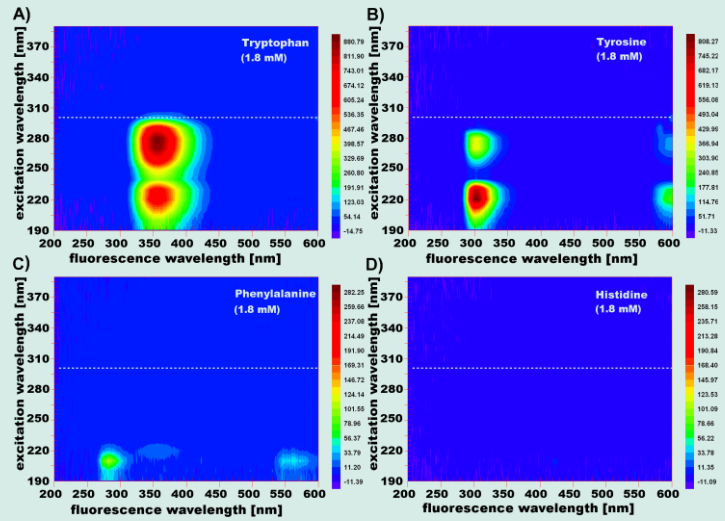


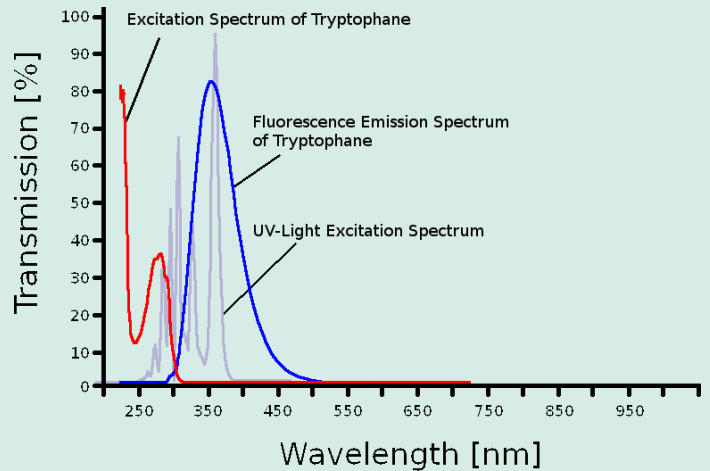
Excitation and Emission Spectra of Trp, Tyr, Phe and His



Tryptophane caused the intrinsic protein fluorescence when excited with near UV-light. Other aromatic amino acids have absorption maxima at shorter wavelengths and much weaker fluorescence activity.

Absorption, Emission and Illumination Spectra of Trp and the Light Source

Absorption- and emission spectra of tryptophane overlaid with the illumination spectrum of XtalLight 100C. Although, most of the illumination light overlap with the emission spectrum of tryptophane and only a minor part with the excitation spectrum, intrinsic fluorescence can be used to distinguish protein from salt crystals.



Transmission Properties of Cover- Materials

Excitation-, emission and illumination spectra after being filtered by different covering materials are shown. Although, excitation wavelengths from 260 to 300 nm are significantly reduced when the sample was covered with standard glass cover slips (lowest images), the appearance of crystal fluorescence remains clear and almost as intense as the quartz covered sample (upper image). The remaining excitation light from 305 to 380 nm contributes significantly to the intrinsic fluorescence excitation.

