

RADIO THERMOMETER RT-01 – “NATALKA” FOR INNER HUMAN TISSUE

Description

Non-invasive detection and localization of temperature anomalies in the inner human tissues. On-line monitoring of the remedies action on the temperature condition of a definite part of a human body without roentgen, ultrasound and other types of radiation ruinously acting on the human organism is essential.

Contrary to IR-thermograph the radio-thermograph makes it possible to define non-invasively the integral a depth temperature overcoming “skin-layer” which is subjected to thermal regulation and is a “screen” for internal temperature fields as living tissues with a temperature (measured in the IR-band) about 37° C radiate from every square centimeter about 50 mW.

Non-inertial method makes it possible to investigate a thin dynamics of local and integral depth temperatures. That is why this method is applicable both to hospital diagnostics and to a biological object temperature regime estimation acting on it with medical, physical-therapy and other methods. The possibilities of constant harmless control over degree of various methods and means of action in the process of treatment as well as fast changes of medical strategy are unique ones.

Innovation aspects and main advantages

Radio thermometer is a receiver with a complex signal processing, it represents a new class of diagnosing medical equipment; the principle of operation of this equipment is based on recording of thermal radiation of internal organs and tissues. Domestic warm-blooded animals can be also the subjects of examination. The surface temperature is supported with the thermoregulation system according to environmental conditions and internal energy processes practically in the stable state.

Specifications

Measured temperatures range	28...42 °C
Measurement precision	0,2 oC
Nominal supply voltage	220 V
Nominal consumed power	18 Wt

Overall dimensions:

- information processing block	190x140x50 mm
- radio-transducer with antenna-applicator	220x60x55 mm
The kit mass	2 kg

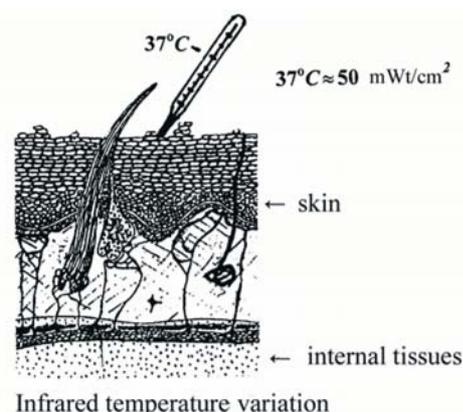
In 2002 the RTM-method received a fair amount of attention on the part of foreign companies. Canadian corporation received exclusive rights to RTM-technologies introduction into the screening program on early diagnostics of mamma diseases on the North American continent.

Areas of Application

Medicine. Early diagnostics of cancerous diseases, intended for medium-level medical personnel after corresponding 50 hours training.



Fig. Radio thermometer RT-01 – “NATALKA”



Stage of Development

Prototypes tested

Contact Details

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