

Scigiene Infrared Comparator Basic Guide

1. The [Scigiene Comparator Cup](#) consists of an aluminum cap with a heavy, matte black base to provide a stable temperature. The solid matte black base incorporates two 3.5mm holes for probe insertions. It is an inexpensive way of comparing probe and [infra-red thermometers](#) to ensure they are reading the same temperature. The Comparator is designed to be used with any [Scigiene NIST Traceable Certified Reference Probe Thermometer](#).
2. The [Scigiene Comparator Cup](#) can be used at any temperature, but is best used at ambient temperature for the comparison of [infra-red thermometers](#). This is to reduce the possibility of a difference in temperature between the inside surface and the base test hole.
3. Any two 3.5mm [probe thermometers](#) may be inserted in the base test holes, for comparison between each other. An [infra-red thermometer](#) may also be pointed down the cup into the base to compare the [infra-red thermometer](#) with the one or two conventional probes already in the base.
4. Ideally, both instruments should be allowed to stabilize, for at least one to two hours, from ambient temperature and not tested immediately from having been in a cold or warm environment.
5. Probes should be placed fully into the base (they should penetrate approximately 28 mm) and the instrument(s) reading(s) allowed to stabilize for at least 1 minute.
6. If you are comparing two probe instruments, the readings should be within 1.5°C of each other (this allows for a maximum of ± 0.7 °C error in each instrument).
7. If you are comparing an [infra-red thermometer](#) against a conventional penetration probe, the readings should be within 2°C of each other. There may be the need to adjust the distance from the [Comparator](#) to the [infra-red thermometer](#) in order that the lens is seeing the correct target area.
8. It is possible, with rapid measurements, to heat (no greater than 80°C) or cool the [Comparator](#) to other temperatures in order to compare instruments at temperatures other than ambient. Please contact Scigiene for further Guidance here.
WARNING: care must be taken when handling cold or hot articles.
 Readings must be taken quickly when comparing infra-red and [probe instruments](#) due to the heating or cooling of the surface of the base measured by the infra-red, as against the middle of the base measured by the probe.
NOTE: [Infra-red thermometer](#) only measure the temperature of the surface of an object.
9. The [Scigiene Comparator Cup](#) is a basic aid to assist in regular checking of your IR instruments. It is still the highly recommendation that you return your [thermometers](#) for service and calibration against National Standards on an annual basis; or at any time that you suspect problems with your instruments to Scigiene Corporation [1295 Morningside Ave. Unit 16-17, Scarborough, ON, M1B4Z4]
10. If you have any doubts as to the validity of your measurements, please contact us at Scigiene. Depending on the device, we may be able to perform basic repairs and recalibration. Contact us at 416-261-4865 for more details.



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