Appendix 2. Hand Data

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Evaluation of SAR in user hand for LJPNSB-7

Introduction

There is no internationally accepted method to measure the SAR-value in user hand, when the phone is used beside the head. The position of the hand is also difficult to determine. Our approach was to measure the maximum SAR, that can occur when hand covers the back of the phone. In practice the situation, however, is different, because the hand is touching the phone in many places and this can change the current distribution.

Test method

Measurements were done with the Dasy 2 dosimetric assessment system DAE V2, SN:213 and with the generic Twin Phantom version 3 from Schmid & Partner Engineering Ag. The phone was positioned back, i.e. antenna and battery, against the flat part of the phantom. The point of maximum SAR was searched. Then the SAR was measured in 10g mass. Because of the highest SAR values were originally measured on the channel 512 (1850 MHz) with the head phantom, hand SAR was measured on this same channel with the maximum output power level.

The method overestimates the SAR: The whole back of the phone, including the antenna area, was scanned for the hand SAR evaluation, even though this is not consistent with the instructions in the user's guide to not touch the antenna unnecessarily. Brain equivalent liquid was used and this has higher conductivity than tissues in the hand. Furthermore a cube for 10g mass was used, which is difficult to realize in practice.

Results

Maximum SAR in hand in 10g mass

Nokia 8290 (NSB-7)

Back side (GSM 1850 MHz)	0.34 mW/g

Summary

The hand SAR values found for the portable cellular phone (FCC ID: LJPNSB-7) are below the maximum recommended levels of 4 mW/g.