



February 22, 2002
Supplement to SAR Test Report for Motorola portable cellular phone (FCC ID: IHDT6CC1)

Prepared by:
Firass Badaruzzaman, SAR RF Engineer
Motorola Personal Communications Sector Product Safety Laboratory
Harvard, Illinois

Summary of FCC request for additional information

There was a request for additional information regarding Motorola's SAR Test Report for Motorola portable cellular phone (FCC ID IHDT6CC1). The requested information is addressed below in the same numbering sequence received.

1.) Please verify that there is only one battery type used with this phone.

There is only one type of battery used with this product. This is the battery that was used in the measurements reported.

2.) Please confirm your liquid depth with photo or provide a z-axis scan plot of the highest SAR.

Please look at below figures:

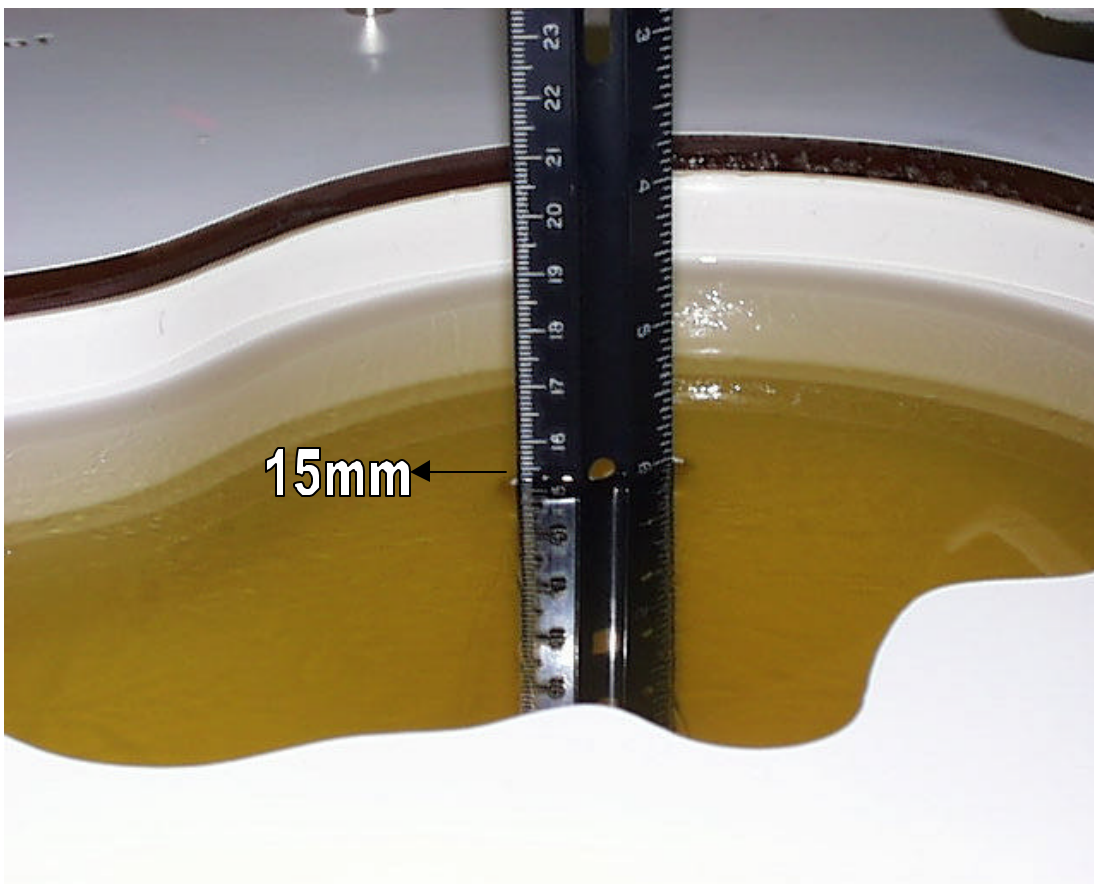


Figure 1. Location of Tissue Simulate Depth Measurement Location in Phantom Head

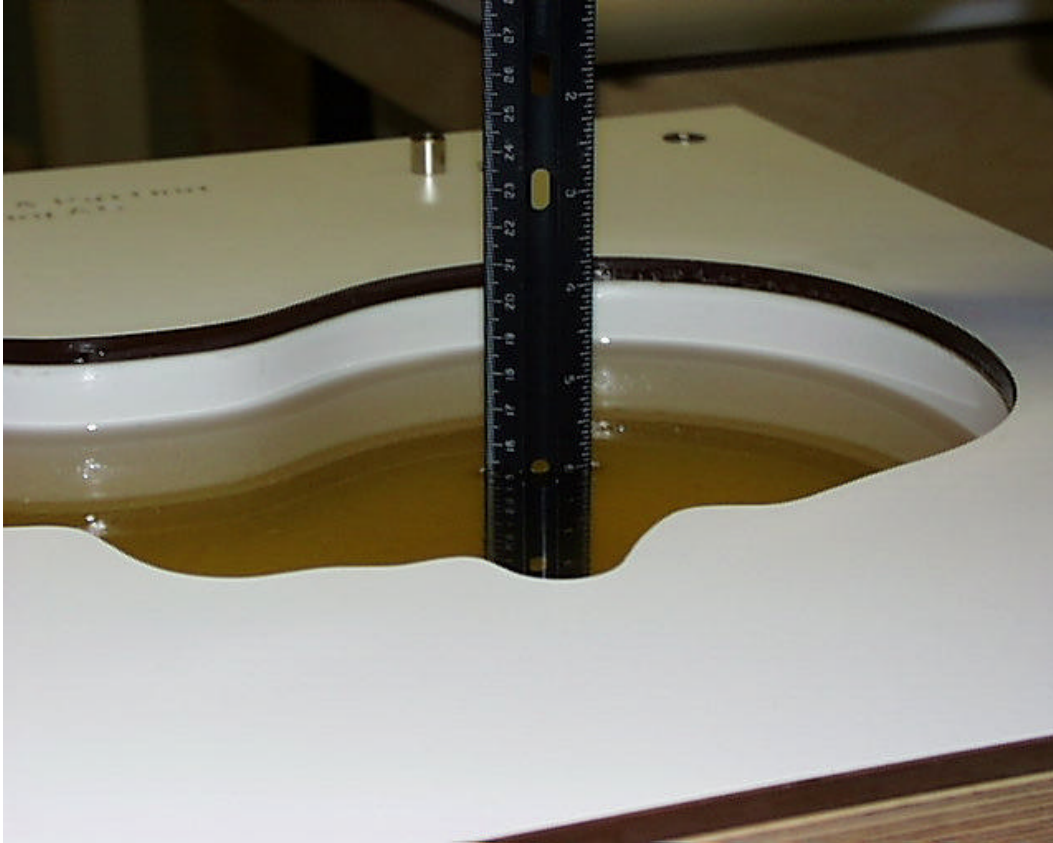


Figure 2. Location of Tissue Simulate Depth Measurement Location in Phantom Head

3.) Please specify composition of ingredients for the tissue liquids used.

The ingredients for the liquid tissue are the same as the ones recommended by FCC OET Bulletin 65 Supplement C 01-01 (Appendix C : Tissue Dielectric Parameters – Page 38). The amounts of each were:

Frequency (MHz)	Ingredients of the Tissue Liquid	Head Simulate (% by Weight)	Body Simulate (% by Weight)
1880 MHz	DGBE	47.00	30.80
	Water	52.80	68.91
	Salt	0.20	0.29

4.) Justification of the 15 degree/Tilt Position tested only at the mid channel, which deviates from the FCC/OET Supplement C recommendation. Please explain.

The 15-degree/Tilt-position measurement was performed in accordance with FCC OET Bulletin 65 Supplement C 01-01 standard, which states:

