

Technical specifications for Hyperthermia Measurement System

The System must have following specifications/features:

a) Basic device configuration:

1. Integrated and fully automatic system featuring high-precision AMF generator and thermal sensors with versatile exchangeable AMF generation CoilSets.
2. Each coil preset must operate in at least 15 or more resonant frequencies between 50 KHz to 1000 KHz, all commutable by software. The maximum allowed deviation in each resonance frequency is not more than $\pm 5\%$.
3. An additional capacitor bank must offer at least 15 additional resonant frequencies between 50 KHz to 1000 KHz, all commutable by software.
4. It should be expandable and configurable to any number of additional frequency modes without internal modification.
5. The CoilSet should produce magnetic field at 50mT or better (Provide details of magnetic field at each frequency).
6. CoilSets must include: One calorimetric setup with high-precision two channel integrated fiber optic temperature probe and good thermal insulation under vacuum.
7. High precision Fiber Optic thermal sensors physically integrated to the hardware and to the main software.
8. Circulating water bath for thermalization controllable by the main software (provide technical specifications of chillers).
9. Cell culture chamber for experiments with cells *in-vitro* and *in-vivo* under controlled atmosphere with software integration. Mention compartment size, temperature and atmosphere control.
10. Laptop Computer with preconfigured data acquisition, measurement and analysis software for control and automation (Provide hardware and software details).

Specifications of laptop computer: Powered by 8th Generation Intel® Core i7-8550U Processor, Windows 10, 8GB RAM, 130MX 4GB Graphics, 128GB SSD + 1TB Hard Drive & Full HD 15" Display or better.

b) Other requirements:

1. The supplier should provide calibration certificate and a field map for each CoilSets.
2. Any additional accessories rewarded for smooth operation of the system.

c) **Warranty:** Minimum one year from date of installation.

f) Accessories (quote as option):

1. Thermal Imaging Camera with all necessary accessories for computer controlled operation with necessary software.
 - Thermal resolution: $< 0.1K$ or better.
 - Temperature: 0 to 100 °C or better.
 - Field of view: 0.5m or better.
 - Kit should contain table tripod stand and case.

B. N. Redasera