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[\[PDF \(554K\)\]](#) [\[References\]](#)**Spectrofluorometric Determination of Total Bilirubin in Human Serum Samples Using Tetracycline-Eu<sup>3+</sup>**[Weiwei BIAN<sup>1\)</sup>](#), [Na ZHANG<sup>2\)</sup>](#) and [Le WANG<sup>3\)</sup>](#)1) *Medical Chemistry Staff Room, Weifang Medical University*2) *Department of Chemistry, Huangshan University*3) *State Key Laboratory of Ceramic, Zibo Entry and Exit Inspection and Quarantine Bureau*

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The measurement of total bilirubin in serum is one of the most frequently performed tests in clinical analysis. A new spectrofluorometric method was developed for the determination of trace amounts of total bilirubin. Using tetracycline-Eu<sup>3+</sup> as a fluorescent probe, bilirubin can remarkably reduce the fluorescence intensity of the tetracycline-Eu<sup>3+</sup> complex, and the reduced fluorescence intensity of Eu<sup>3+</sup> ion is in proportion to the concentration of bilirubin. The optimum conditions for the determination of bilirubin were also investigated. This method is simple, practical, and relatively free of interference from coexisting substances. It can be successfully applied to assess total bilirubin in serum samples. We also compared the developed method with a modified Jendrassik-Grof method in clinical analysis.

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