TEST REPORT
FROM
RADIO FREQUENCY
INVESTIGATION LTD.

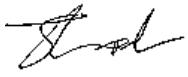
Test Of: Microcell Ltd.
C62 Mobile Telephone Handset with Camera, Headset PTT
and Case Accessories

To: OET Bulletin 65 Supplement C: (2001-01)

Test Report Serial No:
RFI/SARB2/RP45006JD14A

Supersedes Test Report Serial No:
RFI/SARB1/RP45006JD14A

Measurements were performed on
the DASY4 System

This Test Report Is Issued Under The Authority Of Richard Jacklin, Operations Director: 	**Checked By:** 
Tested By: 	**Release Version No:** **PDF01**
Issue Date: 24 September 2003	**Test Dates: 27 August 2003 to 03 September 2003**

It should be noted that the standard, OET Bulletin 65 Supplement C: (2001-01) is not listed on RFIs current UKAS schedule and is therefore "not UKAS accredited".

This report is issued in Adobe Acrobat portable document format (PDF). It is only a valid copy of the report if it is being viewed in PDF format with the following security options not allowed: Changing the document, Selecting text and graphics, Adding or changing notes and form fields. Furthermore, the date of creation must match the issue date stated above.

This report may be copied in full. The results in this report apply only to the sample(s) tested.

This page has been left intentionally blank.

Test Of: Microcell Ltd.
C62 Mobile Telephone Handset
To: OET Bulletin 65 Supplement C: (2001-01)

Table of Contents

1. Client Information

1.1. Client Details

Company Name:	Microcell Ltd.
Address:	Kaarnatie 38 Oulu FIN-90530 Finland
Contact Name:	Mr Kortesalmi

1.2. Test Laboratory

Company Name:	Radio Frequency Investigation Ltd.
Address:	Ewhurst Park Ramsdell Basingstoke Hampshire RG26 5RQ.
Contact Name:	Mr J Lomako

2. Equipment Under Test (EUT)

The following information (with the exception of the Date of Receipt) has been supplied by the client:

2.1. Identification Of Equipment Under Test (EUT)

Brand Name	Siemens
Model Name or Number	C62
FCC Identification	RB9C62
IMEI Number	004400-00-38979151-4849
Battery Serial Number	006071 16EMCSY / 006110 16EMCSY
Country Of Manufacture	None stated
Date Of Receipt	27 August 2003

Brand Name	Siemens
Model Name or Number	QuickPic Camera 1QP-500
FCC Identification	None stated
IMEI Number	S30880-S5701-4A00
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

Brand Name	Siemens
Model Name or Number	Headset PTT HH5510 (PHF)
FCC Identification	None stated
IMEI Number	S30880-S5601-A520
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

Identification Of Equipment Under Test (EUT) (Continued)

Brand Name	Siemens
Model Name or Number	Belt Case FCL-520
FCC Identification	None Stated
IMEI Number	None Stated
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

Brand Name	Siemens
Model Name or Number	Loop Case FCT-500
FCC Identification	None Stated
IMEI Number	None Stated
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

Brand Name	Siemens
Model Name or Number	Leather Holster FLC-500
FCC Identification	None Stated
IMEI Number	None Stated
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

Identification Of Equipment Under Test (EUT) (Continued)

Brand Name	Siemens
Model Name or Number	Tour Case FCT-550
FCC Identification	None Stated
IMEI Number	None Stated
Battery Serial Number	Not Applicable
Country Of Manufacture	China
Date Of Receipt	27 August 2003

2.2. Modifications Incorporated In EUT

The client has stated that the EUT has not been modified from what is described by the Model Number and Unique Type Identification stated above.

2.3. Additional Information Related to the EUT

Equipment Class:	Handheld Mobile Telephone
FCC Rule Part(s):	OET Bulletin 65 Supplement C
Application Type:	Certification
Transmitter Frequency Range 1900 MHz Band (MHz):	1850 - 1910 MHz
Transmit Frequency Allocation Of EUT When Under Test (Channels):	512 - Bottom Channel – 1850.2MHz 660 - Middle Channel – 1879.8MHz 810 - Top Channel – 1909.8MHz
Modulation(s):	GSM GPRS
Modulation Scheme (Crest Factor)	GSM (Crest Factor 8)
Battery Type(s):	3.8 Li-Ion
Antenna Length and Type:	Internal
Number Of Antenna Positions	1 (Fixed Antenna)
Intended Operating Environment:	Portable
Weight:	Approx. 75g incl. battery
Dimensions (without Antenna) mm:	Approx. 100 x 45 x 20 mm
Power Supply Requirement:	
DC Supply (Volts/Amps)	Not applicable
AC Supply (Volts/Amps)	Not applicable
Internal Battery (Volts/Amps)	3.8 V / 630 mAh
Port(s):	Camera PHF

2.4. Support Equipment

Description:	GSM Test Set
Brand Name:	Hewlett Packard
Model Name or Number:	8922M
Serial Number:	3933U04329
Cable Length And Type:	Not applicable (Air Link)
Connected to Port:	Antenna

Description:	DCS/PCS Interface
Brand Name:	Hewlett Packard
Model Name or Number:	83220E
Serial Number:	3842U05665
Cable Length And Type:	Not applicable (Air Link)
Connected to Port:	Antenna

3. Test Specification, Methods And Procedures

3.1. Test Specification

Reference:	OET Bulletin 65 Supplement C: (2001-01)
Title:	Evaluating Compliance with FCC Guidelines for Human Exposure to Radio Frequency Electromagnetic Fields.
Purpose of Test:	To determine whether the equipment complied with the requirements of the specification.

3.2. Methods And Procedures

The methods and procedures used were as detailed in:

EN 50361: 2001
Title: Basic standard for the measurement of specific absorption rate related to human exposure to electromagnetic fields from mobile phones (300 MHz - 3 GHz).

ANSI/IEEE C95.1: 1999
IEEE standard for safety levels with respect to human exposure to radio frequency electromagnetic fields, 3 kHz to 300 GHz.

Federal Communications Commission, “Evaluating compliance with FCC Guidelines for human exposure to radio frequency electromagnetic fields”, OET Bulletin 65 Supplement C, FCC, Washington, D.C, 20554, 1997.

Thomas Schmid, Oliver Egger and Neils Kuster, “Automated E-field scanning system for dosimetric assessments”, IEEE Transaction on microwave theory and techniques, Vol. 44, pp. 105-113, January 1996.

Neils Kuster, Ralph Kastle and Thomas Schmid, “Dosimetric evaluation of mobile communications equipment with know precision”, IEICE Transactions of communications, Vol. E80-B, No.5, pp. 645-652, May 1997.

3.3. Definition Of Measurement Equipment

The measurement equipment used complied with the requirements as detailed in OET Bulletin 65 Supplement C, Appendix D.

4. Deviations From The Test Specification

None

5. Operation Of The EUT During Testing

5.1. Operating Conditions

The EUT was tested in a normal laboratory environment.

During testing, the EUT was powered by an internal battery supply of 3.8 V.

5.2. Operating Modes

The EUT was tested in the following operating mode:

The handset in both GSM and GRPS modes uses one transmitting slot. Testing was carried out in the GSM Mode.

A GSM test simulator was used to provide a test signal.

