



Packaging Materials Testing

Engineering Analytics Laboratories (EA Labs) is proud to provide quality thermal analysis testing support to the packaging industry. Our goal is to serve our clients by providing services that meet their individual needs. Our testing programs are developed per our client's needs for a specific material, a specific application, or even unknown materials. EA Labs also caters to clients that require testing standards and guidelines conforming to Federal Regulations and United States Pharmacopeia (USP) standards, such as **USP 661** for plastics. Our client's needs are our goals.

USP 661 provides standardized testing guidelines for quality control testing of polyethylene, polypropylene, and polyethylene terephthalat. EA Labs follows the **USP 661** testing procedures utilizing a DSC to verify purity for the primary plastics used in pharmaceutical packaging. Other packaging materials are tested utilizing similar procedures, modified to measure for the specific transition point of the material being tested.

The degreed engineers at EA Labs are experienced and trained professionals in order to ensure that every aspect of a test is correctly conducted and that the client's samples are fully understood before, during, and after testing. This provides assurance that all testing is carried out based on the unique characteristics of a material and not just an average or range required by an SOP or Federal Standard.

EA Labs is pleased to provide additional services beyond testing, including equipment servicing, training, consultations, and consumables. For more information or to have your packaging materials tested, please contact EA Labs at the contact information below.



Differential Scanning Calorimetry (DSC) testing for melting, curing, and other phase changes at the molecular level is conducted with a Perkin Elmer DSC 7. EA Labs tests plastics, paper, metallics, and other materials utilizing standards such as the **United States Pharmacopeia standard 661**, to determine the transition point to indicate purity in order to test the material's conformance to the Code of Federal Regulations, Title 21 as part of the FDA Certification requirements. However, EA Labs is not limited to these testing standards, and purposes to work with our clients to **develop customized, need-specific Test Methods**.



Dynamic Mechanical Analysis (DMA) is conducted on packaging material samples to determine structural stability at increased temperature. EA Labs testing holds to standard practices for organics, metallics, liquids, and powders utilizing a range of testing accessories designed for varying shapes, sizes, and physical states. EA Labs uses a PerkinElmer DMA 7e.



Thermogravimetric Analysis (TGA) is conducted to determine mass changes over a temperature range. This provides various testing programs for oil and water content, combustion temperature, and some reaction kinetics. At EA Labs, TGA testing programs utilize a Perkin Elmer TGA 7, and hold to standard practices for organics and metallics.