

### QUV Accelerated Weathering Tester

#### Principle:

The QUV Tester is an accelerated weathering tester. The damage caused by sunlight, rain, and dew is reproduced, damage that occurs over months or years can be reproduced in a fraction of the time.

Materials are exposed to alternating cycles of UV light and moisture at controlled temperatures to enhance accuracy and accelerate test results. Experiments are performed with elevated temperatures, UV lamps, condensation and/or spray.

The QUV's fluorescent lamps simulate UV light from the sun and reproduce the physical damage to materials caused by sunlight. Different lamps, encompassing different wavelengths, can be used to simulate realistic degradation (via UVA-340 lamps) or unrealistic, severe degradation (UVB-313 lamps).

In addition to condensation, spraying can also be used to induce thermal shock, resulting from the rapid dissipation of heat, upon the addition of cooler water droplets. Types of damage include colour change, gloss loss, chalking, cracking, crazing, hazing, blistering, embrittlement, strength loss, and oxidation.

#### Current model:



Figure: QUV Accelerated Weathering tester

Video: <https://youtu.be/8S9ZJ9vFBgU>

Fluorescent UV lamps stimulate the effects of sunlight: light sources of either 340nm/UVA-340 or 313nm/UVB-313 can be used. Condensing humidity or water spray stimulates dew and rain.



# Instrument Description

## Sub Folder: Exposure



All models are automated and can operate continuously. Tester performance data is recorded automatically.

Types of damage include colour change, gloss loss, chalking, cracking, strength loss, blistering and hazing.

### **Samples:**

Typical samples for testing include plastics, coated substrates (metallic or plastic), raw metallic substrates, and paint coated metallic substrates.

### **Standards:**

Samples are assessed using standards such as: ASTM D4329, ASTM G154, ATSM D4799, ATSM D6662, EN 927-6, ISO 11507, ISO 11507, ISO 16747, ISO 4892,

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