

	Technical Specification of Verification and Inspection for Thermometers	S/N	CNMV 7
		Rev.	4
<p>1. This Technical Specification is developed pursuant to Paragraph 2, Articles 14 and 16 of the Weights and Measures Act.</p> <p>2. The date of promulgation, document number, date of enforcement and content of amendment are listed as follows:</p>			
Rev.	Date of Promulgation	Document No. (Ching-Piao-Szu-Tsu)	Date of Enforcement
1	2003-02-06	No.09240005170	2003-07-01
2	2005-11-14	No.09440004100	2007-01-01
3	2007-12-26	No.09640006550	2008-01-01
4	2016-10-19	No.10540018500	2016-10-19
<p style="text-align: right;">Extend the scope to electrical thermometers and set the requirements of verification and inspection for electrical thermometers.</p> <p style="text-align: right;">Identify the scope and set the measuring range and temperatures for verification of basal thermometers.</p> <p style="text-align: right;">Ruled out mercury in glass type thermometers from verification due to they are not allowed to be used.</p>			
Date of Promulgation 2016-10-19	Bureau of Standards, Metrology and Inspection, Ministry of Economic Affairs		Date of Enforcement 2016-10-19

NO GUARANTEE ON THE TRANSLATION

In case of discrepancies between the English translation and Chinese text, the Chinese text shall govern.

1. Scope: this specification applies to electrical thermometers for human use (hereinafter referred to as "thermometers") and subject to verification and inspection. The thermometers use for measuring skin temperature is excluded from this specification.
2. Definition: A maximum device is the component of a thermometer that monitors over a specified time the temperature measured by a probe in contact with a body cavity or tissue, after which it indicates the maximum temperature and maintains the indication until reset by the user.
3. Structure
 - 3.1 A thermometer shall bear the manufacturer's trade name or trademark.
 - 3.2 The unit of temperature is the degree Celsius, symbol °C.
 - 3.3 The minimum scale interval of a thermometer shall not be more than 0.1 °C.
 - 3.4 The measuring range shall be a minimum of 35.5 °C to 42.0 °C, and the range 35.5 °C to 42.0 °C shall be continuous. However, the basal thermometer's measuring range can be from 35.5 °C to 38.0 °C.
 - 3.5 The digital display of temperature of a electrical thermometers shall be complete without broken or incomplete.
4. Verification, inspection and maximum permissible errors
 - 4.1 Verification and inspection equipment:
 - (1)Reference thermometer: the measuring range of the reference shall be a minimum of 35.5 °C to 42.0 °C with an expanded uncertainty no greater than 0.03 °C (calculated for a coverage factor $k = 2$). The calibration shall be traceable to national measurement standards.
 - (2)Reference water bath: a well-regulated and stirred water bath containing at least one litre in volume shall be used to establish reference temperatures over the measuring range for conducting various performance tests on an instrument. The bath shall be controlled to a temperature stability of better than ± 0.02 °C over the specified temperature range and shall not have a temperature gradient. This temperature gradient shall be assured under all conditions and methods of loading temperature probes.
 - 4.2 Verification and inspection of errors of a thermometer shall be carried out at three temperatures: 35.5 °C, 37 °C and 41 °C. However, a basal thermometer can be carried out at two temperatures: 35.5 °C and 37 °C only.
 - 4.3 The maximum permissible errors of verification of thermometers shall be ± 0.1 °C.
 - 4.4 The maximum permissible errors of in-service inspection shall be as small as the maximum permissible errors of verification.
5. The verification compliance marks: the mark shall be attached to a prominent place of the body of the thermometer.