

# ISO 21475:2019 (E)

## Plastics — Methods of exposure to determine the wavelength dependent degradation using spectrally dispersed radiation

---

### Contents

	Foreword
	Introduction
1	Scope
2	Normative references
3	Terms and definitions
4	Principle
5	Apparatus
5.1	Exposure device
5.2	Spectroradiometer
5.3	Measuring device for property change
6	Test specimens
6.1	Specimen preparation and conditioning
6.2	Specimen conditioning
7	Exposure parameter
7.1	Radiation
7.2	Specimen temperature
7.3	Test duration
8	Procedure
8.1	Specimen optical and mechanical properties measurements
8.2	Mounting test specimens
8.3	Exposure
9	Test report
Annex A	(informative) General information on the test method using spectrally dispersed radiation
A.1	General
A.2	Previous history of the test specimen
A.3	Thickness of the test specimen
A.4	Increasing temperature
A.5	Other important parameters
A.6	Further consideration
Annex B	(informative) Examples of devices for spectrally dispersed irradiation
Annex C	(informative) Examples of test results
C.1	General
C.2	Spectrally dispersed radiation test
C.3	Optical and mechanical property measurement
C.3.1	Colour measurement
C.3.2	Micro-fourier transform infrared spectroscopy
C.3.3	Micro hardness
C.3.4	Molecular mass
C.4	Test results of polycarbonate
C.4.1	Specimen

- C.4.2**      **Result of colour measurement**
- C.4.3**      **Result of micro-fourier transform infrared spectroscopy**
- C.4.4**      **Result of micro hardness**
- C.4.5**      **Result of molecular mass**
- C.5**        **Test result of polypropylene**
- C.5.1**      **Specimen**
- C.5.2**      **Result of colour measurement**
- C.5.3**      **Result of micro-fourier transform infrared spectroscopy**
- C.5.4**      **Result of micro hardness**
- C.5.5**      **Result of molecular mass**

**Page count: 18**