

# Spectrophotometry of Human Hemoglobin in the near Infrared Region from 1000 to 2500 nm

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## Abstract

Absorbance and first and second derivative absorbance spectra and quarter-millimolar absorptivity coefficients for hemoglobin species including oxy-, deoxy-, carboxy- and methemoglobin in the visible and in the near infrared regions from 620 nm to 2500 nm are presented. At wavelengths longer than 1500 nm, the absorbance and second derivative absorbance spectra of hemoglobin species are similar for all of the species. Absorption bands are present centred at 1690, 1740, 2056, 2170, 2290 and 2350 nm.