

Answers for Curtis-Straus

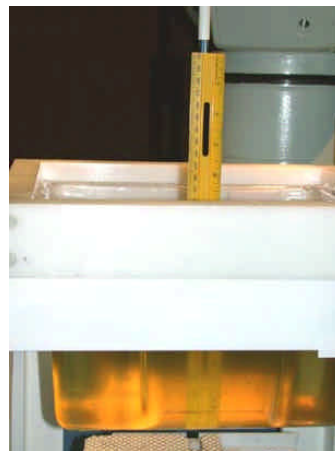
Re: SAR.230625305.OU5 SAR Report

Prepared By PCTEST Engineering Laboratory, Inc.

1. The target system verification target SAR value was obtained by multiplying the 1W target of 9.5 W/kg (IEEE Std P1528 Draft 6.5 Table 7.1) by the actual input power of 0.250W. Thus, the target SAR value for the system at 0.250W is:

$$9.5 * 0.250 = \mathbf{2.375 \text{ W/kg.}}$$

2. The liquid for system verification was brain-simulating liquid (per Supplement C), whereas the muscle simulating liquid (a different tissue material) was used to assess the Body SAR for the device.
3. Please find attached photographs with measurements indicating a liquid depth of at least 15 cm in the phantom shell.



4. The Area scan is a single layer scan done at 2.5 mm above the phantom surface. The grid data is run in 10x10mm increments and cover the whole DUT. A splined is run on the data at 1mm increments. This is used to determine the local hot spot. The zoom scan is centered on this hot spot. The zoom scan is a cube scan of size 7x7x7 points at spacing 5x5x5mm for a cube size of 30x30x30mm.
5. The probe tip distance to phantom inner surface during coarse-scan is 2.5mm (less than half the probe tip diameter).

6. The points are extrapolated to the surface using a 4th order Lagrange polynomial. A 3D spline is run over all sampled and extrapolated points to get points spaced 1 mm apart in all directions. For the 1-gram average, the software then calculates all the 10x10x10mm averages. It then finds the greatest value and reports it.

SAR Calculation:

Each SAR point was found using:

$$\text{Sum} = ((\text{Ch1Ave} * \text{Gain}) / \text{Sense1} + (\text{Ch2Ave} * \text{Gain}) / \text{Sense2} + (\text{Ch3Ave} * \text{Gain}) / \text{Sense3})$$

Sense1-3 = Sensitivity of probe mv/(mW/cm²)

Ch#Ave = Average reading from the Probe Channel

Gain = DC Amplifier Gain (Around 20x)

$$\text{SAR} = (\text{Sum} * \sigma * 3770) / (\rho * \text{CF})$$

Sum = Sum of 3 channels (from above) (mW/cm²)

σ = Conductivity

ρ = Tissue Density (usually 1.0 during scan)

CF = Conversion Factor