“The device should be tested on the left and right side of the head phantom in the “Cheek/Touch” and “Ear/Tilt” positions. When applicable, each configuration should be tested with the antenna in its fully extended and fully retracted positions. These test configurations should be tested at the high, middle and low frequency channels of each operating mode; for example, AMPS, CDMA, and TDMA. If the SAR measured at the middle channel for each test configuration (left, right, Cheek/Touch, Tile/Ear, extended and retracted) is at least 2.0 dB lower than the SAR limit, testing at the high and low channels is optional for such test configuration(s).” (Appendix D: SAR Measurement Procedures – Page 42). The measured SAR was below this threshold and thus the additional tests were not required.

5.) The RF safety statement distance for body worn use in the manual on page 14 does not agree with Page 19 of the SAR Test report. Please clarify.

Good point. A clarification follows:

- The 2.5-cm distance, indicated on page 14 of the manual, addresses operating configurations which do not use a Motorola supplied body worn device. At this distance, the SAR value is **lower** than the body worn value reported in the SAR report.
- The distances, on page 19 of the SAR report, specify the actual parameters when the supplied body worn device is used. Even though these distances are greater than the 2.5-cm specified in the manual, the measured SAR value is **higher** and is therefore reported.

Note:

The body worn device on Page 19 of the SAR Test report contains metal components (spring and clip).

6.) Please describe methods and reasons for extrapolated SAR data as shown in the tabulated SAR summary.

The exact method of extrapolation is $\text{New SAR} = \text{Old SAR} * 10^{(\text{drift}/10)}$. The SAR reported at the end of the measurement process by DASY can be scaled up by the measured drift to determine the SAR at the beginning of the measurement process (this is the worst case SAR when there are negative drifts).