5.3. Configuration And Peripherals

The EUT was tested in the following configuration

Stand-Alone and with accessories (detailed in each result section and is listed in section 2.1)

6. Summary Of Test Results

6.1. Summary Of Tests

Test Name	Specification Reference	Compliancy Status
Specific Absorption Rate (SAR)	OET Bulletin 65 Supplement C	Complied

6.2. Test Results For Specific Absorption Rate – 1900 MHz

6.2.1. Specific Absorption Rate - 1900 MHz Band – Head Measurements

Environmental Conditions

Temperature Variation in Lab (°C):	25.0 to 26.0
Temperature Variation in Liquid (°C):	23.0 to 23.4

C62 without accessories

Position	Side of Head	Frequency Channel No	Distance from antenna to phantom (mm)	SAR Level (W/kg) 1g	SAR Limit (W/kg) 1g	Margin (W/kg) 1g	Result
Touch	LHS	660	10	0.316	1.6	1.284	Complied
Tilt	LHS	660	5	0.336	1.6	1.264	Complied
Touch	RHS	660	10	0.348	1.6	1.252	Complied
Tilt	RHS	660	5	0.414	1.6	1.186	Complied
Tilt	RHS	512	5	0.708	1.6	0.892	Complied
Tilt	RHS	810	5	0.231	1.6	1.369	Complied

6.3. Test Results For Specific Absorption Rate – 1900 MHz

6.3.1. Specific Absorption Rate - 1900 MHz Band – Body Measurements

Environmental Conditions

Temperature Variation in Lab (°C):	25.0 to 26.0
Temperature Variation in Liquid (°C):	23.0 to 23.4

C62 with accessories

Position	Side of Head	Frequency Channel No	Distance from antenna to phantom (mm)	SAR Level (W/kg) 1g	SAR Limit (W/kg) 1g	Margin (W/kg) 1g	Result
C62 with Camera (0mm distance), antenna facing phantom	Flat	660	10	0.838	1.6	0.762	Complied
C62 with Camera (0mm distance), antenna facing phantom	Flat	512	10	1.100	1.6	0.500	Complied
C62 with Camera (0mm distance), antenna facing phantom	Flat	810	10	0.630	1.6	0.970	Complied
C62 without Camera (0mm distance), antenna facing phantom	Flat	660	10	0.612	1.6	0.988	Complied

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

Specific Absorption Rate - 1900 MHz Band – Body Measurements (Continued)

Position	Side of Head	Frequency Channel No	Distance from antenna to phantom (mm)	SAR Level (W/kg) 1g	SAR Limit (W/kg) 1g	Margin (W/kg) 1g	Result
C62 without Camera (0mm distance), display facing phantom	Flat	660	10	0.103	1.6	1.497	Complied
C62 with PHF	Flat	660	10	0.605	1.6	0.995	Complied
C62 in Tour Case FCT-550	Flat	660	20	0.272	1.6	1.328	Complied
C62 in Leather Holster FLC-510	Flat	660	25	0.151	1.6	1.449	Complied
C62 in Loop Case FCT-550	Flat	660	25	0.211	1.6	1.389	Complied
C62 in Belt Case FCL-520	Flat	660	25	0.179	1.6	1.421	Complied

6.4. EIRP Measurement

01 September 2003 to 03 September 2003 EIRP Measurement – 1900 MHz

The EIRP Measurements of the EUT are as follow: -

Frequency Channel	Tx Power After test / dBm
512 – 1850.2MHz	32.9
660 – 1879.8MHz	31.0
810 – 1909.8MHz	29.8

Note: EIRP measurements were only performed after testing.

7. SAR Measurement System

7.1. Radio Frequency Investigation SAR measurement facility utilises the Dosimetric Assessment System (DASY™) manufactured by Schmid & Partner Engineering AG (SPEAG™) of Zurich, Switzerland. The DASY system is comprised of the robot controller, computer, near-field probe, probe alignment sensor, and the SAM phantom containing brain or muscle equivalent material. The robot is a six-axis industrial robot performing precise movements to position the probe to the location (points) of maximum electromagnetic field (EMF). A cell controller system contains the power supply, robot controller, teach pendant (Joystick), and remote control, is used to drive the robot motors. The Staubli robot is connected to the cell controller to allow software manipulation of the robot. A data acquisition electronic (DAE) circuit performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. is connected to the Electro-optical coupler (EOC). The EOC performs the conversion from the optical into digital electric signal of the DAE and transfers data to the PC plug-in card. The DAE3 utilises a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching mulitplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the PC-card is accomplished through an optical downlink for data and status information and an optical uplink for commands and clock lines. The mechanical probe-mounting device includes two different sensor systems for frontal and sidewise probe contacts. They are also used for mechanical surface detection and probe collision detection. The robot uses its own controller with a built in VME-bus computer.

8. SAR Safety Limits

Exposure Limits (General populations/Uncontrolled Exposure Environment)	**SAR** (W/Kg)
Spatial Peak (averaged over any 1 g of tissue)	1.60

Notes:

1. The FCC SAR safety limits specified in the table above apply to devices operated in the General Population / Uncontrolled Exposure Environment.

2. Uncontrolled environments are defined as locations where there is exposure of individuals who have no knowledge or control of their exposure.

9. Details of SAR Evaluation

9.1. The equipment under test was found to be compliant for localised specific absorption rate (SAR) based on the following provisions and conditions:

a) The handset was placed in a normal operating position with the centre of the ear-piece aligned with the ear canal on the phantom.

b) With the ear-piece touching the phantom the centre line of the handset was aligned with an imaginary plane (X and Y axis) consisting of three lines connecting both ears and the mouth.

c) For the cheek position the handset was gradually moved towards the cheek until any point of the mouth-piece or keypad touched the cheek.

d) For the tilted position the EUT was positioned as for the cheek position, then the horizontal angle was increased by fifteen degrees (the phone keypad was moved away from the cheek by fifteen degrees).

e) The EUT was tested in a body-worn configuration with the handset placed in the belt holster which was placed on the device holder with the back of the phone facing parallel to, and the belt-clip touching, the outer surface of the phantom flat section. The belt holster provided a spacing between the back of the phone and the outer surface of the phantom flat section.

f) SAR measurements were evaluated at maximum power and the unit was operated for an appropriate period prior to the evaluation in order to minimise the drift.

g) The device was keyed to operate continuously in the transmit mode for the duration of the test.

h) The location of the maximum spatial SAR distribution (Hot Spot) was determined relative to the handset and its antenna.

i) The EUT was tested with a fully charged battery.

10. Evaluation Procedures

10.1. The Specific Absorption Rate (SAR) evaluation was performed in the following manner:

a) (i) The evaluation was performed in an applicable area of the phantom depending on the type of device being tested. For devices worn about the ear during normal operation, both the left and right ear positions were evaluated at the centre frequency of the band at maximum power. The side, which produced the greatest SAR, determined which side of the phantom would be used for the entire evaluation. The positioning of the head worn device relative to the phantom was dictated by FCC OET bulletin 65 Supplement C.

(ii) For body worn devices or devices which can be operated within 20 cm of the body, the flat section of the phantom was used. The type of device being evaluated dictated the distance of the EUT to the outer surface of the phantom flat section.

b) The SAR was determined by a pre-defined procedure within the DASY4 software. The exposed region of the phantom was scanned near the inner surface with a grid spacing of 20mm x 20mm or appropriate resolution.

c) A 7x7x7 matrix was performed around the greatest spatial SAR distribution found during the area scan of the applicable exposed region. SAR values were then calculated using a 3-D spline interpolation algorithm and averaged over spatial volumes of 1 and 10 grams.

If the EUT had any appreciable drift over the course of the evaluation, then the EUT was re-evaluated. Any unusual anomalies over the course of the test also warranted a re-evaluation.

11. System Validation

11.1. Prior to the assessment, the system was verified in the flat region of the phantom. A 1900 MHz dipole was used. A forward power of 250 mW was applied to the dipole and system was verified to a tolerance of ±5 for the 1900 MHz dipole. The applicable verification (normalised to 1 Watt) is as follows:

Dipole Validation Kit	Target SAR 1g (w/kg)	Measured SAR 1g (w/kg)
D1900V2/540 (1/09/03)	41.2	42.2
D1900V2/540 (2/09/03)	41.2	42.2
D1900V2/540 (2/09/03)	41.2	40.8

12. Simulated Tissues

12.1. The brain and muscle mixtures consist of water and glycol. Visual inspection is made to ensure air bubbles are not trapped during the mixing process. The mixture is calibrated to obtain proper dielectric constant (permittivity) and conductivity of the tissue.

