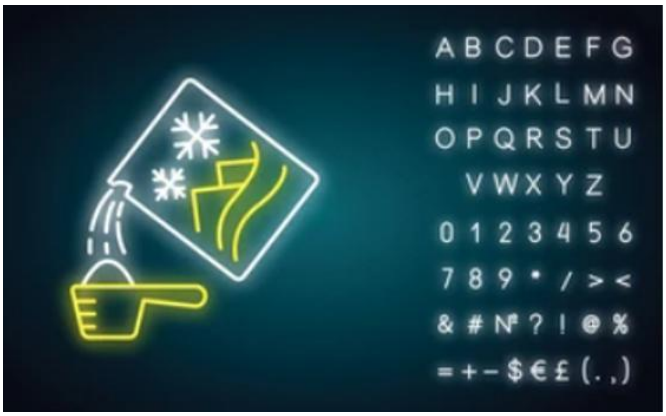
Detection of Fluorescent Whitening Agents in Pharmaceutical Packaging Materials

Fluorescent whitening agents (FWAs) are organic compounds that can absorb invisible ultraviolet light and excite visible blue-violet fluorescence, increasing the total amount of light reflection to achieve whitening and brightening effects. Numerous medical tests have proved that FWAs are potential carcinogenic factors and can be harmful to human health, while FWAs are also potentially harmful to the environment. Therefore, there is a need to test drug packaging materials for fluorescent whitening agents. **CD Formulation** can provide relevant testing services and test data to help customers provide safer and more environmentally friendly drug packaging and promote the process of drug commercialization.



Our Services

CD Formulation has a professional research team and testers to test and analyze our clients' pharmaceutical packaging materials, and the specific services we provide include the following.
Fluorescent whitening agent testing.
Data analysis of material.

In addition to the above services, we can also provide customized fluorescent whitening agent testing services.

Test Methods for Fluorescent Whitening Agents

Ultraviolet Spectrophotometric Method

Ultraviolet spectrophotometry (UV) is a qualitative and quantitative analysis method established by using the absorption characteristics of substance molecules to

electromagnetic waves with wavelengths from 200 to 760 nm, and is one of the traditional methods for detecting FWAs at present.

Fluorescence Spectrophotometry

Fluorescence spectrophotometry (FL) is a method for qualitative or quantitative analysis using fluorescent substances emitting fluorescence after excitation by ultraviolet light. The method is highly sensitive (2~3 orders of magnitude higher than UV) and selective, and is a trace analysis method that has been developed relatively rapidly in recent years, and is used more often in the detection of FWAs.

High Performance Liquid Chromatography

High performance liquid chromatography (HPLC) is an important branch of chromatography, mainly used for the detection of substances with high boiling points, poor thermal stability and large relative molecular masses, and is a relatively mature detection method.

Why Choose CD Formulation?

- Comprehensive integration of pharmaceutical R&D supporting products.
- Long-standing expertise in field solid state characterization to support the development of custom and proprietary active pharmaceutical ingredients.
- Develop internal common methods for various technologies without having to develop methods from scratch.
- Comprehensive advanced equipment, can achieve high capacity, fast turnover, support development, stability, batch release.

References

1. Shen H. L., Shen S.Y. Determination of fluorescent whitening agent ER-1 content with high performance liquid chromatography external standard method[J]. Textile Auxiliaries, 2011.
2. Pan K. L., et al. Study on fluorescence spectra and determination of fluorescent whitening agent VBL[J]. Chemical Research and Application, 2010.