

# Natoli opens laboratory and training facility near Philadelphia

Natoli Scientific, a division of Natoli Engineering, St. Charles, MO, has opened a scientific research and development laboratory in Telford, PA, near Philadelphia. The lab is outfitted with a variety of R&D and production-scale tablet manufacturing equipment and offers a range of troubleshooting and custom-research services.

The facility also features a dedicated classroom space, allowing Natoli to offer additional industry training opportunities. The company's extensive industry training program also includes the Natoli Institute of Industrial Pharmacy Research and Development at Long Island University, regular training courses at the company's St. Charles headquarters, and Tablet Compression Resource centers in Holbrook, NY; Cypress, CA; and Pilchowo, Poland.

## Full-service R&D lab

Services offered at the Telford facility include:

- Formulation evaluation, modification, and testing to reduce tableting challenges
- Contract development
- API characterization
- Compaction simulation
- Formulation and process development
- Tool steel, material, and coating recommendations
- Tablet sticking and picking resolutions
- Scalability solutions
- Technical training courses
- Tablet press instrumentation, calibration, and maintenance services

According to Robert Sedlock, Natoli's director of technical training and development, the lab allows the company to support customers experiencing tableting challenges at any stage in production, from formulation development to scale-up and manufacturing. "Natoli Engineering is known as a leading provider of tablet compression tools and tablet presses, but our technical team is also experienced with the complete tableting process," Sedlock says. "The Telford site provides our customers with a full sol-

id-dosage laboratory including a compaction simulator, instrumented single-station and rotary tablet presses, dry and wet granulation systems, and tablet coating and powder characterization equipment.

"We offer support through classroom and hands-on training as well as on a contractual basis. We also provide calibration and maintenance services for all industry tablet presses and support for new Natoli R&D products such as the NP-RD30 development/scale-up tablet press and AIM data-acquisition software."



Freund-Vector's Nick Slater demonstrates dry and wet granulation processes to attendees at Natoli Scientific's inaugural training event in Telford, PA.

## Hands-on training

Natoli held its inaugural training event at the new facility October 8-10, 2018. The 3-day course, titled "Tablet Development, Scale-up, and Intro to Microtabs," was a new offering for the company. The course was designed to provide a comprehensive overview of the tablet development process, scalability, and microtableting technology and included both classroom and hands-on training, with open discussions, one-on-one consultations, Q&A sessions, and live demonstrations. Instructors included Sedlock, Bill Turner (technical service manager for Natoli's tooling and tablets division), Jonathan Gaik (director of Natoli Scientific), and John Sturgis (Natoli technical support engineer).

In addition to Natoli's instructors, the session featured presentations and hands-on demonstrations from industry experts, including Stuart Porter (president of PPT and film-coating technical consultant for Ashland Specialty Ingredients), Dilip Parikh (president of DPharma Group), Anthony Carpanzano (director of research & development for JRS Pharma), Michelle Quinn (formulation technology manager at MilliporeSigma), Nick Slater (senior process development scientist at Freund-Vector), and Matt Botnick (applications engineer at O'Hara Technologies).

Attendees included formulation scientists, process engineers, compounding pharmacists, and other R&D personnel from the pharmaceutical, nutraceutical, pyrotechnics, and catalyst industries. "I enjoyed the combination of presentations and hands-on demonstrations," said one attendee. "Having limited experience, the hands-on demos helped me apply the knowledge I learned."

A second training course, titled "The Tablet Development Process & Intro to Continuous Manufacturing," was held December 6, 2018, and provided attendees with a comprehensive look at the tablet development process, formulation,

and continuous manufacturing. The course featured lectures by Sedlock and Parikh as well as Ed J. Godek (manager of process technology at Glatt Air Techniques), and Allison Labriola (technical sales manager for excipients and coatings at Chemroy Canada).

Dilip Parikh, an instructor at both training sessions, was impressed with the facility and the structure of the training courses. "This new lab offers a complete range of solid dosage manufacturing equipment from various manufacturers, providing attendees with a comprehensive picture of tablet production," he said. "A number of training courses are available elsewhere and on the web, but they often don't provide a hands-on component to go along with the classroom instruction, so the training is less beneficial."

Fellow instructor, Stuart Porter, agreed, saying, "The program does a nice job of balancing formal oral presentations with practical sessions. Programs like this provide pharmaceutical companies with an opportunity to expose their employees to new ideas and some of the latest technologies. This can be reinvigorating for experienced employees and valuable for new employees who may have limited exposure to pharmaceutical processing technologies."

Natoli plans to host several additional training events at the Telford lab in 2019, including "Tablet Development & Scale-up" February 25-27, "Microtab Compression & Film Coating" April 17, and "Tablet Picking & Sticking Challenges and Solutions" May 29. Details are available on the company's website.

Sedlock noted that training activities are not limited to scheduled events, however. "Our intent," he said, "is to provide customers with customized training programs, where new hires can learn the fundamentals of the tablet development and manufacturing process."

According to Porter, such hands-on training opportunities are more important than ever. "In the past, pharmaceutical formulators were typically graduates of pharmacy schools, where they were exposed to formulation and processing sciences, but that is no longer the case. These roles are now commonly filled by graduates from other scientific disciplines, who often have little formulation and processing experience." T&C

Natoli Scientific  
100 Emlen Way  
Telford, PA 18969  
636 926 8900  
rsedlock@natoli.com  
natoli.com



Natoli Scientific's Jon Gaik demonstrates the Freeman Technology FT4 powder rheometer and powder flow laboratory.