Ingredient	Frequency
	1900 MHz Brain
Water	13.81 Litres
DGMBE	11.11 Litres
Salt	76.5 g

13. Tissue Parameters

13.1. The dielectric parameters of the fluids were verified prior to the SAR evaluation using a 58070C Dielectric Probe Kit and an 8753E Network Analyser. The dielectric parameters of the fluid are as follows:

Frequency (MHz)	Equivalent Tissue	Dielectric Constant εr	Conductivity ó (mho/m)
1900	Brain	38.03	1.46
1900	Muscle	51.03	1.50

14. DASY4 Systems Specifications

Robot System

Positioner:	Stäubli Unimation Corp. Robot Model: RX90L
Repeatability:	0.025 mm
No. of axis:	6
Serial Number:	F00/SD89A1/A/01
Reach:	1185 mm
Payload:	3.5 kg
Control Unit:	CS7
Programming Language:	V+

Data Acquisition Electronic (DAE) System

Cell Controller

PC:	Dell Precision 340
Operating System:	Windows NT
Data Card:	DASY4 Measurement Server
Serial Number:	1080

Data Converter

Features:	Signal Amplifier, multiplexer, A/D converter and control logic.
Software:	DASY4 Software
Connecting Lines:	Optical downlink for data and status info. Optical uplink for commands and clock.

PC Interface Card

Function:	24 bit (64 MHz) DSP for real time processing Link to DAE3 16 nit A/D converter for surface detection system serial link to robot direct emergency stop output for robot.

E-Field Probe

Model:	ET3DV6
Serial No:	1529
Construction:	Triangular core fibre optic detection system
Frequency:	10 MHz to 3 GHz
Linearity:	±0.2 dB (30 MHz to 3 GHz)
Probe Length (mm):	337
Probe Diameter (mm):	12
Tip Length (mm):	10
Tip Diameter (mm):	6.8
Sensor X Offset (mm):	2.7
Sensor Y Offset (mm):	2.7
Sensor Z Offset (mm):	2.7

Phantom

Phantom:	SAM Phantom
Shell Material:	Fibreglass
Thickness:	2.0 ±0.1 mm

15. Validation Results –1900 MHz Head (01 September 2003)

15.1. System Validation

15.1.1. Validation of the system test configuration was carried out prior to testing.

Validation Dipole Type and Serial No.	Calibrated Value of SAR in 1g volume (W/kg) at 1900 MHz	Measured Value of SAR in 1g volume (W/kg) at 1900 MHz	Percentage Difference (≤5%)
D1900V2/540	41.2	42.2	Yes

15.2. Liquid Properties - Brain

15.2.1. Properties of the tissue simulating liquid were measured prior to testing.

Property	Target Value (1900 MHz)	Measured/Calculated Value (1900 MHz)	Percentage Difference (≤5%)
Relative Permittivity	40.0	38.03	Yes
Conductivity	1.4	1.46	Yes

15.3. Temperature Variation

15.3.1. The temperature of the laboratory and within the tissue simulating liquid for this test shall not exceed the range +15ºC to +30ºC.

15.3.2. The actual temperature measured at the beginning and end of each test was recorded and the maximum range is shown below:

Measurement	Maximum Temperature	Minimum Temperature
Laboratory	26.0	25.0
Tissue Simulating Liquid	23.4	23.0

16. Validation Results –1900 MHz Head/Body (02 September 2003)

16.1. System Validation - Head

16.1.1. Validation of the system test configuration was carried out prior to testing.

Validation Dipole Type and Serial No.	Calibrated Value of SAR in 1g volume (W/kg) at 1900 MHz	Measured Value of SAR in 1g volume (W/kg) at 1900 MHz	Percentage Difference (≤5%)
D1900V2/540	41.2	42.2	Yes

16.2. Liquid Properties - Body

16.2.1. Properties of the tissue simulating liquid were measured prior to testing.

Property	Target Value (1900 MHz)	Measured/Calculated Value (1900 MHz)	Percentage Difference (≤5%)
Relative Permittivity	53.3	51.03	Yes
Conductivity	1.52	1.50	Yes

16.3. Temperature Variation - Body

16.3.1. The temperature of the laboratory and within the tissue simulating liquid for this test shall not exceed the range +15ºC to +30ºC.

16.3.2. The actual temperature measured at the beginning and end of each test was recorded and the maximum range is shown below:

Measurement	Maximum Temperature	Minimum Temperature
Laboratory	26.0	25.0
Tissue Simulating Liquid	24.4	23.3

17. Validation Results –1900 MHz Head/Body (03 September 2003)

17.1. System Validation - Head

17.1.1. Validation of the system test configuration was carried out prior to testing.

Validation Dipole Type and Serial No.	Calibrated Value of SAR in 1g volume (W/kg) at 1900 MHz	Measured Value of SAR in 1g volume (W/kg) at 1900 MHz	Percentage Difference (≤5%)
D1900V2/540	41.2	40.8	Yes

17.2. Liquid Properties - Body

17.2.1. Properties of the tissue simulating liquid were measured prior to testing.

Property	Target Value (1900 MHz)	Measured/Calculated Value (1900 MHz)	Percentage Difference (≤5%)
Relative Permittivity	53.3	51.03	Yes
Conductivity	1.52	1.50	Yes

17.3. Temperature Variation - Body

17.3.1. The temperature of the laboratory and within the tissue simulating liquid for this test shall not exceed the range +15ºC to +30ºC.

17.3.2. The actual temperature measured at the beginning and end of each test was recorded and the maximum range is shown below:

Measurement	Maximum Temperature	Minimum Temperature
Laboratory	25.0	25.0
Tissue Simulating Liquid	23.4	23.4

18. Measurement Uncertainty

18.1. No measurement or test can ever be perfect and the imperfections give rise to error of measurement in the results. Consequently, the result of a measurement is only an approximation to the value of the measurand (the specific quantity subject to measurement) and is only complete when accompanied by a statement of the uncertainty of the approximation.

18.2. The expression of uncertainty of a measurement result allows realistic comparison of results with reference values and limits given in specifications and standards.

18.3. The uncertainty of the result may need to be taken into account when interpreting the measurement results.

18.4. The reported expanded uncertainties below are based on a standard uncertainty multiplied by an appropriate coverage factor, such that a confidence level of approximately 95% is maintained. For the purposes of this document “approximately” is interpreted as meaning “effectively” or “for most practical purposes”.

Measurement Type	**Range**	**Confidence Level**	**Calculated Uncertainty**
Specific Absorption Rate	1900 MHz	95%	± 17.12%

18.5. The methods used to calculate the above uncertainties are in line with those recommended within the various measurement specifications. Where measurement specifications do not include guidelines for the evaluation of measurement uncertainty, the published guidance of the appropriate accreditation body is followed.

18.6. Measurement uncertainties in SAR measurements are difficult to quantify due to several variables including biological, physiological, and environment. However, the estimated measurement uncertainties in SAR are less than 30%.

18.7. According to ANSI/IEEE C95.3, the overall uncertainties are difficult to assess and will vary with the type of meter and usage situation. However, accuracy’s of ±1 to 3 dB can be expected in practice, with greater uncertainties in near-field situations and at higher frequencies (shorter wavelengths), or areas where large reflecting objects are present. Under optimum measurement conditions, SAR measurement uncertainties of at least ±2 dB can be expected.

18.8. According to CENELEC, typical worst-case uncertainty of field measurements is ±5 dB. For well-defined modulation characteristics the uncertainty can be reduced to ±3 dB.

Measurement Uncertainty (Continued)

Specific Absorption Rate Uncertainty at 1900 MHz, GSM Modulation Scheme calculated in accordance with IEEE 1528-200X

