLY	Applications	THIN & THICK FOODS
2"	Insertion Point	0.5"
DIAL DISPLAY	Readability	EZ-READ DIGITAL DISPLAY
NEEDED OFTEN	Calibration	NOT NEEDED
WATER RESISTANT	Waterproof Rating	IPX7 - DISHWASHER SAFE
NSF	Certifications	NSF, CE, WEEE, RoHS
1 YEAR	Warranty	LIFETIME WARRANTY

1 Temperature Range & Resolution

Even with its magnifying lens, a bimetal thermometer dial can be difficult to read and accurately assess where the pointer sits. Each tick mark is 2° (5° in the high-temp 50° - 550° unit). If viewed from even the slightest angle, it could throw the interpretation of the reading off by 2°, 4° or even 10°. With the digital thermometer's large display and resolution to 0.1° there can be no assumptions made or judgment calls about the temperature reading.

The imprint area on a bi-metal is also too small to represent dual scales of Fahrenheit and Celsius on the same unit. With a digital, the press of a button allows you to read the temperature in the scale you prefer.

IT TAKES 3 BI-METALS TO COVER THE SAME TEMPERATURE RANGE AS 1 DIGITAL THERMOMETER!

DFP450W
Digital Pocket Test
-40° to 450°F

=

1246-01
Bi-metal Pocket Test
-40° to 180°F

+

1246-02
Bi-metal Pocket Test
0° to 220°F

+

1246-03
Bi-metal Pocket Test
50° to 550°F

Distributed by:

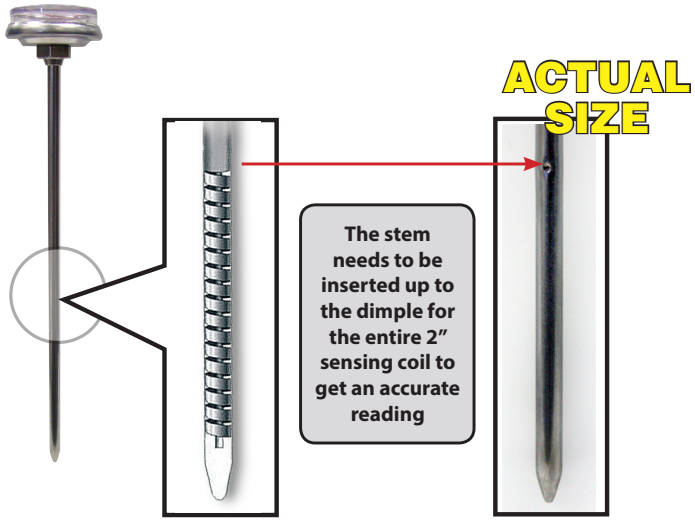
2 Sensing Element and Insertion Depth

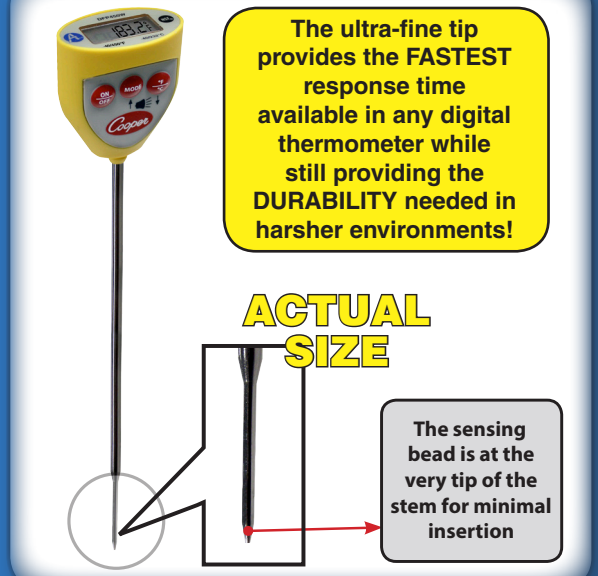
BI-METALS CANNOT BE USED FOR THIN OR DELICATE FOODS

If you cut open a bi-metal stem thermometer from the tip to the dimple, you would see the bi-metal coil that senses the temperature. It is wound like a spring and extends almost two inches in length. The coil expands (unwinds) or contracts (winding tighter) with changes in temperature thus turning the pointer on the dial. To register an accurate temperature reading the entire coil must be exposed to the heat or cold source. This temperature can take 20+ seconds to stabilize. The purpose for the dimple on the outside of the stem is to indicate that correct insertion depth. This is helpful for liquids and thicker cuts of meat like roasts, but the 2" insertion depth should not be used for thin product like burger patties. Plus, the .140" 3.5 mm diameter of the stem leaves a very unsightly hole and is not recommended for deli meats, cheeses and other foods where the visual quality would be diminished.

DIGITALS CAN BE USED FOR THIN AND DELICATE FOODS

The sensing element in the digital pocket test is a bead-type thermal resistor or "thermistor". It is tiny and is located at the very tip of the stem. The proper insertion depth can be as shallow as 1/8" and the ultra-fine tip leaves a small pin-hole that is practically invisible. Another good feature of a thermistor is its sensitivity, which allows temperatures to stabilize quickly. This will take less than 6 seconds, the fastest response time any thermistor can provide.





3 Accuracy & Calibration

Due to its simplistic mechanical design, a bi-metal coil thermometer can be affected by shakes, drops and exposure to extreme hot and cold temperatures. The coil can loosen and change its response to temperature changes. This is why regulatory agencies' recommendations to frequently validate the accuracy of thermometers began. So often the bi-metal is determined to be out of range, they are designed with a nut that can turn and change the pointer to read the correct temperature. A digital thermometer has factory calibrations set in its memory chip that cannot be affected by physical impact. Cooper-Atkins is so confident of the accuracy of our digitals that we guarantee them for life!

Calibration Often Needed

No Calibration Needed!

Cooper ATKINS®
Accuracy to the Highest Degree

800-835-5011 • 860-347-2256 • www.cooper-atkins.com/products/digitals

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