
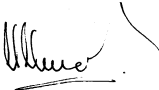


SOP - 1
USE OF OXIMETER AND EXTRACTION OF DATA

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Definitions/Abbreviations	
BPM	Beats per minute

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SOP	Standard Operating Procedure
SpO ₂	Blood oxygen saturation
CRF	Case Report Form

1. PURPOSE:

To provide step-by-step instructions to all persons using the OXIMETER for research purposes, to monitor and measure blood oxygen saturation (SpO₂) and pulse rate.

2. REFERENCES:

Device manual.

3. PERSONNEL REQUIRED AND LEVEL OF EXPERTISE:

Tobacco and Alcohol Research Group team members.

4. MATERIALS AND EQUIPMENT REQUIRED:

Oximeter and cables and fingertip sensor.

5. PROCEDURE:

5.1 When to use:

When SpO₂ or pulse rate monitoring/recording is required by the study protocol.

5.2 How to use:

5.2.1 Collecting data

- Clean or disinfect the reusable sensor before attaching to new subject (see cleaning information under "Maintenance").
- Attach the sensor connector (Ref 3044) to the oximeter.
- Attach the sensor onto the subject's finger, with the cable lying across the palm of the hand and parallel to the arm. Be sure to fully insert the subject's finger into the sensor.
- To begin measuring SpO₂ and pulse rate, press the "I" key. The "patient number" will be momentarily displayed. Record this on CRF. After a few seconds the SpO₂ value, pulse rate and pulse strength bar graph will be shown. One SpO₂ and pulse rate reading will be taken every 30 seconds.
- To manually increase the "patient number" for a new subject, press the "I".
- To clear all spot check data, press and hold the "I" key for approximately six seconds.
- Press the "O" key to turn off the device. The oximeter turns off automatically two minutes after the sensor is removed from the subject or after the sensor is disconnected from the oximeter.

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5.2.2 *Extracting data – downloading to Excel*

- After collecting data, switch off oximeter.
- Connect the oximeter to a PC through the printer/pc interface cable (ref 3350). Ensure the plug of the cable marked “BCI” is connected to the oximeter and the plug marked with “PRINTER” is connected to the serial cable.
- Start program in *accessories*, then *communications*.
- Select *hyper-terminal*, (click yes if prompted to make default terminal). Create a name and select corresponding icon, click OK.
- Go to *connect using* and select appropriate com port (COM1?), click OK.
- Set port settings as follows:

Bits per second	9600
Data bits	8
Stop bits	1
Parity	none
Flow control	none

- Go to *transfer, capture text* then select file (or create one), then *start*.
- Switch on oximeter. The data will automatically upload and be displayed on the screen.
- Go to *transfer*, either when download is complete or to stop download, *capture text* then *stop*.
- Start Excel and go to *file* and *open*. Ensure “All Files” is selected for file type.
- Choose *fixed width data*.
- Go to *preview of file* and scroll down. Designate the *Start import row* based on the one directly below *Min:Sec*, *SpO₂* and *BPM*. Press *next*.
- To create a line break, click at the desired position in the data preview screen as follows:
 - Between time and % sat.
 - Between numeric value and % symbol.
 - Between % sat and BPM.
 - Between numeric value and acronym BPM.
- Press *next*. Choose *general* for column data format. Press *finish*.

5.2.3 *Maintenance*

- No calibration is required but functioning can be checked using an Oximetry/ECG Patient Simulator (available as an accessory).
- When about two hours of battery time remains, the left-most bar graph segment lights up. The oximeter will continue to operate normally until the batteries run out at which point the device will switch off.

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- Clean the reusable sensor and oximeter with a soft cloth moistened in a mild soap solution. If disinfection is required, wipe the sensor's/oximeter's surfaces with a soft cloth moistened in isopropyl alcohol. Do not allow liquid to enter any of the sensor's/ oximeter's openings.
- For long-term storage or long periods of not being used (6 months), remove the batteries from the oximeter.

6. TROUBLE SHOOTING:

Problem	Solution
Technical issues	Refer to Chapter 7 of the manual or contact Pulmolink http://www.pulmolink.co.uk/
Any other problems	TARG Laboratory phone: 07957334265 Prof Marcus Munafò (0117) 954 6841 internal 46841 Marcus.Munafò@bristol.ac.uk Dr Angela Attwood (0117) 331 7450 internal 17450 Angela.Attwood@bristol.ac.uk