

5. Thermometers

Ordinarily, use rod thermometers with an immersion line or total immersion mercury-filled rod thermometers, calibrated under the Japanese Industrial Standards. For the tests under the headings of Congealing Point, Boiling Point and Amount of Distillate, and Melting Point (Class 1 substance), use thermometers with an immersion line.

The rod thermometers with an immersion line are shown in the following table.

For auxiliary thermometers, use mercury-filled thermometers with a temperature range of 0 to 360 °C, minimum graduations of not more than 15, and an appropriate shape.

Thermometer Standards

	No. 1	No. 2	No. 3	No. 4	No. 5	No. 6
Liquid	Mercury	Mercury	Mercury	Mercury	Mercury	Mercury
Gas filled above liquid	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen	Nitrogen
Temperature range	- 17 - 50	40 - 100	90 - 150	140 - 200	190 - 250	240 - 320
Minimum graduation	0.2	0.2	0.2	0.2	0.2	0.2
Longer graduation lines	each 1	each 1	each 1	each 1	each 1	each 1
Graduation number	each 2	each 2	each 2	each 2	each 2	each 2
Total length (mm)	280 - 300	280 - 300	280 - 300	280 - 300	280 - 300	280 - 300
Stem diameter (mm)	6.0 ± 0.1	6.0 ± 0.1	6.0 ± 0.1	6.0 ± 0.1	6.0 ± 0.1	6.0 ± 0.1
Bulb length (mm)	12 - 15	12 - 15	12 - 15	12 - 15	12 - 15	12 - 15
Distance from the bottom of bulb to the lowest graduation line (mm)	75 - 90	75 - 90	75 - 90	75 - 90	75 - 90	75 - 90
Distance from the top of thermometer to the highest graduation line (mm)	35 - 50	35 - 50	35 - 50	35 - 50	35 - 50	35 - 50
Distance from the bottom of bulb to immersion line (mm)	60	60	60	60	60	60
Form of top of thermometer	loop	Loop	loop	loop	loop	Loop
Allowable limit of error	0.2	0.2	0.2	0.2	0.2	0.4