Type	Source of uncertainty	+ Value	- Value	Probability Distribution	Divisor	c_i	Standard Uncertainty		υ_i or υ_{eff}	Note
							+ u (dBµV)	- u (dBµV)		
B	Probe calibration	8.900	8.900	normal (k=2)	2.0000	1.0000	4.450	4.450	∞	
B	Axail Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Hemispherical Isotropy	0.100	0.100	normal (k=2)	2.0000	1.0000	0.050	0.050	∞	
B	Spatial Resolution	0.500	0.500	Rectangular	1.7321	1.0000	0.289	0.289	∞	
B	Boundary Effect	0.769	0.769	Rectangular	1.7321	1.0000	0.444	0.444	∞	
B	Linearity	2.330	2.330	Rectangular	1.7321	1.0000	1.345	1.345	∞	
B	Detection Limits	0.200	0.200	Rectangular	1.7321	1.0000	0.115	0.115	∞	
B	Readout Electronics	0.650	0.650	normal (k=2)	2.0000	1.0000	0.325	0.325	∞	
B	Response Time	0.000	0.000	Rectangular	1.7321	1.0000	0.000	0.000	∞	
B	Integration Time	0.005	0.005	Rectangular	1.7321	1.0000	0.003	0.003	∞	
B	RF Ambinet conditions	3.000	3.000	Rectangular	1.7321	1.0000	1.732	1.732	∞	
B	Probe Positioner Mechanical Restrictions	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Probe Positioning with regard to Phantom Shell	2.850	2.850	Rectangular	1.7321	1.0000	1.645	1.645	∞	
B	Extrapolation and integration/ Maximum SAR evaluation	5.080	5.080	Rectangular	1.7321	1.0000	2.933	2.933	∞	
A	Test Sample Positioning	0.584	0.584	normal (k=1)	1.0000	1.0000	0.584	0.584	10	
A	Device Holder uncertainty	0.154	0.154	normal (k=1)	1.0000	1.0000	0.154	0.154	10	
B	Phantom Uncertainty	4.000	4.000	Rectangular	1.7321	1.0000	2.309	2.309	∞	
B	Drit of output power	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Conductivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
B	Liquid Permittivity (target value)	5.000	5.000	Rectangular	1.7321	1.0000	2.887	2.887	∞	
B	Liquid Permittivity (measured value)	2.440	2.440	Rectangular	1.7321	1.0000	1.409	1.409	∞	
	Combined standard uncertainty			t-distribution			8.74	8.74	>500	
	Expanded uncertainty			k = 1.96			17.12	17.12	>500	

Appendix 1. Test Equipment Used

Instrument	Manufacturer	Model Number	RFI No.
Sony MVC FD-81	Sony	MVC - FD81	A1094
SMA Directional Coupler	MiDISCO	MDC6223-30	A1097
Handset Positioner	Schmid & Partners	SD 000 H01 DA	A1328
Probe	Schmid & Partners	ET3 DV6	A1185
Low noise Amplifier	Mini Circuits	ZHL-42	A1225
Data Acquisition Electronics	Schmid & Partner	DAE3	A1234
SAM Phantom	Schmid & Partners	001	A1238
20 dB Attenuator	Narda	766-20	A215
Cable	Utiflex	FA210A0003M3030	C1053
Cable	Utiflex	FA210A0001M3050A	C1054
Cable	Rosenberger	1	C1059
Signal Generator	Gigatronics	7100/.01-20	G046
Robot Power Supply	Schmid & Partner	Dasy4	G0528
PSU	Thurlby Thandar	CPX200	G088
NRV-Z1 Power Sensor	Rohde & Schwarz	NRV-Z1	M011
URY Power Meter	Rohde & Schwarz	URY	M094
Robot Arm	Staubli	RX908 L	M1047
10V Insertion Unit 50 Ohm	Rohde & Schwarz	URY-Z2	M1095
Hewlett Packard	Hewlett Packard	8922M	M1101
Hewlett Packard	Hewlett Packard	83220E	M1102
Temperature/Humidity/Pressure Meter	RS Components	None	M136
Thermometer	Testo	110	M509
1900MHz Validation Dipole	D1900V2	540	A1237
Site 56	RFI	N/A	S256

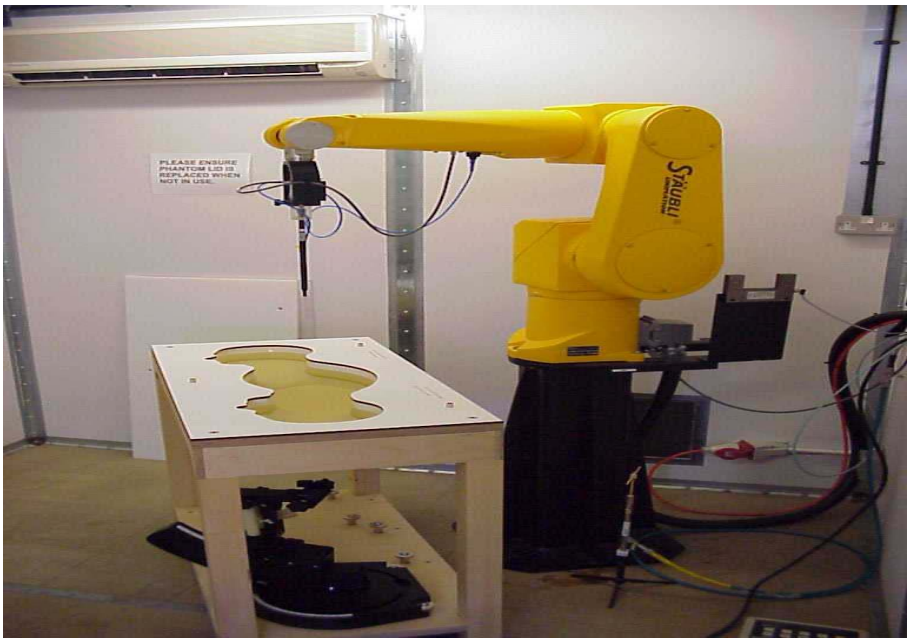
NB In accordance with UKAS requirements, all the measurement equipment is on a calibration schedule.

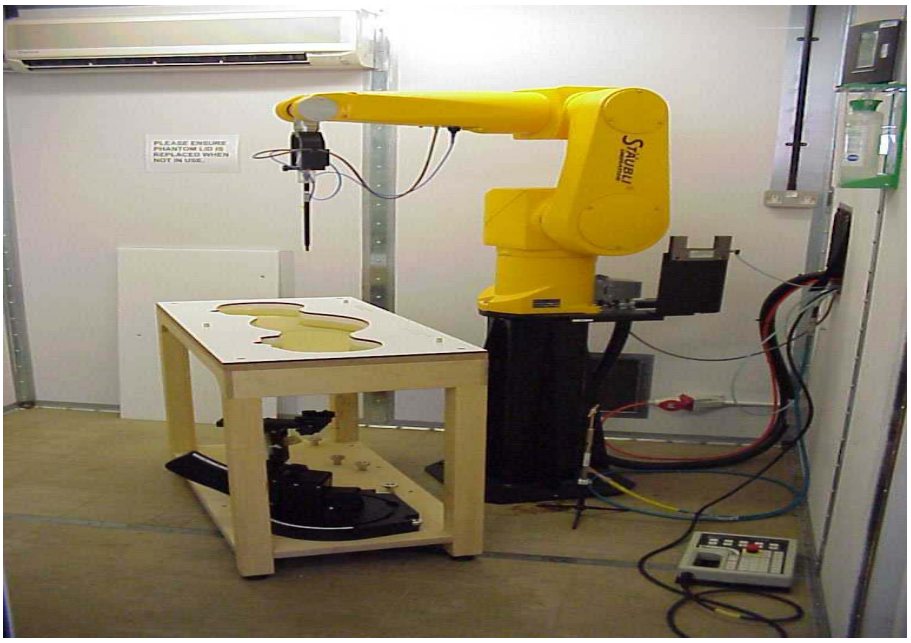
Appendix 2. SAR Distribution Scans

Please refer to RFI/EMCB1/45006_Distribution Scans

Appendix 3. Test Configuration Photographs

This appendix contains photographs showing the test configuration for the measurement of Specific Absorption Rate (SAR)





Test Configuration Photographs (Continued)

Appendix 4. Calibration Data

Please refer to RFI/EMCB1/45006_Calibration Data.

This page has been left intentionally blank.

