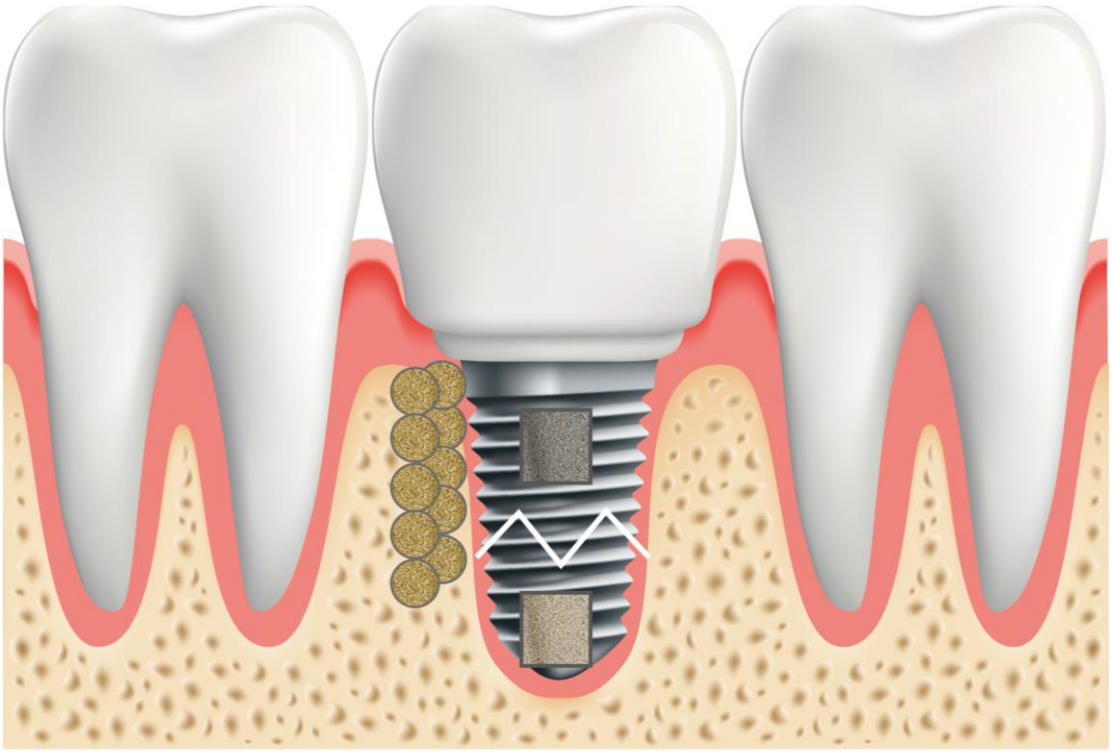
LUCIDEON
insight creating advantage

MEDICAL SERVICES

- REGULATORY TESTING & STRATEGY
- HA COATING VALIDATION
- MATERIAL CHARACTERIZATION
- CORROSION ANALYSIS
- SURFACE IMAGING & ANALYSIS
- COMPOSITE / ADHESIVE DEVELOPMENT
- POWDER CHARACTERIZATION
- TOUGHENED DENTAL CERAMICS
- TRIBOLOGY



- BIOACTIVE MATERIALS DEVELOPMENT
- ADDITIVE MANUFACTURING SUPPORT
- EXTRACTABLES & CLEANING
- BONE CEMENT & SUBSTITUTION DEVELOPMENT
- FAILURE ANALYSIS
- MANUFACTURING & PROCESS OPTIMIZATION
- STATIC & FATIGUE TESTING
- ICRT PLATFORM

TOUGHENED DENTAL CERAMICS

Dental implants need to be robust to withstand the relatively harsh mechanical and chemical conditions of the mouth. Ceramic materials offer a strong, biocompatible and largely unreactive material making them popular for use in dental applications. Lucideon's sintering technology has allowed its experts to focus on toughening advanced ceramic materials for use in dental devices.

COMPOSITE/ADHESIVE DEVELOPMENT

Our materials experts improve existing materials and work to develop the next innovative materials solutions. From extending your product life and adherence properties, to developing novel and composite materials with additional functionality, we develop materials for the next generation of medical products.

STATIC & FATIGUE TESTING

Medical materials need to withstand a lot, from microbial and chemical attack to mechanical wear. At Lucideon we can simulate the required environments and the typical mechanical movements (and non-typical for specialist products) to determine how your products will perform in-situ.

BIOACTIVE MATERIALS DEVELOPMENT

Bioactives will form a big part of the next generation of products. With added functionality, bioactive materials can help to repair, protect, and provide other patient benefits such as pain and discomfort relief as well as encouraging integration with the body.

SURFACE IMAGING & ANALYSIS

The surface of a material is a crucial part of its makeup, giving it functionality, performance properties, texture and aesthetics. Lucideon's surface science team provides quantitative and qualitative surface analysis, producing scientific conclusions and support that's both visual and backed by detailed data and analysis.

HA COATING VALIDATION

HA and other bioceramic coatings provide a porous and bioactive surface that allows better bone integration with your devices. Effective and robust coatings are important to provide optimal performance. Our experts can provide detailed analysis and method development to ensure your coating applications are consistent and adequate. We can measure the chemical, mechanical and microstructural properties of the materials – validating both the process and the product for regulatory submissions.

FAILURE ANALYSIS

Lucideon performs extensive testing to predict and reduce failure risks in application. We also perform root cause identification of failures, should the failure have occurred in application, as well as recommending corrective actions.

MATERIAL CHARACTERIZATION

In dental applications it is important to understand your materials, their composition, key properties and how they behave. At Lucideon we provide the answers with qualitative, quantitative and visual data to support a full understanding of your materials.

WEAR TESTING & TRIBOLOGY

Our wear testing facilities evaluate the wear, friction, and lubrication performance of your products. Wear testing is further supported by our world-leading surface evaluation, materials characterization, and debris, particulate and wear pattern analyses. We work to ISO methods and also develop customized protocols when your novel design doesn't quite fit the standard.

ADDITIVE MANUFACTURING SUPPORT

Additive manufacturing (AM) offers a wide range of benefits and opportunities for the medical device sector, but is not without its challenges. At Lucideon we can help you navigate the obstacles of component testing and validation, failure analysis, materials development and process and cleanliness validation to help you develop an AM product that is fit for purpose.

BONE CEMENT & SUBSTITUTION DEVELOPMENT

Bone cement and its alternatives play an important role in helping orthopedic implants integrate with the recipient's bones or helping bones heal themselves. We validate their properties, performance, safety and cleanliness, and even improve the functionality of bone cements and other adhesives through novel materials development or process optimization.