

Transmittance Spectrum of IR Quartz Cell

INTRODUCTION

Quartz cell has an excellent transmittance in the long wavelength region and is used in many fields. This time, by using U-4100 (liquid sample measurement system) which allows the analysis over a wide wavelength range of 185 to 3300 nm, the transmittances of the IR quartz cell made of high purity anhydrous synthetic quartz glass and standard quartz cell were analyzed. Air was used as the control in the analysis. While the transmittance of the IR quartz cell is 80% or higher over the whole wavelength region, the transmittance of the standard quartz cell is reduced to less than 10% at around the wavelength of 2700 nm. When the transmittance of a cell is low, there are effects such as increased noise in the sample having a high absorbance and the analysis is affected. For the analysis focusing on the near-infrared region, highly accurate analysis is possible by using the IR quartz cell.

SAMPLE

Sample : IR quartz cell, standard quartz cell

INSTRUMENT CONDITIONS

Instrument : U-4100 spectrophotometer (liquid sample measurement system)

Analysis wavelength range: 200 - 3300 nm

Sampling interval : 1 nm

[UV/VIS]

Scan speed : 300 nm/min

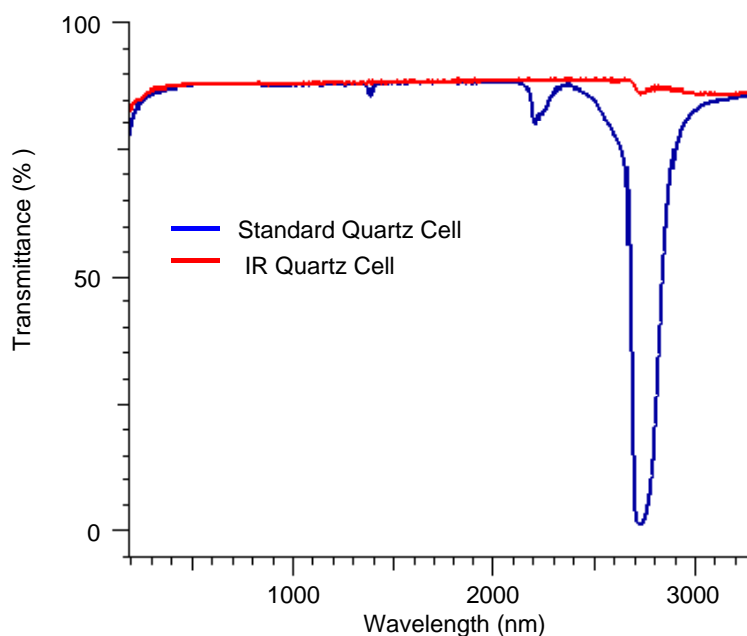
Slit : 8 nm

[NIR]

Scan speed : 750 nm/min

Slit : Automatic control

PbS sensitivity : 2



Transmission Spectra of IR Quartz Cell and Standard Quartz Cell

KEY WORDS

Electronics/Semiconductor-Related,
Other Electronics/Semiconductor-Related, Transmission Spectrum,
Transmittance, Quartz Cell, Material, UV, U-4100

Spectrophotometer (UV)

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