



Test Report
Project 99/5300/8338

**"EMF absorber tests of
TV and computer monitor"**

Client

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07.07.1999



5 Analysis of the Measurement Results

To get an "effective" or "average" reduction rate, the effective, i.e. RMS values of the fields $B_{\text{eff}} = \sqrt{B_x^2 + B_y^2 + B_z^2}$ with and without absorbers will be compared:

$$\text{effective reduction rate} = \left(1 - \frac{\sqrt{B_x^2 + B_y^2 + B_z^2} \text{ (with absorber)}}{\sqrt{B_x^2 + B_y^2 + B_z^2} \text{ (without absorber)}}\right) \cdot 100 \%$$

This is in fact another method as applied in the test report 98/5300/8296 "Electromagnetic wave absorber BSM-502F measurements", where an RMS of the *reduction rates* for the x, y and z components was calculated. The method which is used here is better suited and gives a more rigorous analysis for an investigation of an average reduction rate.

item	B_{eff} without absorber	B_{eff} with absorber	effective reduction rate
TV monitor	138.0 mG	77.4 mG	44 %
Computer monitor	38.2 mG	20.6 mG	46 %

Tab: 5.1: Average or effective reduction rate for TV and computer monitor.

6 Remarks

- The frequency range of the EMF field tester is limited to a frequency range of approximately 30 Hz - 300 Hz. Therefore the calculated reduction rates are only valid for the LF magnetic fields in this frequency range.
- The reduction of the fields was measured only in a local manner. The results presented in this report do not allow any conclusion concerning a reduction of the fields in the wider surrounding of the monitors. The given values are only valid for the fixed measurement point on the casing of the TV or computer monitor as described in this report.