

Response Time of the Avant[®] 9700 Pulse Oximeter with PureSAT[®] Signal Processing Technology

Summary

The attached side-by-side comparison of the Nonin Avant[®] 9700 against two leading pulse oximeters demonstrates the immediate, real-time response of the 9700 in a simulated, 30-second desaturation event. The testing was conducted under a condition of good perfusion, and devices were set in the fastest possible response mode. The Oxitest Simulator Plus 7 was used to simulate a 30 second patient apnea event, with corresponding changes in heart rate. The apnea event was taken from an actual patient record. The represented data is an average of ten runs of the same 30-second apnea event. Saturation was tested at five levels from 97% to 70%, with heart rates between 82 and 100. As oxygen saturation levels decreased, the heart rate was increased to duplicate physiological conditions.

In this test, the Avant 9700 proved to be as responsive as product A, and both the Avant 9700 and product A were more responsive than product B, by an average of about 8 seconds.

Nonin Technology

Nonin's PureSAT[®] technology finds and extracts, on a pulse by pulse basis, the best and most usable pulse signals, all the while identifying unusable or missing signals. Nonin algorithms process each pulse waveform individually, without depending on a uniform pulse rate, which allows the Nonin oximeters to respond more quickly to changes.

Avant 9700 Specifications*

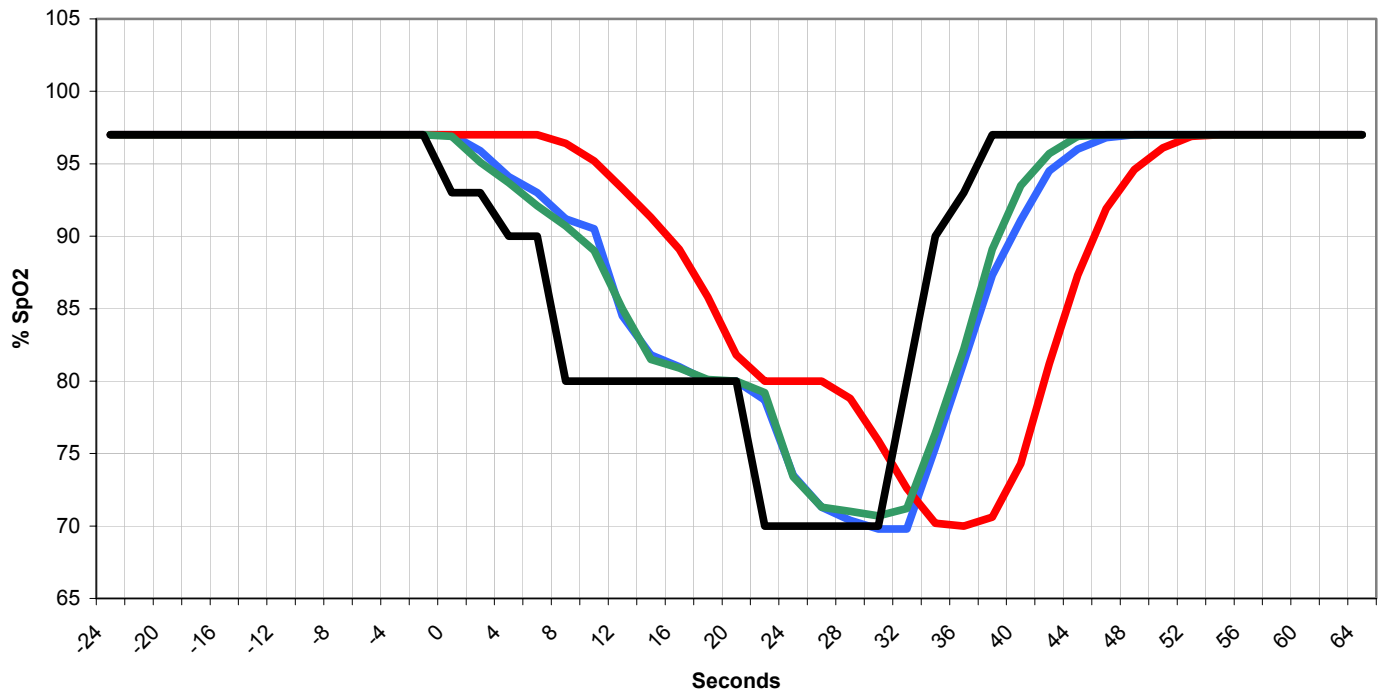
Saturation Accuracy (%SpO ₂ + 1 SD) 70-100%			Pulse rate accuracy 60-240 beats/min		
No Motion	Adults/Peds	± 2 digits	No Motion	Adults/Peds	± 3 digits
	Neonates	± 3 digits		Neonates	± 3 digits
Motion	Adults/Peds	± 2 digits	Motion	Adults/Peds	± 5 digits
	Neonates	± 3 digits		Neonates	± 5 digits
Low Perfusion	Adults/Peds	± 2 digits	Low Perfusion	Adults/Peds	± 3 digits
	Neonates	± 3 digits		Neonates	± 3 digits

*Complete specifications are available at www.nonin.com

Nonin Technical Bulletin

Exhibit 1

Averaged SpO₂ Response Time Testing Perfusion Setting 100% 30 Second Desaturation



Nonin Avant 9700 - Fast Responding SpO2	Product B - 2 sec Averaging, Max Sensitivity On, Alarm Delay Off
Product A - 2 Sec Reponse, Fast Mode On Alarm Delay Off	OxiTest Simulator