Appendix 5. Photographs of EUT

This appendix contains the following photographs:

Photo Reference Number	Title
PHT/45006JD14/001	C62 Handset Front View
PHT/45006JD14/002	C62 Handset Rear View
PHT/45006JD14/003	C62 Handset Tilt Left
PHT/45006JD14/004	C62 Handset Tilt Right
PHT/45006JD14/005	C62 Handset Touch Left
PHT/45006JD14/006	C62 Handset Touch Right
PHT/45006JD14/007	C62 with Belt Case FLC-520
PHT/45006JD14/008	Belt Case FCL-520 Front View
PHT/45006JD14/009	Belt Case FCL-520 Rear View
PHT/45006JD14/010	C62 with Camera, Antenna Facing Phantom
PHT/45006JD14/011	C62 without Camera, Antenna Facing Phantom
PHT/45006JD14/012	C62 without Camera, Display Facing Phantom
PHT/45006JD14/013	Camera Front View
PHT/45006JD14/014	Camera Rear View
PHT/45006JD14/015	C62 with PHF
PHT/45006JD14/016	C62 with PHF
PHT/45006JD14/017	View of PHF
PHT/45006JD14/018	C62 with Leather Holster FLC-510
PHT/45006JD14/019	Leather Holster FLC-510 Front View
PHT/45006JD14/020	Leather Holster FLC-510 Rear View
PHT/45006JD14/021	C62 with Loop Case FCT-550
PHT/45006JD14/022	Loop Case FCT-550 Front View
PHT/45006JD14/023	Loop Case FCT-550 Rear View
PHT/45006JD14/024	C62 with Tour Case FCT-550
PHT/45006JD14/025	Tour Case FCT-550 Front View
PHT/45006JD14/026	Tour Case FCT-550 Rear View
PHT/45006JD14/027	1900 MHz Head Fluid Level
PHT/45006JD14/028	1900 MHz Body Fluid Level

These pages are not included in the total number of pages for this report.

These pages are left intentionally blank.

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/001 C62 Handset Front View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

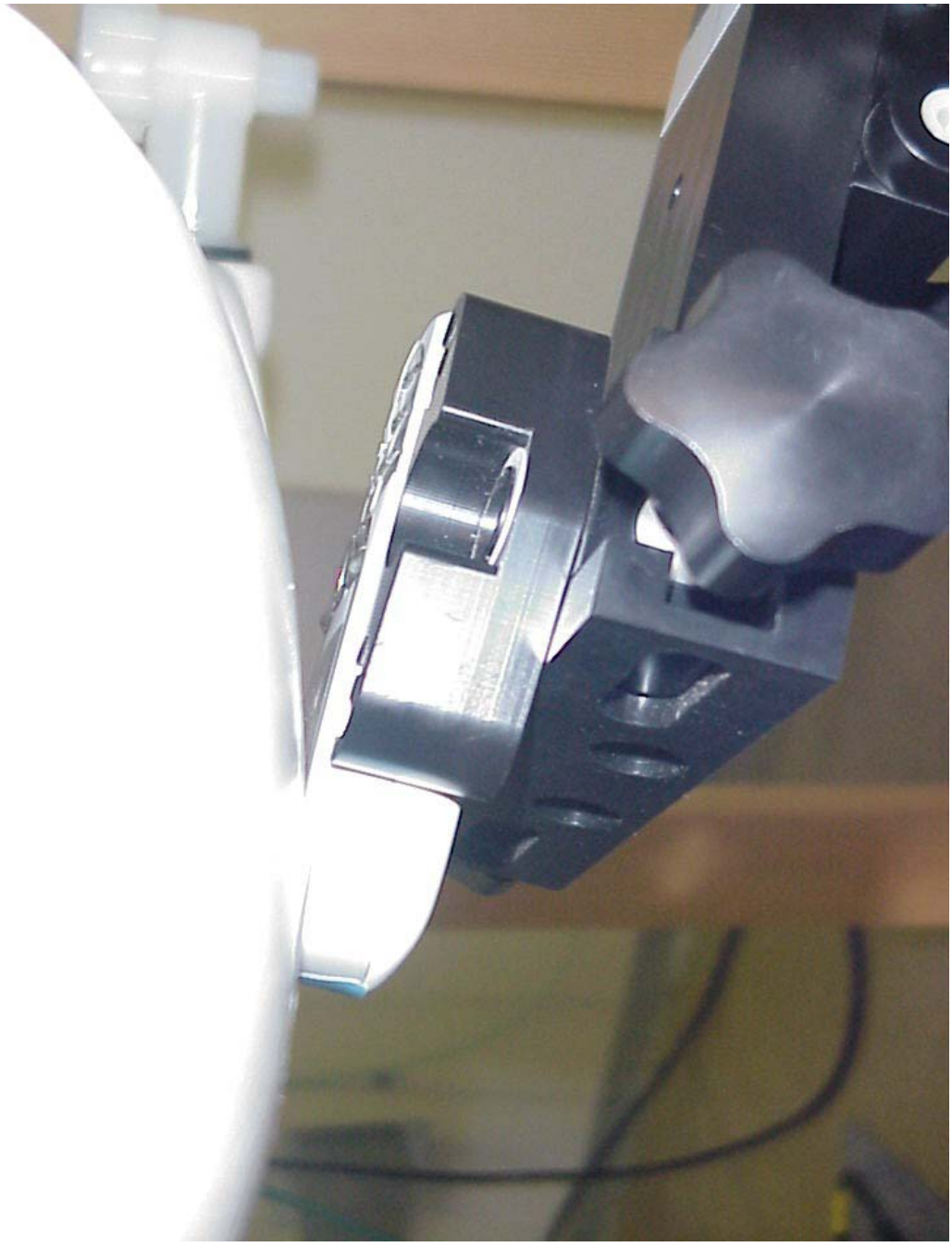
PHT/45006JD14/002 C62 Handset Rear View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/003 C62 Handset Tilt Left

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/004 C62 Handset Tilt Right

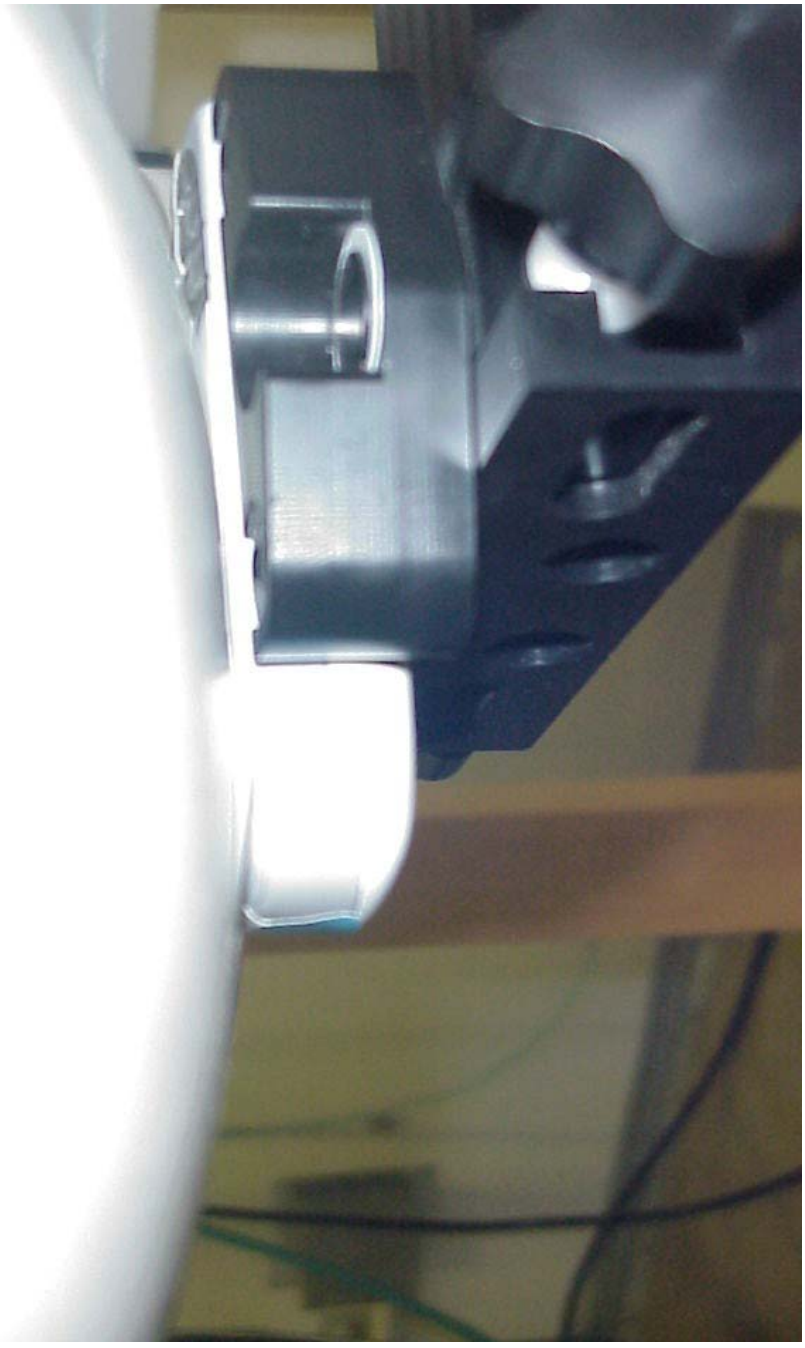


Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/005 C62 Handset Touch Left

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/006 C62 Handset Touch Right



