



---

---

**JASCO CERTIFIED ATR STANDARD**

---

---

**N°J031/2024**

The ATR Validation Standard is a flexible silicone material with certified values intended for use in calibrating the ATR accessory of spectrophotometers in the infrared (IR) spectral region from 500 cm<sup>-1</sup> to 4000 cm<sup>-1</sup>).

ATR Validation 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:**

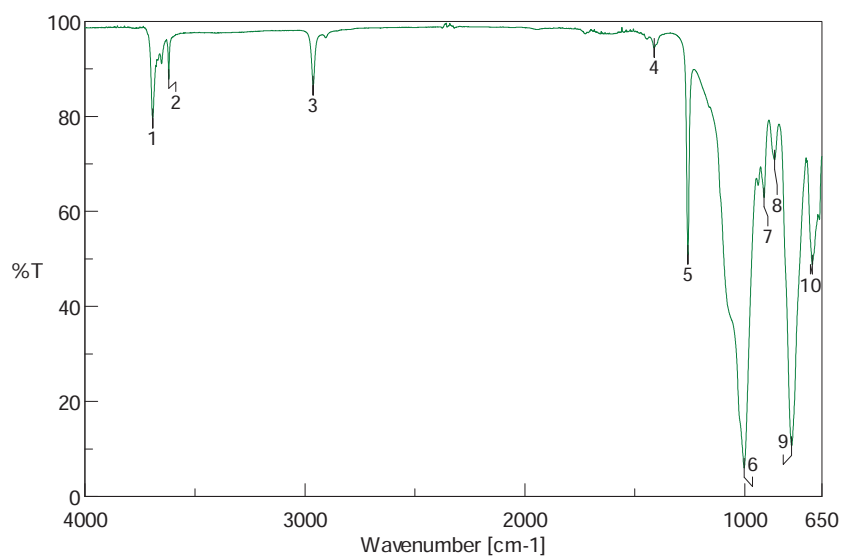
TAG: **ATR-01**  
Description: **MRC-910-ATR**  
Serial Number: **0140**

**Parameters used in this measurement:**

Light source	Standard
Detector	TGS
Accumulation	64
Resolution	4 cm <sup>-1</sup>
Zero filling	On
Apodization	Cosine
Gain	Auto (4)
Aperture	Auto (7 mm)
Scan speed	Auto (2 mm/sec)
Filter	Auto (12800 Hz)

**Results:**

Band Number	Expected Position of the Wavenumber [cm <sup>-1</sup> ]	Measured Position of the Wavenumber [cm <sup>-1</sup> ]	Difference [cm <sup>-1</sup> ]	Acceptance criterion [± 0.5 cm <sup>-1</sup> ]
1	3692.70	3692.53	0.170	Approved
2	3619.36	3619.25	0.110	Approved
3	2962.26	2962.28	0.020	Approved
4	1412.41	1412.60	0.190	Approved
5	1258.10	1258.18	0.080	Approved
6	1007.30	1007.26	0.040	Approved
7	912.51	912.165	0.345	Approved
8	864.81	864.917	0.107	Approved
9	785.95	786.007	0.057	Approved
10	693.64	693.284	0.356	Approved

**Spectrum:**

The expiration data 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=rcruz@jasco.com.br, c=US  
Date: 2024.01.08 11:58:19 -03'00'