



Testing Capabilities

FOR CHEMICAL
AND PHARMACEUTICAL
PROCESSING APPLICATIONS





Unlock Precision and Performance With Expert Product Testing Services

In today's fast-paced chemical and pharmaceutical industries, the demand for optimized processes and reliable outcomes is greater than ever. At De Dietrich, we understand the complexities involved in your separation technologies, drying and solids handling. That's why we offer comprehensive product testing services to ensure your systems perform at their peak efficiency.

With advanced testing capabilities and decades of industry expertise, we can help you refine processes, improve product quality, and optimize your system's performance—before scaling up. Whether you're testing new materials, improving throughput, or ensuring compliance with regulatory standards, our testing solutions provide the insights you need to reduce risks and make informed decisions so you can select your equipment with confidence.

Partner with us to unlock the full potential of your processing systems, improve yields, and ensure the reliability of your operations. At De Dietrich, we're committed to helping you achieve excellence in every step of your production process.



Testing Objectives

In chemical and pharmaceutical production, precision and efficiency are critical. Because different specifications require customized solutions, we work closely with you to analyze your specific needs and examine requirements and quality demands to ensure your processes are optimized for success.

Our engineers provide detailed information tailored for the specific application – based on their years of experience and expertise in process engineering.

Our specialized testing services focus on key objectives such as:

1

Feasibility Studies

Determine whether a process or system is capable of handling specific materials under varied conditions, ensuring that the technology is suitable for your needs.

- Equipment Selection
- Product Quality

2

Process Optimization

Test for ways to improve throughput, efficiency, and product quality by refining parameters like pressure, temperature, and flow rates.

- Cake thickness
- Filter Cloth Selection
- Process Parameters

3

Process Efficiency

Evaluate the effectiveness of separation technologies, ensuring maximum product recovery and minimal waste in filtration and drying processes.

- Filtration Efficiency
- Drying Efficiency
- Wash Efficiency

4

Material Handling and Properties

Evaluate the flowability and flow properties of powder/bulk solid materials to determine optimum equipment design to ensure reliable flow and transfer.

- Throughput/Rate, Line Size and equipment required to achieve it
- Potential issues with handling product and how to address them
- Flow properties such as bulk density, particle size distribution, and cohesive strength

5

Scale-Up Analysis

Using validated lab data allows for scale up using real world data, mitigating risks in production scale environments.

- Expected throughput
- Expected cycle times



Testing Equipment

At De Dietrich, our test center is equipped with cutting-edge equipment that allows us to conduct comprehensive feasibility studies and a wide range of processing tests. Designed to replicate real-world conditions, our equipment offers precise simulations for separation, drying, and powder handling processes, ensuring that we provide the most accurate data and actionable insights for your production needs.

From high-performance centrifuges and vacuum dryers to advanced powder handling systems, our testing solutions enable us to fine-tune process parameters, optimize efficiency, and ensure scalability—all before full-scale implementation. Whether you're exploring new materials, troubleshooting an existing process, or looking to improve throughput, our testing capabilities give you the confidence to make informed decisions with minimal risk.

Our equipment list includes (but is not limited to):



Powder & Material Handling

- Powder Pump System
- Powder transfer evaluations
- Closed solids conveying trials



Filtration & Filter-Dryers

- 25L Nutsche Filter-Dryer
- RoLab Manual Nutsche Filter
- 1 Liter Benchtop Pressure Filter



Vacuum Drying Equipment

- 25L TDC Central Shaft Vacuum Dryer
- 50L Conical Screw Dryer



Pilot Short Path Evaporators

- 0.05m² evaporator area
- 5L jacketed feed tank volume

Centrifuges & Mechanical Separation



- 300mm and 450mm Inverting Filter Centrifuges
- Horizontal Pilot Plant / Horizontal Peeler Centrifuges
- 150mm Horizontal Decanter Centrifuge

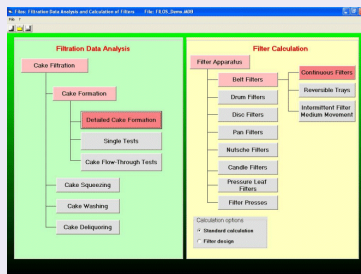


Simulation and Modeling

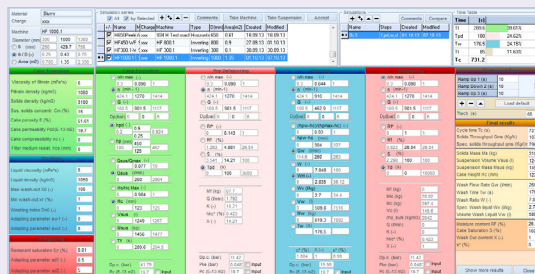
We understand that reliable data is the foundation for making informed decisions when it comes to selecting equipment for your operation. That's why our test center offers advanced simulations and modeling services designed to compare products, analyze processes, and assess feasibility. Whether you're evaluating new materials or optimizing existing systems, our simulations replicate real-world conditions to provide you with the most accurate insights.

