



Starna scientific
'Setting the Standard'

Quality Assurance in the Analytical Laboratory

Spectrophotometer NIR Wavelength Qualification (Transflectance)

NIR Transflectance Reference

Purpose

This Reference Material is specially designed for the wavelength qualification of near infrared reflectance spectrophotometers over the range 900 nm to 2600 nm.

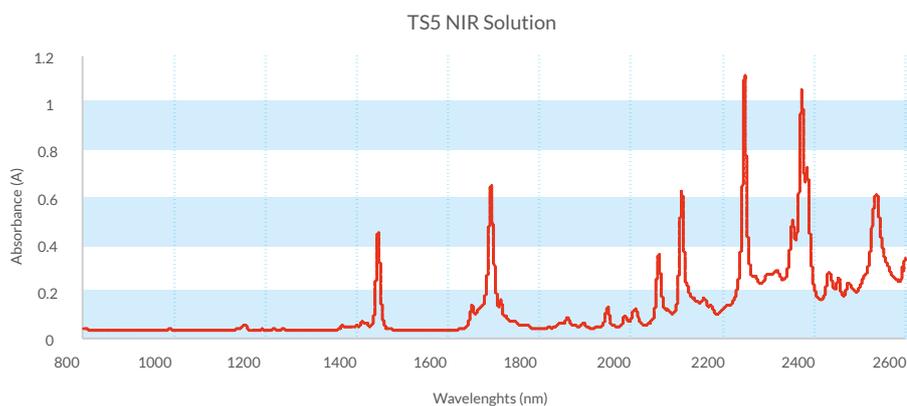
Description and Discussion

Near infrared reflectance spectroscopy has become a widely used tool in the analysis of food products. To provide a wavelength qualification tool for these instruments, this reference material uses a proven transmission reference in a 5 mm mirror - coated cell to simulate reflectance measurements. Used in this way the reference has an effective 10mm path-length. A proprietary organic matrix (TS5) is sealed by heat fusion into the far-UV quality quartz cell.

14 certified peaks are available for wavelength qualification purposes.

Approximate peak wavelength values (in nm) are:

991, 1155, 1447, 1652, 1693, 1861, 1948, 2060, 2111, 2248, 2353, 2373, 2385, 2536



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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 NIR Reference gives actual values measured at bandwidths of 1.00, 2.00, 3.00, 4.00 and 5.00 nm, 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.

How to Order

Near Infrared Transflectance Wavelength Reference Cell.

**CATALOGUE
NUMBER**

RM-NIR/T

Accreditation

Starna Scientific is accredited to both ISO 17034 as a Reference Material producer, and ISO/IEC 17025 as a Calibration Laboratory for optical reference measurements. Starna Scientific's manufacturing facility is accredited to the ISO 9001 Quality Management System with BSI. For details see www.starna.com/accreditations.

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.



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