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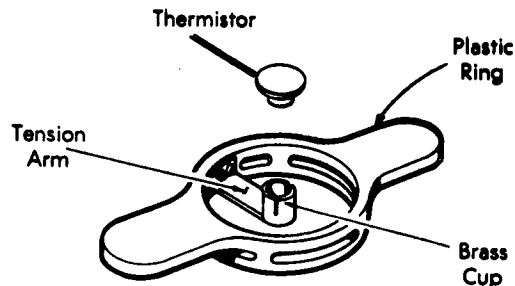


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Thermistor Holder for Skin-Temperature Measurements

The problem:

To attach temperature probes (thermistors) to the skin of human subjects by a means which is practical, reliable, and does not affect the characteristics of the skin segment being measured.



The solution:

Support the sensing head of the thermistor probe in the center area of a plastic ring which has tabs so that it can be anchored in place by rubber bands or adhesive tapes.

How it's done:

A ring of clear acrylic plastic is milled to form a 3.7-cm circle with 2-cm tab extensions; the extensions help stabilize the ring and provide attachment points for the fastening tapes or bands. As shown in the diagram, slots are cut in the perimeter of the ring to allow circulation of air and to provide a channel

for the leads of the thermistor probe. A brass tension arm with a 7-mm diameter cup in the end is formed from shim stock; it is attached by screws to the inner surface of the plastic ring and bent to provide the desired tension at the cup; the tension on the brass arm can be calibrated to provide similar surface pressures against the skin. The ceramic (non-sensing) surface of the thermistor is fastened by epoxy glue to a 5-mm length of stainless steel tubing, which fits snugly into the brass cup. When the thermistor holder is held in place by bands, small pieces of rubber tubing can be inserted between the bands and the extension tabs to provide flexibility during exercise testing.

Note:

Requests for further information may be directed to:

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Reference: TSP 74-10119

Patent status:

This invention is owned by NASA, and a patent application has been filed. Inquiries concerning non-exclusive or exclusive license for its commercial development should be addressed to:

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