Discussion .The calculations based on your experimental data provide a reliable method for assessing the concentration of blue dextran solutions in future applications.– Vitamin B12: The experiment correctly identified the characteristic absorption peaks of vitamin B12, with the prominent peak occurring at 361 nm. This matches previous research, which identifies three absorption maxima for cyanocobalamin: at 278 nm, 361 nm, and 550 nm?14+source??15+source?.Spectrophotometric Characteristics The spectrophotometric analysis performed on blue dextran and vitamin B12 revealed significant insights into their optical properties.The peak absorbance at a specific wavelength aligns with previous studies, which typically report maxima around 620–650 nm due to the blue coloration of the dextran complex?14+source?.The extinction coefficient for blue dextran depends on its specific dye and preparation, but the absorbance values fall within expected ranges for spectrophotometric studies of dyed dextran.Dilution and Sample Preparation The experiment required specific dilutions of the stock solutions of blue dextran and vitamin B12 to ensure that their absorbance values fell within a measurable range for the spectrophotometer.Blue dextran was diluted 1:8, while vitamin B12 was diluted 1:11..