

Title (en)  
METHOD AND MEASURING DEVICE FOR MEASURING OXYGEN SATURATION IN BLOOD

Title (de)  
VERFAHREN UND MESSGERÄT ZUM MESSEN DER SAUERSTOFFSÄTTIGUNG IM BLUT

Title (fr)  
PROCÉDÉ ET APPAREIL DE MESURE POUR MESURER LA SATURATION DU SANG EN OXYGÈNE

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Application  
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Abstract (en)  
[origin: WO2011095162A1] The invention relates, inter alia, to a method for measuring oxygen saturation of the blood flowing in a peripheral human or animal body part (20), wherein electromagnetic radiation ( $q_1'(t)$ ,  $q_2'(t)$ ) having a first and a second wavelength is radiated into or through the peripheral body part, the reflected or transmitted radiation ( $x_1'(t)$ ,  $x_2'(t)$ ) is measured in order to form two measurement signals ( $x_1(t)$ ,  $x_2(t)$ ), and the oxygen saturation of the blood is determined by evaluating the two measurement signals. According to the invention, a mathematical mixture module is used to evaluate the two measurement signals, and a statistical evaluation method is applied to the two measurement signals, wherein the statistical independence of a useful source signal and of an interference source signal is assumed as a constraint, and the evaluation method is used to determine the useful source signal and two filter functions related to the useful signal, and the oxygen saturation of the blood is determined by means of the three mentioned signals.

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