
**JASCO CERTIFIED INFRARED TRANSMISSION
WAVENUMBER STANDARD**

NºJ028/2024

The infrared transmission wavenumber standard certified values are intended for use in calibrating the wavenumber scale of spectrophotometers in the infrared (IR) spectral region from 400 cm⁻¹ to 4000 cm⁻¹.

This standard unit consists of a matte finish polystyrene film with a 25 mm diameter exposed area, centered 38 mm from the bottom of a cardboard holder, which is 5 cm × 11 cm × 0.2 cm in size.

Polystyrene film standard is certified on a Jasco FT/IR-4X Series Spectrometer – serial number A018362111 which has been calibrated with NIST certified polystyrene film (SRM-1921b), which is the NIST primary standard.

The instrument room temperature was maintained at 23 °C ± 1 °C and the humidity ranged from 30 % to 50 % during the measurements.

Standard Identification:

TAG: **IR-03**
Description: **Polystyrene-38 micron**
Serial Number: **PE10367**

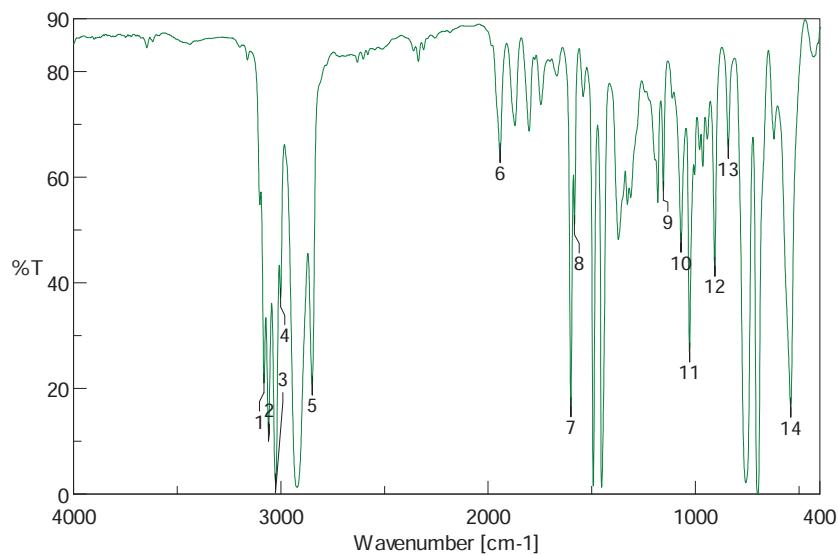
Parameters used in this measurement:

Light source	Standard
Detector	TGS
Accumulation	16
Resolution	4 cm ⁻¹
Zero filling	On
Apodization	Cosine
Gain	Auto (1)
Aperture	Auto (7 mm)
Scan speed	Auto (2 mm/sec)
Filter	Auto (12800 Hz)

Results:

Band Number	Primary Standard Wavenumber position[cm ⁻¹]	Secondary Standard Wavenumber position[cm ⁻¹]	Difference [cm ⁻¹]	Acceptance criterion [± 0.5 cm ⁻¹]
1	3082.26	3081.79	0.47	Approved
2	3060.16	3059.71	0.45	Approved
3	3025.99	3025.76	0.23	Approved
4	3001.2	3001.66	0.46	Approved
5	2849.48	2849.31	0.17	Approved
6	1942.97	1942.93	0.04	Approved
7	1601.29	1600.83	0.46	Approved
8	1582.98	1583.27	0.29	Approved
9	1154.5	1154.19	0.31	Approved
10	1069.22	1069.33	0.11	Approved
11	1028.27	1027.87	0.40	Approved
12	906.63	906.38	0.25	Approved
13	841.79	841.78	0.01	Approved
14	539.41	539.87	0.46	Approved

Spectrum:



The expiration date is, as noted below, is 5 years from the date of validation.

Calibrated by: _____ Roberto Cruz

Date Certified: _____ January 08, 2024

Expiration Date: _____ January 08, 2029

Roberto Cruz

Digitally signed by Roberto Cruz
DN: cn=Roberto Cruz, o=Jasco,
ou=Service, email=r cruz@jasco.com.br,
c=US
Date: 2024.01.08 11:18:27 -03'00'