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

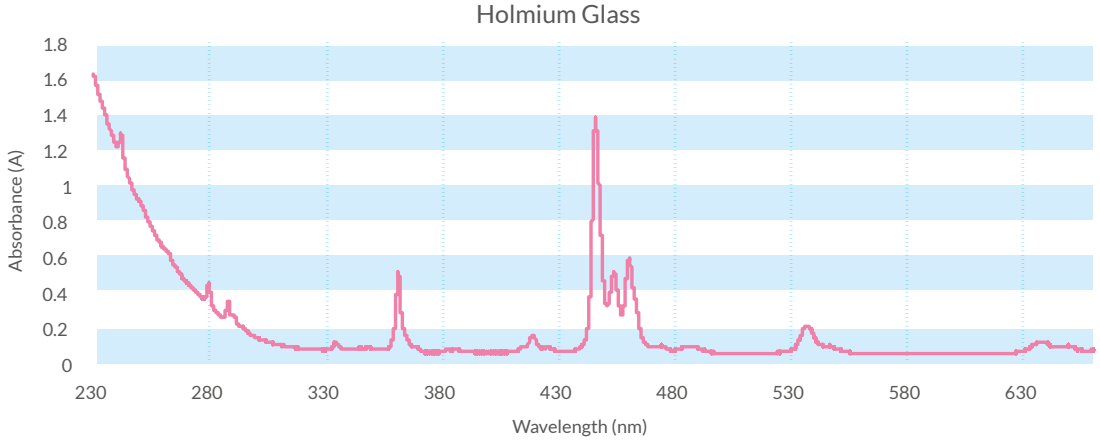
Therapeutic Goods Administration (Australia)

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.



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Approximate peak wavelength values (in nm) are: 242, 279, 288, 334, 361, 419, 446, 454, 460, 537, 638

Note: The above values are for guidance only. Because the absorption bands are asymmetric, measured values will be spectral bandwidth dependent. The Calibration Certificate accompanying each Starna Holmium Glass Reference gives actual values measured at bandwidths of 0.10, 0.25, 0.50, 1.00, 1.50, 2.00 and 3.00nm, and only these certified values should be used for instrument qualification. On request, Starna can provide certified values at other wavelengths and bandwidth values..

Certification and Documentation

A Certificate of Calibration and Traceability and full instructions for use are provided with each Reference Material. The certificate is supplied in electronic format, on a USB drive in the same box as the references, allowing hard copy to be produced on demand and giving easy interface to the user's own IT systems. Certification measurements are made on a reference spectrophotometer that has been qualified using Standard Reference Materials certified by the National Institute of Standards and Technology (NIST) in the USA, or against primary physical references such as elemental emission lines.

Accreditation

Starna Scientific is accredited to both ISO Guide 34 (4001) as a Reference Material producer, and ISO 17025 (0659) as a Calibration Laboratory for optical reference measurements. Starna Scientific's manufacturing facility is accredited to the ISO 9001 Quality Management System with BSI.

Warranty

STARNA offers a Lifetime Guarantee on all Starna Certified Reference Materials, unless otherwise stated, such that any reference material that moves outside its published uncertainty budget will be replaced free of charge. This guarantee is subject to the reference materials being re-certified at least every two years and that the references have not been physically, thermally or optically abused. The STARNA UKAS accredited calibration laboratory aims to re-certify and despatch references within five working days from receipt.

How to Order

	CATALOGUE NUMBER
Holmium glass filter	**RM-HG**

Starna scientific
'Setting the Standard'

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