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/007 C62 with Belt Case FLC-520

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/008 Belt Case FCL-520 Front View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

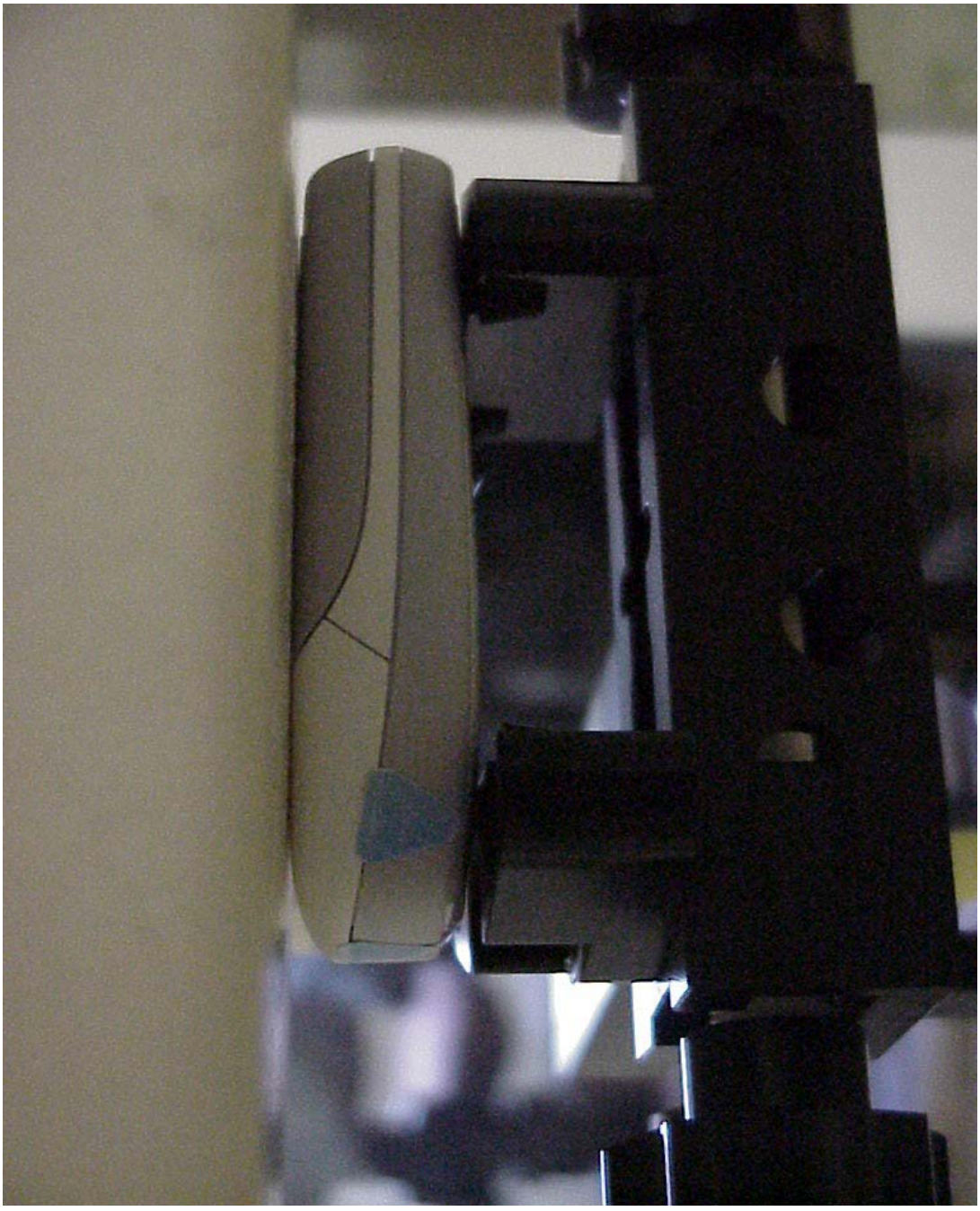
PHT/45006JD14/009 Belt Case FCL-520 Rear View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/010 C62 with Camera, Antenna Facing Phantom

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/011 C62 without Camera, Antenna Facing Phantom



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/012 C62 without Camera, Display Facing Phantom

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

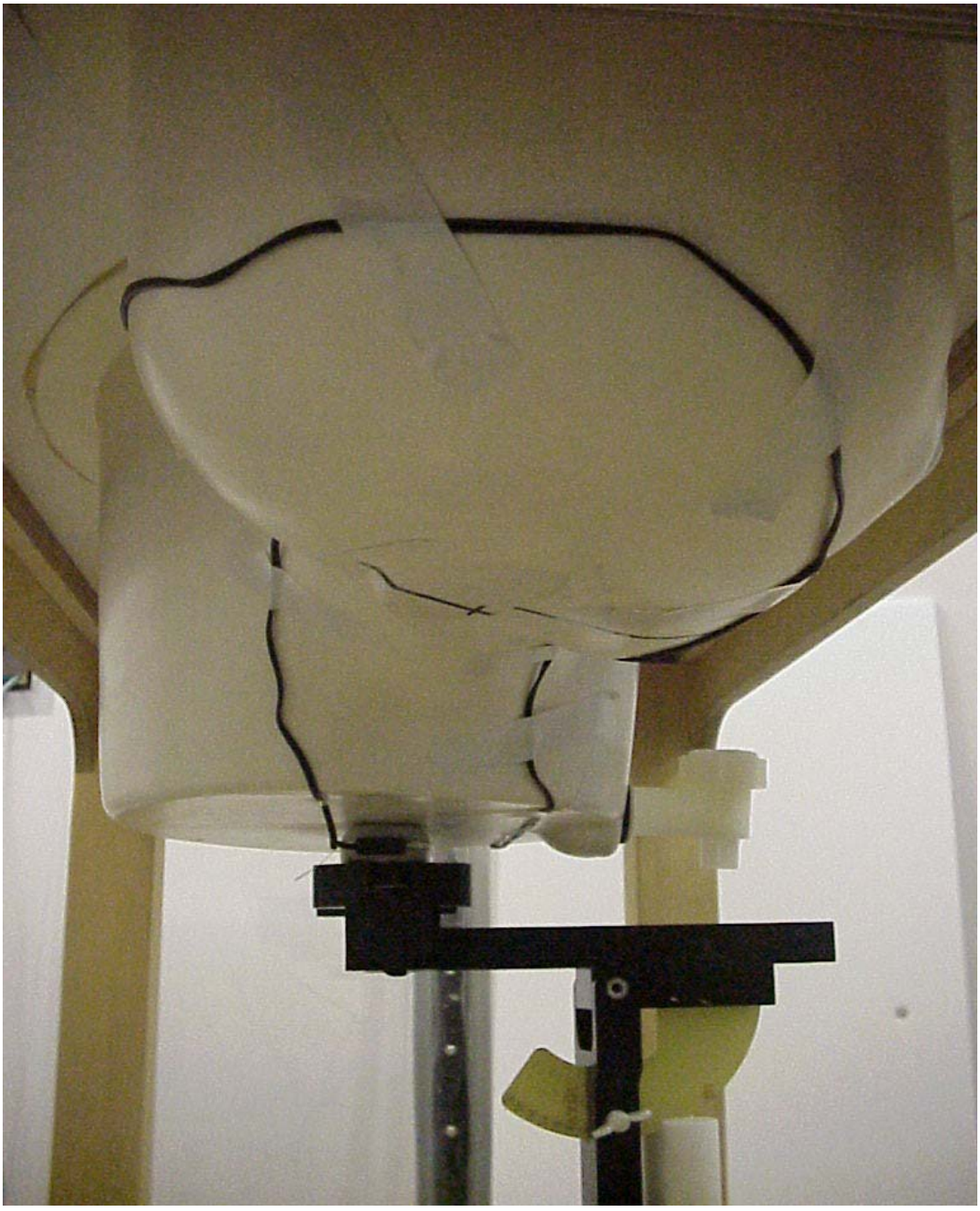
PHT/45006JD14/013 Camera Front View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/014 Camera Rear View

