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## 1800MHz, 1900MHz Dipole Antenna comparison Validation



### Tissue Verification

**Table 1.1 Simulated Tissue Verification**

| MEASURED TISSUE PARAMETERS |          |               |          |                |          |
|----------------------------|----------|---------------|----------|----------------|----------|
| Date(s)                    | 02/10/03 | 1900MHz Brain |          | 1900MHz Muscle |          |
| Liquid Temperature(°C)     | 23.0     | Target        | Measured | Target         | Measured |
| Dielectric Constant:ε      |          | 40.00         | 40.20    | 53.30          | 53.67    |
| Conductivity:σ             |          | 1.400         | 1.39     | 1.520          | 1.52     |

### Test System Validation

Prior to assessment, the system is verified to the  $\pm 10\%$  of the specifications at 835MHz and 1900MHz by using the system validation kit(s). (Graphic Plots Attached)

**Table 1.2 System Validation**

| SYSTEM DIPOLE VALIDATION TARGET & MEASURED |                                               |                  |                                            |                                           |                     |
|--------------------------------------------|-----------------------------------------------|------------------|--------------------------------------------|-------------------------------------------|---------------------|
| A                                          | System Validation Kit:<br>D1800V2, S/N: 2d047 | 1900MHz<br>Brain | Targeted SAR <sub>1g</sub> (mW/g)<br>9.925 | Measured SAR <sub>1g</sub> (mW/g)<br>9.98 | Deviation(%)<br>0.5 |
| B                                          | System Validation Kit:<br>D1900V2,S/N: 5d017  | 1900MHz<br>Brain | Targeted SAR <sub>1g</sub> (mW/g)<br>9.925 | Measured SAR <sub>1g</sub> (mW/g)<br>10.3 | Deviation(%)<br>3.7 |

\* Case A : Use 1800MHz Dipole Antenna, 1900MHz Head Tissue.

\* Case B : Use 1900MHz Dipole Antenna, 1900MHz Head Tissue.

reviewed by  
D.M.JUNG (Manager)

## Test Setup Photo

