

# Pilot Study Program

Many new membrane applications require pilot testing during their development phase. Synder offers an extensive pilot study program to help our customers develop innovative applications. As an industry leader in supporting research and development activities, we know the importance of having low cost, flexibility, and quick responsiveness.

Contact us today to learn more about our Pilot Study program. We look forward to serving you.

## Pilot Studies at Synder's Laboratories

For the companies that prefer to let Synder's professionals gauge the feasibility or performance of their application, we run a full range of pilot and feasibility testing at Synder headquarters in Vacaville, CA, USA.

- Flat sheet feasibility tests and performance estimations with both single and eight bank cells which require 5 or 10 liter samples, respectively.
- Complete spiral wound Microfiltration, Ultrafiltration, and Nanofiltration pilot studies, done in-house for extended performance testing.



UF-201



NF-UF-202

# Feasibility Testing

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At Synder Filtration, we take pride in providing technical expertise and personal collaboration with our customers. We strive to gain a better understanding of your process goals in order to develop a comprehensive testing plan designed to suit your separation needs. Our unique and collaborative application development program offers great flexibility for further development in specialty process applications.

**1. Pilot Study RFQ Form Submission.** This helps us to gather important information about the feed stream, operating parameters, and the customer's application goals.

**2. RFQ review.** Synder account manager schedules review meeting with the customer and the engineering staff to discuss the project and clarify any remaining questions.

**3. Feasibility testing.** A feasibility test is proposed to the customer, and conducted if approval is received. A feasibility report is prepared with 24-48 hours after test completion.

- Flat sheet feasibility tests: Synder's complete line of NF, UF, and MF and MAX membranes are available in a variety of different flat sheet options for feasibility testing.
- Spiral element feasibility tests: In some cases such as feed streams requiring high operating pressure to obtain additional concentration and flux data, spiral elements may be recommended for use on feasibility tests.
- Analytical capabilities include TOC levels, COD levels, hardness, chloride, sulfate, and iron concentrations, liquid viscosity, turbidity, pH, and conductivity measurements. Synder is also able to outsource other analytical capabilities such as SEM, FTIR, BOD, TSS, and ICP, if the customer accepts 3rd party involvement in the testing.

**4. Pilot study testing.** If feasibility results are positive, a pilot study is proposed. Pilot studies can last anywhere from one week to several months or longer, depending on the nature of the application and possible variability in the feed stream. See pilot system specs.

**5. Full scale system design & fabrication.** If the pilot study results are positive, a full scale system is proposed and revised as needed until the customer is satisfied with the design specs, lead time, and projected ROI. Synder then fabricates the system.

**6. System installation & commissioning.** The final step is installation, commissioning, and training on site. Start up and commissioning service can be done worldwide.