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SOUTHWEST RESEARCH INSTITUTE

New Microencapsulation Capabilities

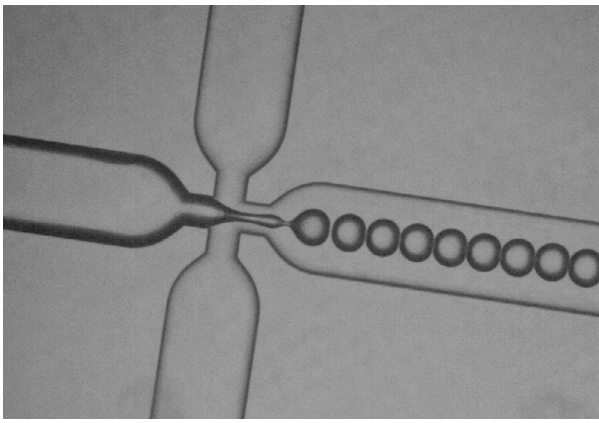
Southwest Research Institute added a variety of new microencapsulation capabilities in 2020 and 2021. These processes are now available for contract research and development projects, and have significant potential for novel microencapsulated products in the fields of pharmaceuticals, nutraceuticals, food, cosmetics, consumer products, agriculture, and other industrial applications. The equipment is available for use on projects requiring cGMP.

Electrostatic Spray Drying

- Equipment: Fluid Air PolarDry® Model 004
- Capability: lower temperature, electrostatic spray drying, solvent-capable
- Capacity: up to 4 L/hr drying capacity (scalable to 200 L/hr)
- Ideal for active ingredients that are temperature or oxygen sensitive.

Inert Spray Drying & Fluid Bed Coating

- Equipment: ProCepT 4M8-Trix
- Capability: N_2 atmosphere, solvent-capable
- Capacity: <1 L/hr spray drying, 1 L glass vessel for fluid bed coating/ agglomeration
- Ideal for feasibility studies with active ingredients that are temperature or oxygen sensitive



Microfluidic Drop Formation

- Equipment: Dolomite double emulsion microfluidic system
- Capability: monodisperse single or double emulsion droplets/ particles/capsules
- Capacity: Single chip system, mg to low g scale
- Ideal for evaluation of microfluidics to make monodisperse microspheres or microcapsules.

High Throughput Membrane Emulsification

- Equipment: Micropore Technologies LDC-1 and AXF-1
- Capability: preparation of monodisperse emulsions
- Capacity: 100 mL (LDC-1) up to 200 L/hr (AXF-1)
- Ideal for scalable preparation of monodisperse emulsions in support of subsequent encapsulation processes.

We welcome your inquiries.
For more information, please contact:

Joseph T. Persyn
Manager
210.522.2691
joseph.persyn@swri.org

James D. Oxley, Ph.D
Staff Scientist
210.522.2913
james.oxley@swri.org

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Quality Certification — Chemistry and Chemical Engineering Division

The Chemistry and Chemical Engineering Division of Southwest Research Institute has achieved certification to ISO 9001:2015, an internationally recognized quality standard.

Pharmaceuticals and Bioengineering Department
Chemistry and Chemical Engineering Division

microencapsulation.swri.org

Southwest Research Institute

Southwest Research Institute is a premier independent, nonprofit research and development organization using multidisciplinary services to provide solutions to some of the world's most challenging scientific and engineering problems. Headquartered in San Antonio, Texas, our client-focused, client-funded organization occupies 1,500 acres, providing more than 2.3 million square feet of laboratories, test facilities, workshops, and offices for more than 2,600 employees who perform contract work for government and industry clients.

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210.522.2122

ask@swri.org

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