

Determination of Vitamin B2 using Techcomp FL970 Fluorescence Spectrophotometer

Introduction

Vitamin B2 (VB2), or riboflavin, is one of eight B vitamins that are essential for human health. It can be found in egg yolk, milk, beans, grains, plants, and dairy products. It is crucial for breaking down food components, absorbing other nutrients, and maintaining tissues. The qualitative and quantitative measurement of VB2 is therefore an essential part in both food science development and food production.

Sample and Apparatus

Sample: VB2 tablet

Instrument : Techcomp FL970 fluorescence spectrophotometer

Parameter and result

Parameter: Wavelength scan mode (EM scan (430nm~700nm) / EX wavelength =420nm); scan speed 240nm/min sampling interval: 1nm; EX slit: 5.0nm; EM slit: 2.5nm, PMT: 800.

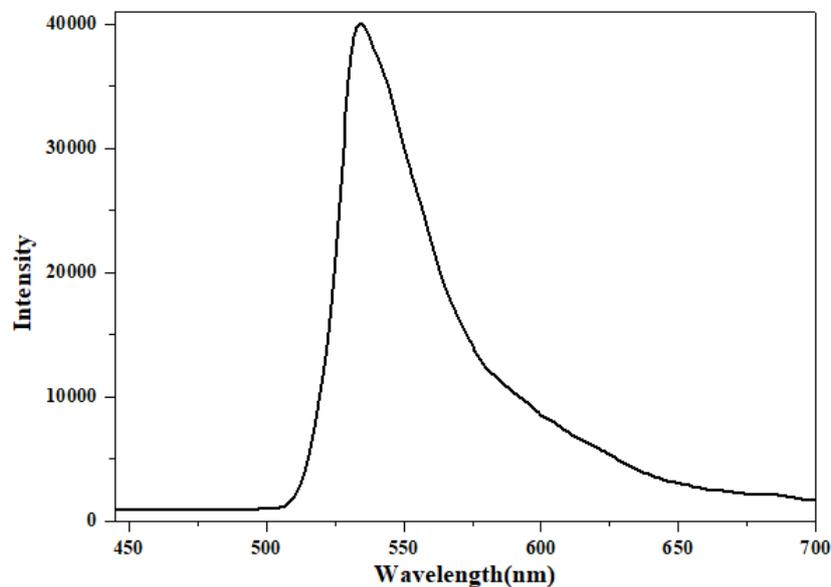


Fig.1 The EM spectrum of VB2

Result:

VB2 in glacial acetic acid gives a very strong fluorescence signal at 534 nm. As can be seen from the above, the Techcomp FL970 is able to detect the strong signal with no interference.

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