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## **Evaluation of Thermal Transport Properties of Pillows**

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**Abstract:** In order to design thermally desirable pillows, the relation between the sensory evaluation of the coolness of pillows and their thermal transport properties was investigated. The perception value Pv of coolness was correlated with the dry heat loss Qd of the pillow. The pillows with a large value of Qd were regarded as cooler. The Pv value tended to correspond to the apparent thermal conductivity Ke of the padding material used in the top side of the pillow. Pillows with a large value of Ke were regarded as cooler. The pillows with a small value for the contact area CA of the head and pillow showed a cooler feeling. The temperature Tm between the head and pillow after 30 minutes of use was measured. A pillow that had larger values for Qd and Ke and a smaller value for CA showed a lower value for Tm, and was regarded as being cooler.

**Key Words:** pillow, padding material, thermal transport property, coolness

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