

Determination of tocopherol in oil pharmaceuticals by using the spectrofluorimetry and method validation

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Abstract The paper presents research results regarding the establishing of the optimal conditions for the determination of fat-soluble vitamin E in multivitamin pharmaceutical products, by using the native fluorescence of the compound in n-hexane. Two spectrofluorimetric methods were tested, with solubilisation directly in n-hexane and after n-hexane extraction from non-polar matrices using ethanol as a carrier. The excitation and emission wavelengths were 290 nm and 306 nm, respectively, and a comparative study was made. The first method is linear in the range 1 – 100 µg/mL, having a detection limit of 1 µg/mL and a quantification limit of 2 µg/mL. The second method was developed for vitamin E concentrations in the range 2 - 60 µg/mL. The method is linear in the range 2 – 50 µg/mL, with a 0.68 µg/mL detection limit and a 2.27 µg/mL quantification limit.

Keywords: tocopherol, pharmaceutical, spectrofluorimetric assay, validation
