



ULTRAVIOLET

Test Chamber & Accelerated Weathering Testers

UV TEST CHAMBER

Qualitest-UV100

An economical, compact and user-friendly UV Test Chamber model designed to meet the diverse requirements of our customers. The Qualitest-UV100 UV Accelerated Weathering Tester is equipped with three high-performance 20W UVA or UVB lamps as light sources. With this UV Test Chamber, operators have the power to customize total illumination time, temperature, and spray duration to simulate environmental conditions that induce sample degradation.

Accelerated weathering testing is indeed a valuable method for evaluating the durability and performance of materials in a relatively short period of time. It simulates the effects of natural weathering conditions to assess how materials will withstand environmental factors over time.

Here are **some key points** regarding accelerated weathering testing that can be accomplished by the Qualitest range of UV Test Chambers and UV Accelerated Weathering Testers:



PURPOSE

The primary purpose of accelerated weathering testing is to predict how materials will degrade, corrode, fade, or otherwise deteriorate when exposed to various environmental conditions. This information helps manufacturers and researchers make informed decisions about material selection and design.

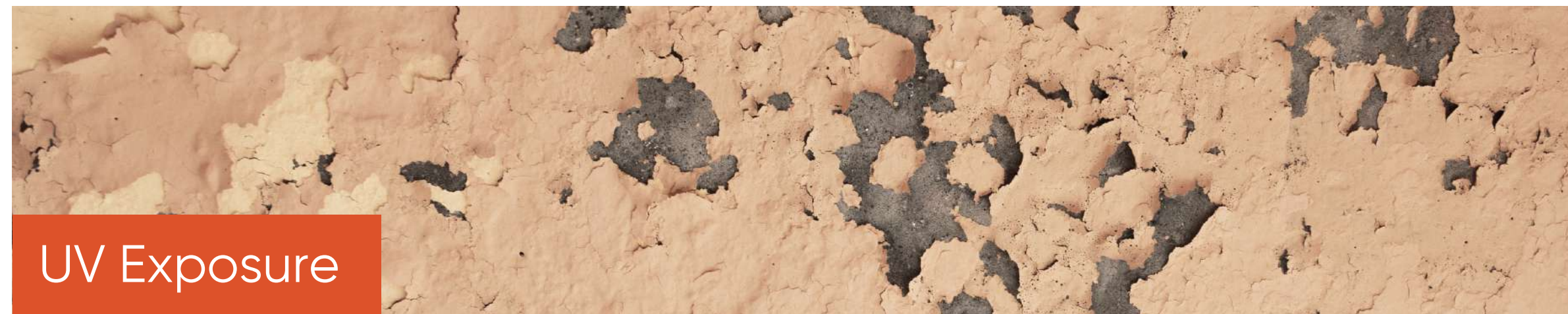
SIMULATION

It involves subjecting materials to extreme conditions that mimic or exceed what they might experience in real-world outdoor environments. This accelerated exposure allows for a faster assessment of material performance, which is especially important for industries like automotive, construction, and outdoor equipment.



ENVIRONMENTAL CONDITIONS:

The range of environmental conditions that can be simulated in accelerated weathering tests includes:



This assesses the effects of ultraviolet (UV) radiation, which is responsible for material degradation such as fading, cracking, and loss of mechanical properties. UV exposure is simulated using devices with fluorescent UV lamps.



Simulating the combined effects of UV and visible light exposure, solar radiation testing can reveal how a material's appearance and performance change over time.



Materials can be exposed to corrosive elements such as salt spray or acid rain to evaluate their resistance to chemical degradation.



Thermal cycling and extreme temperature conditions help assess how materials respond to temperature variations and thermal stress.



Humidity chambers simulate high humidity conditions to evaluate how materials withstand moisture and humidity-related degradation.





MECHANICAL PROPERTIES

One of the key aspects of accelerated weathering testing is its ability to assess the impact on the mechanical properties of a product. This includes properties such as tensile strength, elasticity, hardness, and other mechanical characteristics that can be affected by prolonged exposure to environmental conditions.

QUALITY CONTROL

Manufacturers often use accelerated weathering testing as a part of their quality control process to ensure that their products meet specific durability and performance standards. This is especially important in industries where materials are subjected to outdoor or harsh conditions.

DATA INTERPRETATION:

The data generated from accelerated weathering tests can be used to estimate the service life of materials or products under real-world conditions. It can also aid in making design modifications and material selection choices to improve durability.

TECHNICAL SPECIFICATIONS

Model	Qualitest-UV100
Total power	1.2 kW
Stable temperature range of working room	RT+5°C ~60°C
Stable range of test time	1h ~99,999h
Stable range of spray time	1min-99,999min
Stable range of spray interval time	1min-99,999min
Rated life of lamp	1,000h
Wavelength of lamps	313 nm (UVB Lamps) or 340 nm (UVA Lamps)
Lamp power	3 pcs; each lamp is 20 W
Water consumption for spray	3L/min
Capacity for test panels	18 pcs standard-size panels
Specification of sample	150mm x 70mm
Cabinet Size	940mm x 490mm x 630mm (LxD x H)
Net Weight	72KG
Power Supply	220V/50Hz, 6A (110V is also available. Please specify when ordering)





USA | Canada | UAE | Mexico | India | Hong Kong

Toll-Free: 1.877.884.TEST (8378) | Fax: 954.697.8211

info@qualitest-inc.com | www.WorldofTest.com

Canada & International: 70 East Beaver Creek Rd., #9, Richmond Hill, Ontario L4B 3B2, Canada

USA: 1323 SE 17th St., #200 Ft. Lauderdale, FL 33316, USA

Qualitest FZE – GCC/Middle East/Africa: Jafza One, BB 1610, Jebel Ali Free Zone, PO Box 261440, Dubai, UAE