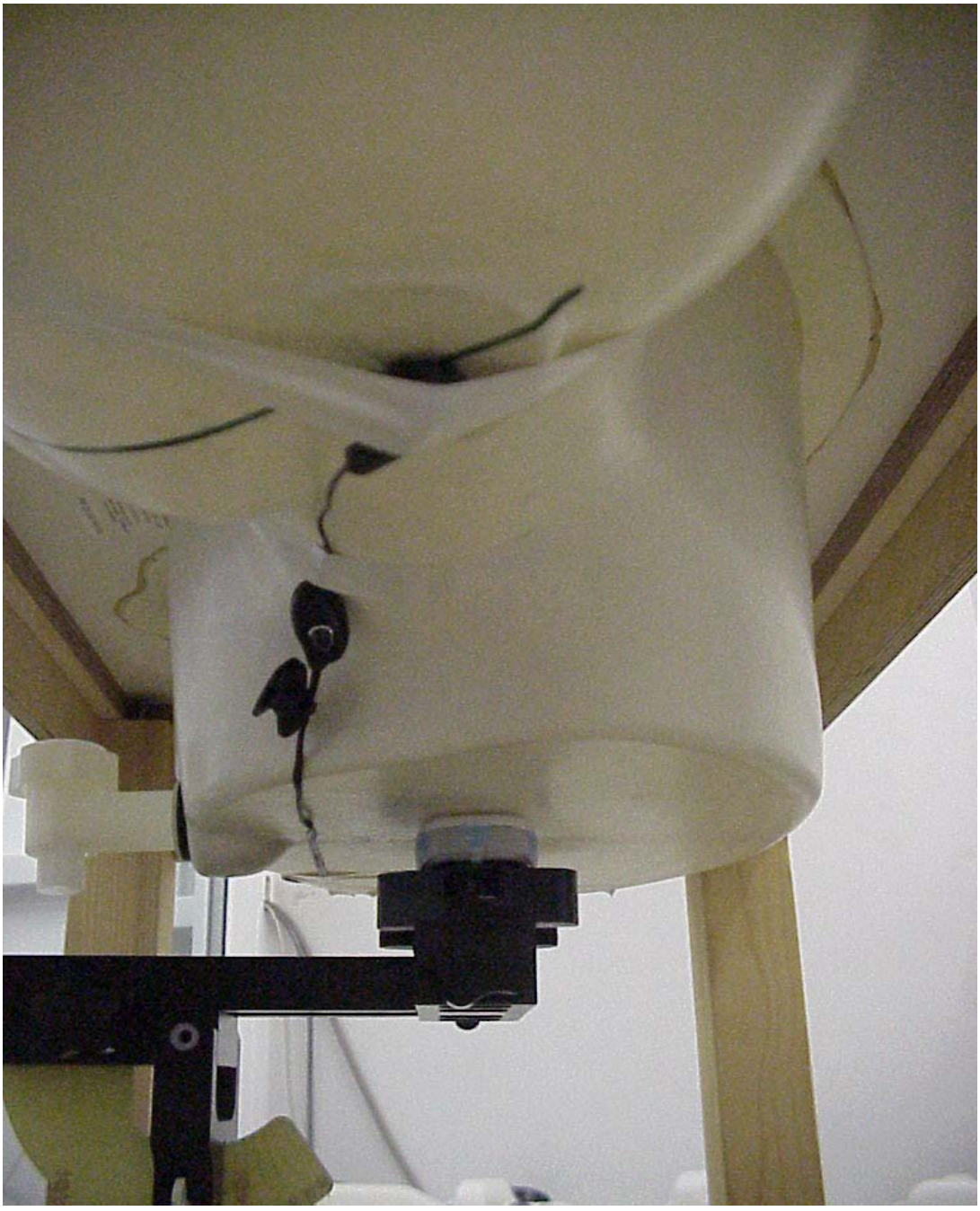
Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/015 C62 with PHF



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/016 C62 with PHF



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

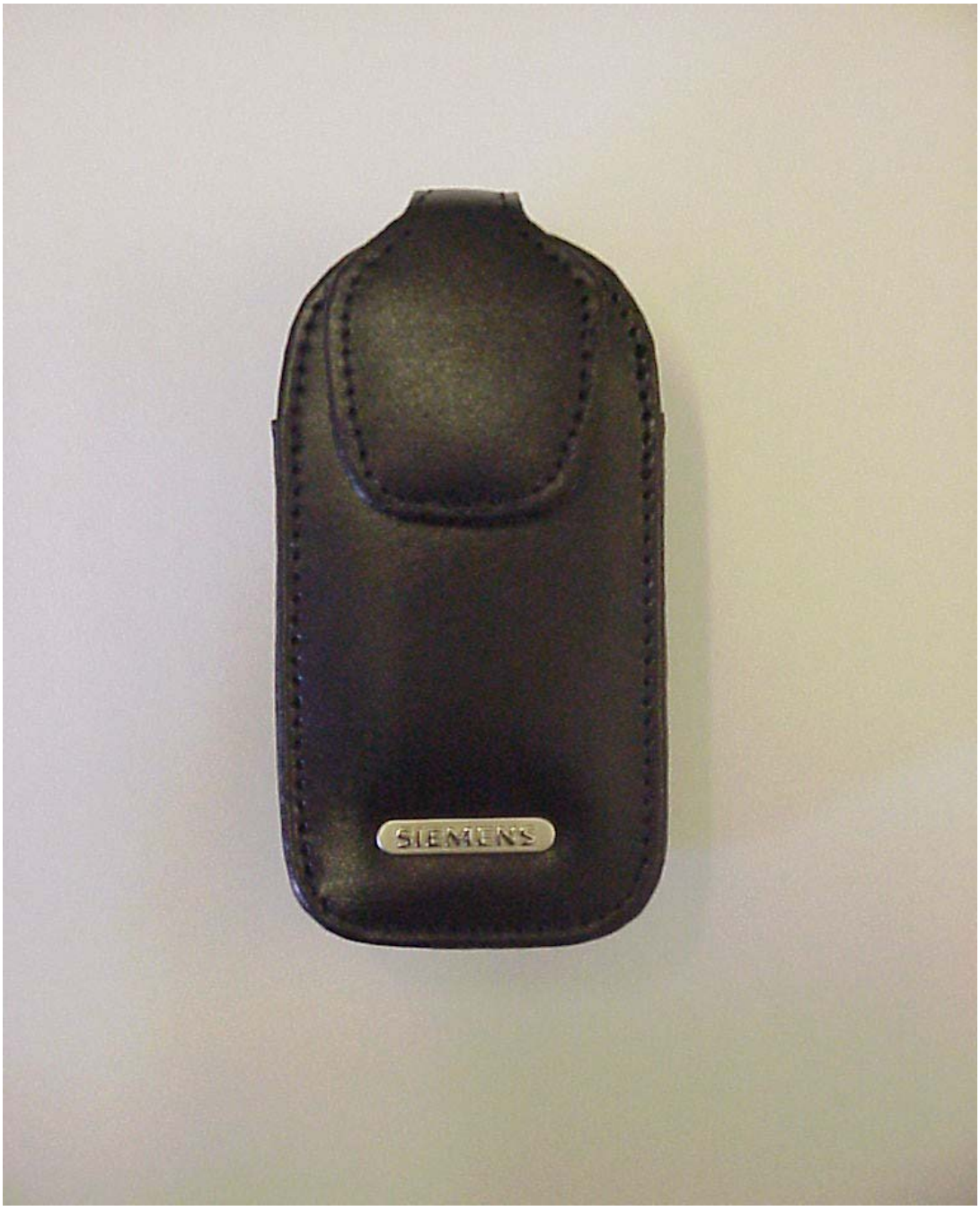
PHT/45006JD14/017 View of PHF

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/018 C62 with Leather Holster FLC-510

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/019 Leather Holster FLC-510 Front View

