

Simulate Acid Rain & Other Unique Environments

For years, weathering testers have utilized light, heat and moisture. What happens when a fourth environmental factor, such as acid rain, perspiration or swimming pool water, enters the weathering equation? These other factors can significantly change the weatherability or fade resistance of your product.

The Q-Sun Xe-3-HDS dual spray allows you to introduce additional solutions to your xenon arc weathering and light stability test program. The possible niche environments for indoor and outdoor applications that you can realistically reproduce in your lab are endless.

Q-SUN

Xenon Test Chamber Model Xe-3-HDS

Dual Spray System. In addition to purified water, a secondary solution can be sprayed onto specimens. This allows additional environmental pollutants, or other solutions, to be introduced into the laboratory test.

Flat Specimen Plane. The modified, near-horizontal specimen orientation increases moisture dwell time, which produces more realistic results. It also allows flexible specimen mounting, especially for 3-D parts and components.

220-liter Reservoir. Holds a sufficient amount of a secondary solution for ease of operation. The reservoir cart is on casters for easy mobility and maintenance.



The Q-Sun Xe-3-HDS allows you to spray both water and an additional solution onto test specimens.

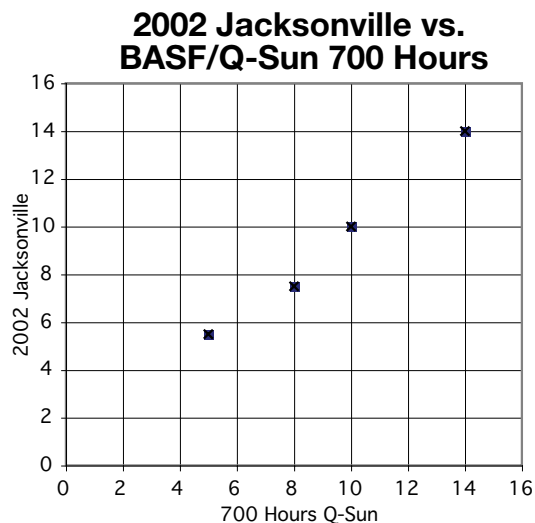
- Full-Spectrum Xenon Arc Lamps
- Meets Specifications
- Low Purchase Price & Operating Costs
- Simple to Use
- Relative Humidity Control
- Solar Eye Irradiance Control
- NIST Traceable Calibrations
- ISO 9000/QS-9000 Compliant

Applications

The versatility of the dual spray system enables users to use either standardized solutions from established test procedures, or design their own unique solutions for their unique applications. For example, customized solutions can be developed to simulate the composition of local acid rain.

BASF Acid Test

Acid rain damage became an automotive problem in the 1980's with the introduction of clearcoats. Blount Island in Jacksonville, Florida became the key outdoor testing site for acid etch, but the automotive industry still needed an accelerated method which correlated with outdoor results. In response to this need, BASF and Q-Panel developed a new test procedure which utilizes a special solution to mimic the local acid rain. Researchers used this solution with a dual spray Q-Sun Xenon Test Chamber to produce etching similar to 14 weeks of outdoor exposure in Jacksonville in as little as 400 hours of laboratory testing. As shown in the graph, the Q-Sun BASF Acid Test demonstrates excellent correlation to Jacksonville, Florida.



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Lightfastness of Textiles

Perspiration. In combination with sunlight, human perspiration is a major contributor to the limited service life of some clothing. A number of simulated perspiration solutions have been documented in various test methods such as AATCC TM 125.

Chlorinated Water. Swimming pool water has been known to affect the lightfastness of some textile dyes.

Personal Care Products

Soap Solution. Users have programmed the Q-Sun to spray soap solutions onto various personal care products to establish their chemical and light resistance. This application could be particularly useful for testing the packaging of bath and kitchen products.

Conclusion

The Q-Sun's dual spray system expands your testing options. It allows you to create more realistic exposure environments, and provides an excellent way to test different solutions and establish an effective test procedure for your unique product or environment.

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