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Differential Analysis of UV Spectrum in Corneal Epithelial Models

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Purpose: To compare UV-absorption and UV-induced fluorescence in the bovine and rabbit corneal epithelium. **Methods:** Spectrophotometry and Spectrofluorometry. **Results:** Absorption peaks of the bovine corneal epithelium occur throughout the UV range whereas that of rabbit do not occur in the UVB region. Both models give fluorescence peaks which occur in the visible range but the fluorescence intensities are lower in case of the rabbit. **Conclusions:** Bovine corneal epithelium possesses a better protective mechanism than the rabbit as the latter does not absorb maximally UVB rays, the most biotoxic in the UV range. A lesser fluorescence intensity in the rabbit represents a higher concentration of fluorescence reducers than in bovine corneal epithelium.