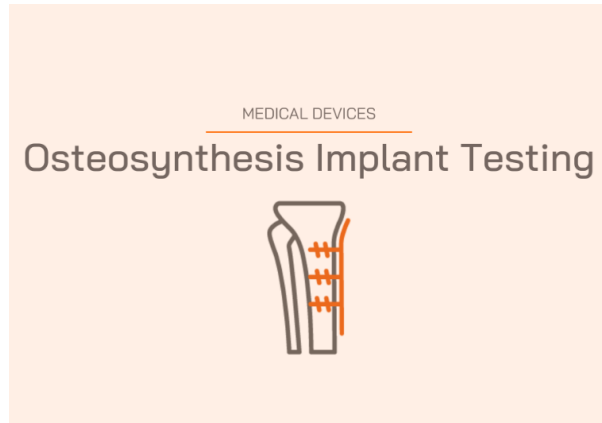


Osteosynthesis Implant Testing



What Is Osteosynthesis Implant Testing?

Osteosynthesis implant testing refers to a series of tests and evaluations conducted to ensure that implants used for bone fixation (such as plates, screws, nails, and rods) meet specific safety, performance, and durability criteria. These osteosynthesis implants must resist **defined torsional, tensile and bending stresses** during the tests and also comply with international standards in order to be marketed.

You can rely on the expertise of our [medical device testing](#) services at [Applus+ Laboratories](#), where we will help you improve **the development of your osteosynthesis implants** while also offering you a **full simulation testing** to make sure they are fit for the human body.

What Osteosynthesis Implant Testing Services Do We Offer?

At Applus+ Laboratories, we perform different kinds of testing methods for [metallic bone plates, metallic medical bone screws and intramedullary fixation devices](#). Through these distinct processes, all performed against **ASTM standards**, we ensure the highest standards of safety, performance, and durability.

Static and Fatigue Testing for Osteosynthesis Implants Against ASTM standards

Our main osteosynthesis implants testing services perform against 4 different standards, to check how these implants resist **single, heavy loads** and **repetitive loads**, simulating the stresses they will encounter over their lifetime.

- **ASTM F1264**
Includes both static and fatigue testing for **intramedullary fixation devices**, commonly used in osteosynthesis for stabilizing fractures.
- **ASTM F543**
Primarily focused on static testing for **metallic bone screws**, testing their ability to withstand insertion and removal forces, as well as maintaining adequate holding strength in bone.
- **ASTM F382**
Like ASTM F1264, this standard includes static and fatigue testing, but this time related to **metallic bone screws used in surgical fixation** of the skeletal system.
- **ASTM F384**
Where we evaluate **metallic bone plates used in surgical fixation** of the skeletal system through static testing (bending, torsional and shear tests).

Our Testing Facilities and Equipment for Osteosynthesis Implant Testing

To perform all the different testing methods mentioned above, we at Arplus+ Laboratories offer a comprehensive testing service of osteosynthesis implants where, thanks to our **advanced equipment**, we can test all the products simulating the **effects of daily use**.

Capable of testing up to **eight osteosynthesis implants simultaneously**, our sophisticated multi-station simulator with five controllable axes evaluates how each implant performs under different **prosthetic attachments, fixation methods, and design configurations** across various physiological conditions.

To get reliable and accelerated results, we test our osteosynthesis implants for up to **ten million cycles**, simulating all the **effects of a lifetime of use** to ensure durability and performance under real-world conditions.

What Are the Benefits of Osteosynthesis Implant Testing?

Every time we perform an osteosynthesis implant testing service we do it to verify whether these implants are **safe and durable** for patients; once this has been checked, the implant then can be validated and marketed as quickly as possible.

Improving Safety and Efficacy for Osteosynthesis Implants

With increasingly innovative implant development, testing the [materials](#) used in these implants is vital to guarantee their **safety and compliance** with regulations. This ensures that the final product received by the patient is both safe and effective.

Compliance with International Standards for Osteosynthesis Implants

Adhering to international standards not only **broadens market access** for your osteosynthesis implants but also **accelerates the path to market** expansion overseas. By meeting these universally recognised benchmarks, you enhance your **credibility and reputation** in the global marketplace.

Why Choose Applus+ Laboratories for Osteosynthesis Implant Testing?

When you choose Applus+ Laboratories for your **osteosynthesis implant testing**, you are opting for rigorous quality assurance and expertise that ensure the highest standards of safety and performance for your products. In other words: you are partnering with a **leader in the field of medical device testing**.

We want to ensure your osteosynthesis implants achieve the highest levels of precision and reliability; that's why we **provide ASTM-compliant services**. Trust us and we'll fulfil all your osteosynthesis implant testing needs, thanks to a wide range of testing capabilities and a **strong emphasis on customer satisfaction**.

At Applus+ Laboratories, we are committed to being your **comprehensive resource for medical device testing**. Our **suite of services** is designed to accelerate your product's journey to [market](#). Our offerings include:

- Development testing with actionable improvement suggestions
- Ongoing testing throughout the product's lifecycle
- Qualification of products and processes, including batch release testing
- Contract Manufacturing Organization (CMO) services

Operating in numerous countries, we deliver our testing services globally, providing top tier osteosynthesis implant testing anywhere in the world.

Trust Applus+ Laboratories as your dependable partner for osteosynthesis implant testing. We stand ready to support your efforts with our extensive services and expert insights.