

Thermometers with wetting liquid

Instructions for thermometers with separated indicator liquid

For many types of thermometer, the use of wetting thermometric liquids is essential. Different liquids are used according to the properties of the thermometer and their purpose (see Technical Data Sheet on thermometer glass and thermometric liquids).

The following instructions only apply to procedures for thermometers filled with wetting liquids.

- Before using these thermometers with wetting liquid, check whether any indicator liquid has separated off into the top of the capillary. Unlike the coloured indicator liquid, the separated liquid is generally colourless and can easily be overlooked.
- All types of thermometer which are filled with wetting liquid have an expansion chamber at the top end of the capillary. By heating the temperature probe carefully, the indicator liquid can be coaxed up into this expansion chamber and combined again with the separated liquid. If necessary, it can be assisted in this by using a powerful centrifuge with the temperature probe pointing downwards.
- If there is still a small amount of liquid remaining at the end of the expansion chamber, this has to be flame-heated carefully at this point (cigarette lighter, Bunsen burner or spirit burner) in order to combine it with the separated liquid by repeatedly heating the temperature probe while holding the thermometer upright.

The possible evaporation of the indicator liquid in the capillary is a physically induced phenomenon which cannot always be avoided in the event of poor storage or if conditions are unfavourable. It is definitely not a manufacturing defect, however, and provided that it is handled properly it will also not affect the guaranteed precision of the thermometer type used.