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Packaging Validation Services

### Introduction to Concentrated Impact Test

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## Introduction to Concentrated Impact Test - Medistri

### Introduction to Concentrated Impact Test

The validation of packaging stems from the need to ensure the quality of products across the many steps in your distribution cycle: from shipping to storage. It is indeed an increasingly common requirement for many product categories, including a strong emphasis on the packaging quality requirements for medical and pharmaceutical industries.

Concentrated Impact Test is a type of transit testing that is performed to make sure a package can withstand the rigors and environment of the distribution cycle. It is one of the most widespread impact testing methods for measuring the protective capacity of packaging.

The Concentrated Impact Test is important because it helps ensure that a package can withstand the rigors and environment of the distribution cycle. This test simulates the physical hazards a package encounters throughout the shipping and distribution environment, including shock, vibration, and compression. By performing this test, manufacturers can assess the protective capacity of their packaging and make any necessary changes to improve its performance. This is an important part of the packaging validation process to ensure that the sterile barrier is still intact after the package has been subjected to the rigors of transit.

For ISTA 2A, the test involves dropping a weight onto the package from a specified height to simulate the impact forces that the package may encounter during shipping and handling.

For ISTA 3A, the test involves dropping a weight onto the package from a specified height to simulate the impact forces that the package may encounter during shipping and handling.

For ASTM D7386, the test involves subjecting the package to a series of impacts using a free-fall drop tester or an incline impact tester.


For ASTM D4169, the test involves subjecting the package to a series of impacts using a free-fall drop tester or an incline impact tester.

The validation of concentrated impact tests according to these standards involves ensuring that all procedures are followed accurately and consistently, and that all test results are recorded and analyzed to determine whether the package meets the requirements of the standard.

- ISTA 2A is a Partial Simulation Performance Test for individual packaged-products weighing 150 lb (68kg) or less when prepared for shipment. It is more comprehensive than the ISTA 1 Series and includes test input from the ISTA 3 Series. It is a favorite with Medical Device Manufacturers (MDMs) because the price of testing is less than ASTM D4169.
- ISTA 3A is a General Simulation Performance Test for individual packaged-products weighing 70 kilograms (150 pounds) or less when prepared for shipment via a parcel delivery carrier. It was developed in conjunction with United Parcel Service (UPS) as a pre-shipment certification test for small parcel packages. It has also been added to the list of "consensus standards" by the FDA.
- ASTM D7386 is a Standard Practice for Performance Testing of Packages for Single Parcel Delivery Systems, where comparably lower volumes of product are delivered, altering the transit experience. It was developed from ISTA 3A and the test results are similar.
- ASTM D4169 is a Standard Practice for Performance Testing of Shipping Containers and Systems. The universal requirements for ASTM D4169 testing are clearly stated and must be followed, while other testing criteria such as levels, sequences, and orientations are up to you.

These standards have different approaches and can be tailored to more specific situations or package configurations. It's important to choose the right standard based on your desired outcome and how your product will be shipped from the manufacturing floor to the end user.

Should you fully validate your packaging system or should you simply test one particular characteristic of your sterile barrier system, Medistri laboratory is accredited and highly experienced for the most common tests.

 To learn more about Medistri's Concentrated Impact Test, visit on our website [here](http://www.medistri.swiss) or directly contact our team at [contact@medistri.swiss](mailto:contact@medistri.swiss).

- The Medistri Team

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