

QUV tester (UV-A - Q-lab)



Principle

Ultraviolet radiation, temperature, and moisture are the factors that contribute to material degradation of products exposed to the elements. Accelerated weathering is the simulation of these conditions using special environmental chambers and instruments in order to speed up the weathering process and measure its effects on parts, components, products, and materials.

The simulation is determined in a number of hours sunlight kilolanglely.

The weathering tests are performed in different appliances (lamps and conditions) according to ASTM, ISO and DIN standards.

Method

In the QUV tester, accelerated weathering is conducted under UVA-light, reproducing the critical short wavelength of UV radiation in an accelerated manner. The test simulates the degradation caused by the exposure to sunlight and weather conditions.

The sample is exposed to UVA-light during several hours, in dry and humid conditions. The test chamber is equipped with a condensation system to moisten the samples (simulation of dew).

The relevant properties of the samples are determined afterwards.

Applications

Determination of the impact on:

- colour
- gloss
- chalking
- burst and crack formation
- mechanical properties for outdoor applications

