Test report: 498ENV11.DOC

Wismar, 5. Juli 1998

EMC-Tests on the devices/equipment:

SpO2 Sensor

Test item:

Description:	SpO2 Sensor
Model:	Finger probe
Serial number:	P856 RA

Distributor:

EnviteC Wismar GmbH
Philipp-Müller-Straße 12
23966 Wismar

Testing laboratory:

EMV-Informations- und Prüfzentrum e.V.
Philipp-Müller-Straße 12
23966 Wismar

Test specification:

Interference discharge	Strength of radio interference field (comparison with Nellcor Sensor DS 100A)	DIN EN 60601-1-2 /09.94/

Note:

EMC-IPZ e. V. guarantees those commissioning the test that the tests were carried out in accordance with the scope of the test as detailed under point 2 and the test specifications detailed under point 3. Any deviations are presented separately.

The test results contained in this test report relate exclusively to the testing of the test item presented. EMC-IPZ e. V. accepts no liability for consequences and generalisations which may subsequently be drawn from the test results for further prototypes and models of the device type represented by the test item.

1. General information on the test item(s)

Description: SpO2 sensor

Model: Finer probe

Serial number: P856 RA

Distributor: EnviteC Wismar GmbH

Contact person: Herr Scholl

Brief description: This sensor is an accessory for Nellcor pulsoximeters.

System frequencies: none

Advance measures on EMC: none

Participant in the test: Herr Scholl (EnviteC Wismar)

Responsible for the technical content of the report:

	Name	Signature
Tester	Reiko Witt	
Engineer responsible	Reiko Witt	

2. Scope of test

2.1 Interference discharge

DIN EN 55011 (DIN VDE 0875-11/October 1997/
Radio interference of electrical devices and equipment:
Thresholds and measuring processes for radio interference of industrial, scientific and medical high-frequency devices (ISM devices).

The term ISM covers devices or equipment which is developed for the generation and/or local consumption of high-frequency energy for industrial, scientific, medical, domestic or similar purposes.

Testing method	Reference norm / client specified
Strength of radio interference field in frequency range 30 MHz - 1 GHz	DIN EN 60601-1-2 /09.94/

3. Measuring and test results

3.1 Preface and classification

The test item must meet the requirements of CISPR 11

Classification

The device is classified as an industrial, scientific and medical high-frequency device. As such, sub-classification into classes and groups is necessary.

Group sub-classification

Group 1 ISM devices: Group 1 contains all ISM devices in which circuit-bound HF-energy, which itself is necessary for the internal function of the device, is purposely generated.

Group 2 ISM devices: Group 2 contains all ISM devices in which HR-energy is generated purposely as electromagnet radiation for the treatment of materials, and EDM (electrical discharge machining).

Class sub-classification

Devices in class A are devices which as suitable for use in all other areas apart from residential and in such equipment directly connected to a mains power supply which (also) supplies power to residential property.

Devices in class B are devices which are suitable for use in residential areas and in such equipment which is directly connected to a mains power supply which (also) supplies power to residential property.

Accordingly the device is classified as follows:
Device group 1, class B

3.2 Interference discharge

3.2.1 Strength of radio interference field (30 MHz - 1 GHz)

Base norm:
DIN EN 55011 / 10.97 /

Representative operating conditions:

(no info!)

Measuring set-up:
- Test set-up from beginning

Measuring process:
The strength of the radio interference field was determined at its maximum in the entire frequency range. In the course of this the positions of the test item and the antenna were changed.
At the start a pre-scan was carried out with an antenna height of 1.5 m and horizontal polarisation.

The comparison revealed no differences in the radiation characteristics of the two sensors.

Frequency range/Threshold class:
In accordance with the norm the strength of the radio interference field in the frequency range of 30 MHz to 1 GHz was determined. The text item was classified as threshold class B, since the area of application is specified as both residential and industrial areas.

Evaluation of the measuring results/certification status:
During this EMC test, no relevant interference emissions from the test item were found. Measuring was carried out in a shielded, absorber-lined cabin and in the open.