



**For a Total Solution to all of your  
Materials Testing Needs**

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## Concordia Medical's ADMET eXpert 2611 tests specialty fibers and scaffolds for medical applications

*Concordia Medical, located in Warwick, RI, is an innovator in specialty fiber-based medical implants and scaffolds for regenerative medicine. It combines specialty fiber engineering skills with extensive medical industry experience. Quality is of major importance and the company has obtained ISO 13485:2003 certification, and achieved FDA QSR (Quality System Regulation) compliance for quality systems required for medical device design and manufacturing.*

*Concordia recently turned to ADMET for its eXpert 2611 universal testing machine equipped with MTESTWindows™ to replace an older system. Now, the company is conducting all of its development and production tensile and compression testing using the new ADMET system.*

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Concordia Medical combines specialty fiber engineering skills with extensive medical industry experience building its reputation on the high quality of its products and services.

The company, which was recently spun off from Concordia Fibers and relocated to a new building, has obtained ISO 13485:2003 certification and achieved FDA QSR (Quality System Regulation) compliance for its operations.

Concordia Medical develops and produces a broad range of absorbable fiber based products using Polyglycolic Acid (PGA), Poly-L Lactic Acid (PLLA) and co-polymers of PGA and PLA, as well as custom co-polymers.

Through the experience of Concordia Fibers, Concordia Medical also has expertise in working with non-absorbable fibers like Polyester (PET), Polypropylene (PP), Polytetrafluoroethylene (PTFE), Polyether Ether Ketone (PEEK), Ultra High Molecular Weight Polyethylene (UHMWPE), collagen, silk and other customer supplied raw materials.

Concordia Medical's products include twisted and textured fibers, knit meshes, braided structures, and BIOFELT®, a proprietary needle-punched non-woven felt scaffold material. BIOFELT is highly porous, soft and flexible, biocompatible and enables human cells to grow into its 3D interconnected pores so that new natural tissue can be formed to replace and/or repair damaged human tissue.

Concordia Medical's products are used in orthopedic, cardiovascular, urological/OB-GYN, dental/oral and general surgery applications, as well as for regenerative implants.

### **Development and production testing**

Individual fiber filaments and knit, braided, and non-woven structures are tensile tested for uniformity and strength. Concordia Medical had been using a Sintech (now MTS) universal testing machine that it shared with its parent company, Concordia Fibers. In order to support growth, additional testing capability was needed, as well as updating the operating system for the Sintech system.

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## **SOLUTION OVERVIEW**

**Industry:** Medical implants

**ADMET Product:** eXpert 2611 with MTESTWindows

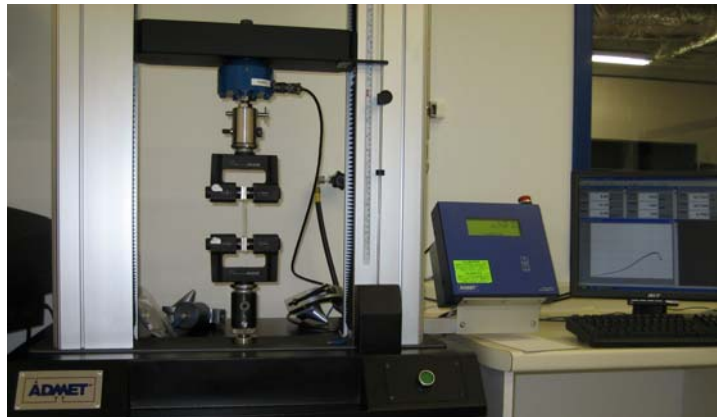
**Customer:** Concordia Medical

**Application:** Testing medical implants and scaffolds for regenerative medicine

Ian Christianson, Quality Assurance/Regulatory Affairs Manager, decided to look into retrofitting the Sintech machine. He contacted the manufacturer and also ADMET, which often retrofits other manufacturers' equipment.

Christianson discovered that for a relatively modest premium over a retrofit he could replace the Sintech with an ADMET machine that would give him a dedicated machine and free up the older unit for continued use at Concordia Fibers.

He ordered an ADMET eXpert 2611 electromechanical, dual-column tabletop universal testing machine (UTM) equipped with ADMET's MTESTWindows Materials Testing System. He also ordered a new set of grips and an adapter so the company could continue to use the grips that had been previously used on the older machine.



### **Flexibility – Ease-of-use**

Concordia is now using the ADMET system for both product development and production quality control. It conducts various standard tests including tensile strength, elongation, tenacity and suture pull-out strength, as well as a ball burst compression test. The staff creates new tests as necessary.

Commented Christianson, "We have our own internal quality requirements but depending on what our customers are looking for, we are able to conduct other tests and report different findings. That's one of the benefits of the machine -- its flexibility. It's actually a very good product development machine."

The staff finds the MTESTWindows test system easy to program and easy to use. "We're not tensile testing experts but we've been able to create all the programs that we need so that the test methods meet the requirements.

"One thing that's good about MTEST is that it uses the standard view of Windows so it's pretty simple. You don't have to learn all new methodology. You're just running Windows so you can use the file transfers and other utilities," said Christianson.

Concordia uses the Microsoft capabilities often to compare test results to specifications, archive the results and share data with customers. Explained Christianson, "We take a raw file from the ADMET machine and open it in a program like Excel. Then it becomes very easy to keep it on file for reference or to give the information to our customers so that they can work with the raw file."

Concordia finds that the ADMET eXpert 2611 combined with the MTESTWindows Materials Testing System is flexible and easy to use for both development testing and production quality assurance.

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### **For more information:**

For more information about ADMET products or services, please call us at 800-667-3220 or 781-769-0850, email [sales@admet.com](mailto:sales@admet.com) or visit our Web site at <http://www.admet.com>.

For additional information on Concordia Medical, visit <http://www.concordiamedical.com>.

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