Spectrophotometer UV and Visible Wavelength Qualification

Holmium Oxide Glass Reference

Purpose

Like its liquid counterpart, the holmium glass filter produces characteristic peaks that make it suitable for use as a wavelength reference material in the UV and visible regions of the spectrum (240 nm – 640 nm). Unlike the liquid cell, however, It is not adopted by all the Pharmacopoeias for wavelength qualification.

It is accepted for this purpose by the following bodies:

United States Pharmacopeia

American Society for Testing and Materials

Therapeutic Goods Administration (Australia)

British Pharmacopoeia

Description and Discussion

Glass filter containing holmium oxide, mounted stress free in an anodised aluminium holder. As a solid material the holmium glass filter is physically more robust than the equivalent liquid cell, and can therefore be used in more demanding environments, making it especially useful as a routine wavelength check. Sliding window covers are provided to protect the surface from damage when not in use. Variations from melt to melt of the glass can cause small uncertainties in peak position, so each Starna filter is individually certified.

The spectrum shows 11 characteristic and well-defined peaks covering the wavelength range from 240 nm to 640 nm.