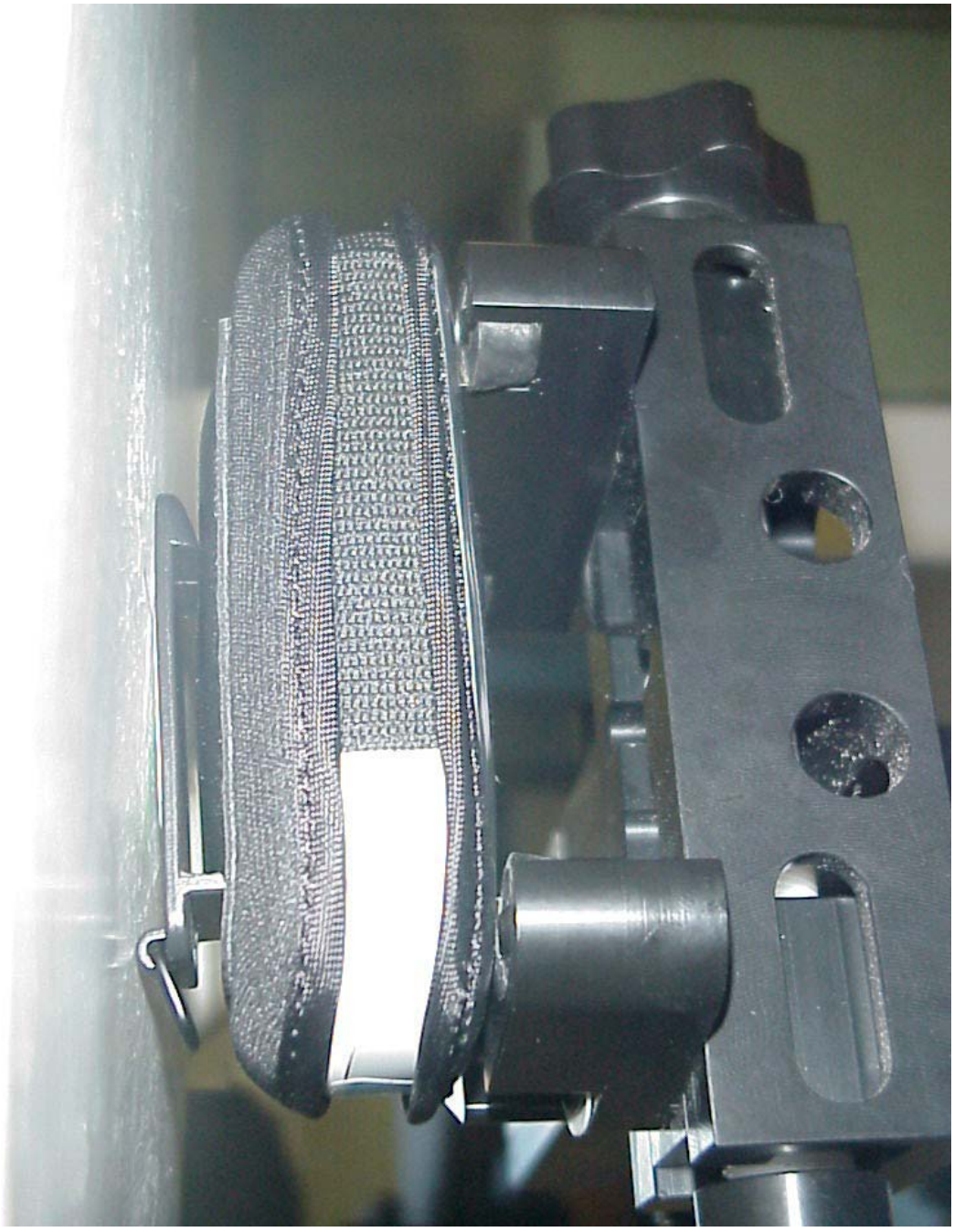


Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/020 Leather Holster FLC-510 Rear View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/021 C62 with Loop Case FCT-550



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/022 Loop Case FCT-550 Front View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/023 Loop Case FCT-550 Rear View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/024 C62 with Tour Case FCT-550

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

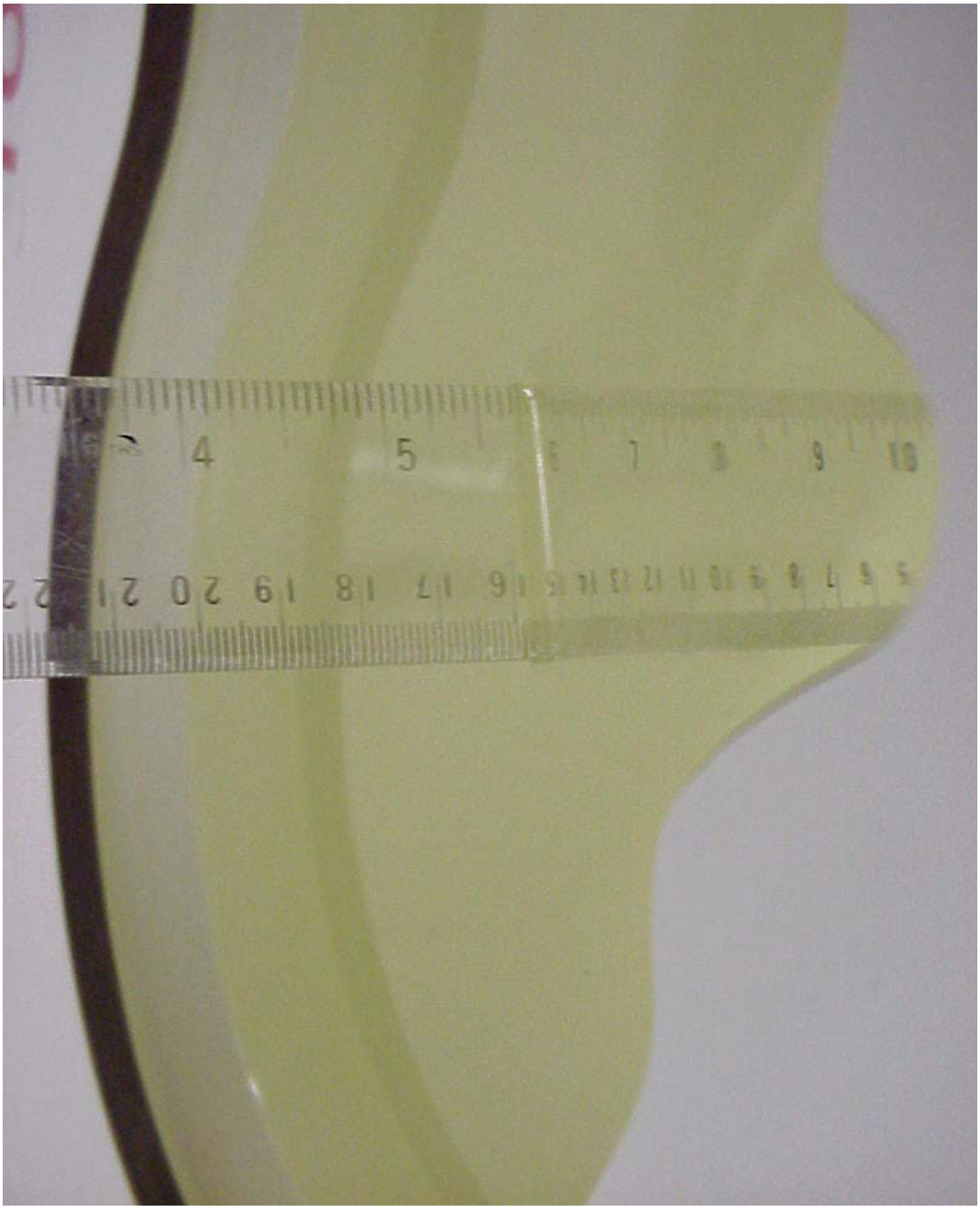
PHT/45006JD14/025 Tour Case FCT-550 Front View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/026 Tour Case FCT-550 Rear View

Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/027 1900 MHz Head Fluid Level



Test Of: **Microcell Ltd.**
C62 Mobile Telephone Handset
To: **OET Bulletin 65 Supplement C: (2001-01)**

PHT/45006JD14/028 1900 MHz Body Fluid Level