From predicting performance under varying conditions to modeling different process parameters, our advanced tools allow you to test multiple scenarios without the time or expense of full-scale trials. This enables more precise comparisons, faster development cycles, and the ability to identify the best solutions for your operational needs. With our simulation and modeling capabilities, you can confidently move forward with process improvements, product development, and system upgrades.

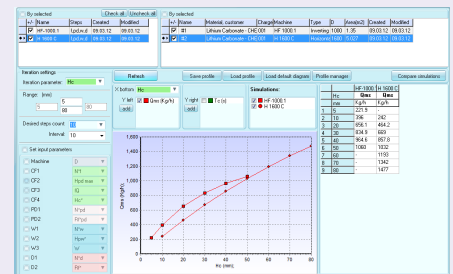
Some examples of simulations and modeling services available through our test center include:



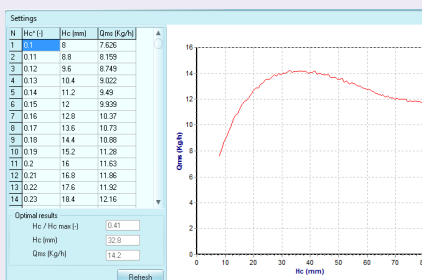
NUTSCHE FILTRATION
EVALUATION



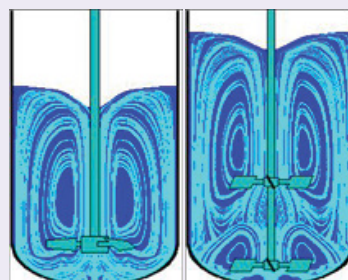
BATCH FILTERING
CENTRIFUGE DIAGNOSTICS



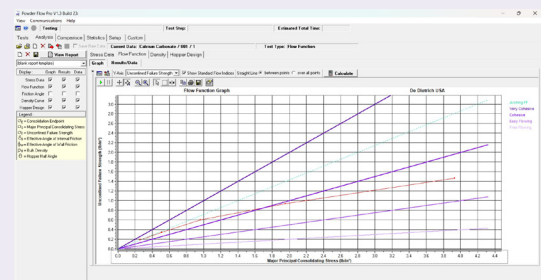
CENTRIFUGE PERFORMANCE
COMPARISON



OPTIMUM CAKE
THICKNESS ANALYSIS



GLASS-LINED VESSEL
MIXING SIMULATION



SHEAR CELL
TESTING



Rental Equipment

We understand that every process is unique, and sometimes, testing under real production conditions is the best way to determine feasibility and optimize performance. That's why our test center offers a range of rental equipment, providing you the flexibility to conduct trial and feasibility testing directly on-site.

Whether you're looking to test new materials, validate system upgrades, or assess process changes, our state-of-the-art rental equipment allows you to experiment with confidence in your own operational environment. This hands-on approach helps you gather accurate, real-time data while minimizing downtime and reducing the need for long-term capital investments.

With De Dietrich's rental solutions, you can explore potential improvements and innovations with ease, making your testing process more efficient and cost-effective.



ROLAB FILTER



Discover the Full Potential of Your Process

Our state-of-the-art test center is conveniently located in Swedesboro, New Jersey, giving us the capability to conduct pilot tests right here in the US, using the latest equipment and technologies and staffed by a group of highly knowledgeable process engineers.

Drawing on the experience of test data accumulated over the last 50+ years in conjunction with your test results, we are able to confidently choose the right system for your process. With our advanced tools and industry expertise, we're here to help you achieve optimal results, every step of the way.

Need help finding the right solution? [Contact the experts at De Dietrich](#). We'll work with you to identify the right testing process for your application.



DE DIETRICH is a leading provider of Process Equipment, Integrated Systems, and Engineered Solutions to the bulk chemical, fine chemical, and pharmaceutical industries. Our experience enables us to offer a wide range of high-quality solutions, products, and services for a variety of manufacturing processes.

We provide a full spectrum of support, from testing and process optimization to complete turnkey systems, meeting your unique process requirements, schedule and budget.

How can we help you meet your business's processing needs?

To find out more, contact us:

Visit - www.ddpsinc.com

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