

BATTELLE FLORIDA MATERIALS RESEARCH FACILITY

At Battelle's Florida Materials Research Facility (FMRF), we understand the effects of exposure, submergence and marine fouling on your products. Our outdoor, subtropical exposure facility is rated among the most corrosive environments in the United States and is the only commercial oceanfront facility for subtropical exposure studies in the country.

WHAT WE DO

We offer our customers a variety of testing and analysis services in semi-fresh and brackish water, including:

- Standardized exposure testing and post exposure analysis
- Client-specific exposure testing (non-standardized)
- Customized research and testing programs

Our experts can help you select the test conditions most suitable for your product. Our clients are always welcome and encouraged to visit our facility at any point in the testing program.

Oceanfront Atmospheric Exposure

Understand how your product performs under in-use or worst-case exposure conditions. We have a wide array of exposure racks and fences conforming to American Society for Testing and Materials (ASTM) standards. Samples may be exposed at any angle, at either fixed or variable positions.

- Exposure of raw materials, paints, coatings, plating and end products
- Seawater spray accelerated testing
- Under eaves testing
- Fully powered appliance testing

Marine Submergence and Fouling Studies

See how your product interacts with a wide spectrum of fouling organisms. Battelle conducts marine submergence and fouling studies in semidiurnal tidal waters of the Ponce de Leon Inlet and in a sophisticated, filtered, sea water system adjacent to the natural waters of the inlet.

- Variable depth and cyclic submergence
- Waterline, inter-tidal and splash zone exposure
- Hydrodynamic, filtered, sea water flow systems
- Algal, marine mud and stagnant pool resistance testing



BATTELLE

OUR FACILITY

Our outdoor subtropical exposure facility is rated among the most corrosive environments in the United States, and is the only commercial oceanfront facility for subtropical exposure studies in the United States. Our state-of-the-art facility stretches from the oceanfront to Ponce de Leon Inlet. Our Halifax River site offers a marine immersion dock equipped for fixed, waterline or splash-zone exposures of paints and materials. Our oceanfront site provides two acres of exposure area less than 70 meters from the Atlantic.

Quality Control through Environmental Monitoring

- Solar and UV radiation
- Rainfall and hours of wetness
- Ambient temperature
- Relative humidity
- Wind speed and direction

Oceanfront Site Features

- Class 5+ corrosivity (200 mg chloride/m²/day)
- ASTM standardized exposure racks
- Access to 480V/240V 3 Phase, and 220V power
- 5-90° angles of exposure (East & South facing)
- Accelerated testing, including under eaves and sea water spray options

Inlet River Site Features

- Salinity 26–35 ppt, Class III Water
- Test and seawater intake docks
- Boat ramp
- Seawater Recirculation System with four 50-foot tanks and two 16-foot tanks
- Dynamic test apparatus for marine coating—5-25 knots



Outdoor testing of automotive components at Battelle's Marine Atmospheric Site



Marine Immersion Dock for antifouling, fouling release, and splash-zone tests



"Paint Wheel" rotating at 16 knots during dynamic test of hull coatings for ASTM D4939

Every day, the people of Battelle apply science and technology to solving what matters most. At major technology centers and national laboratories around the world, Battelle conducts research and development, designs and manufactures products, and delivers critical services for government and commercial customers. Headquartered in Columbus, Ohio, since its founding in 1929, Battelle serves the national security, health and life sciences, and energy and environmental industries. For more information, visit www.battelle.org.

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