

Abstract Submitted  
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**Optical Properties of Bovine Ocular Tissues in the Near Infrared Region**<sup>1</sup> GUANG-YIN SWANLAND, student, RAYLON YOW, DHIRAJ SARDAR, ANDREW TSIN, ROBERT THOMAS — Optical properties of bovine ocular tissues have been determined in the near infrared region. The indices of refraction ( $n$ ) of these ocular tissues were measured with a Michelson interferometer. The total diffuse reflectance ( $R_d$ ), total diffuse transmittance ( $T_d$ ), and collimated transmittance ( $T_c$ ) on the individual tissues have been measured using a double-integrating sphere setup. The inverse adding doubling (IAD) method based on the diffusion approximation and radiative transport theory is applied to the measured values of  $n$ ,  $R_d$ ,  $T_d$ , and  $T_c$  to calculate the optical absorption and scattering coefficients as well as the scattering anisotropy of bovine ocular tissues.

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