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Title page for E-project-042413-160152

Project Type	MQP
Submission date	2013-04-24
Authors	<ul style="list-style-type: none"> • Alexandra V Fontaine, BE • Arben Koshi, BE • Danielle C Morabito, BE • Nicolas A Rodriguez, BE
URN	E-project-042413-160152
Title	Reflectance-Based Pulse Oximetry for the Chest and Wrist
Advisor	<ul style="list-style-type: none"> • Mendelson, Yitzhak, BE
Availability	unrestricted
Abstract	
<p>Reflectance-based pulse oximetry is a technique used for noninvasively monitoring the oxygen saturation (SpO₂) and pulse rate (PR). However, there is little supporting evidence that it can accurately collect measurements from the chest and wrist. In this project, a reflectance-based pulse oximeter was built and used to collect measurements while sitting, standing, during self-induced hypoxia, and during self-induced hyperventilation then compared to the measurements taken by a HOMEDIC Deluxe Pulse Oximeter. The prototype was able to accurately measure within an error of + 1% and ±3% for SpO₂ and PR respectively from the wrist while an error of ±1% and +4% for SpO₂ and PR respectively from the chest.</p>	
Files	<ul style="list-style-type: none"> • Final_MQP_Report.pdf

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