

UV-VIS-NIR SPECTROMETER



Descriptions

Ultraviolet-visible (UV-Vis-NIR) spectroscopy is a technique used to measure **light absorbance across ultraviolet (200-400nm), visible (400-800nm) and near infrared, NIR (800-1800nm) ranges of the electromagnetic spectrum.**

When incident light strikes matter it can either be **absorbed, reflected, or transmitted.** The absorbance of radiation in the UV-Vis range causes atomic excitation, which refers to the transition of molecules from a low-energy ground state to an excited state.

In this instrument, three (3) types of sample can be analyzed, whether in **liquid, bulk or powder** form. This instrument also provided a wide wavelength range between 170 to 3600nm with 2 differences in lamp sources; xenon and halogen. This instrument can produce three (3) data types which are absorbance, transmittance and reflectance.

Further Information

- Dr. Nur Hidayah Ahmad
- E-mail : nurhidayahahmad@utm.my

Brand-Model

SHIMADZU, UV-3600Plus

Basic Specifications

Wavelength range: 170 nm to 3600 nm

Detectors: PMT, InGaAs, cooled PbS

Measurement types:

Reflection, Diffuse Reflection, Transmittance, Absorption and Specular Reflectance

Maximum size of reflective sample:

Approx. 100 mm dia. x 15 mm thick

Equipment Website/ Product Brochure

<https://www.ssi.shimadzu.com/sites/ssi.shimadzu.com/files/Products/literature/Spectroscopy/C101-E128A.pdf>

Types of samples

Bulk / powder / liquid

Location

Material Characterization Laboratory
(T05, 03-01-10)

Operator

- Mrs Nor Syahidah Ahmad Shah
- E-mail : norsyahidah@utm.my

- Ms Rahizah Binti Abd Rahman
- E-mail : rahizah.ar@utm.my