

TechBriefs

Savannah River National Laboratory

U.S. DEPARTMENT OF ENERGY • SAVANNAH RIVER SITE • AIKEN • SC

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Benefits

- > Reduces risk of personal contamination
- > Reduces personal exposure
- > Protects workers from hazardous materials
- > Shortens duration of solid phase extraction
- > Shrinks footprint of operation

Applications

- > Collecting residue from separations columns
- > Protective equipment
- > Chemical and nuclear separations processes

Contact Information

Savannah River National Laboratory
E-mail: partnerships@srnl.doe.gov



Residue Handling Minimization with Vacuum-Assisted Separations

Technology Overview

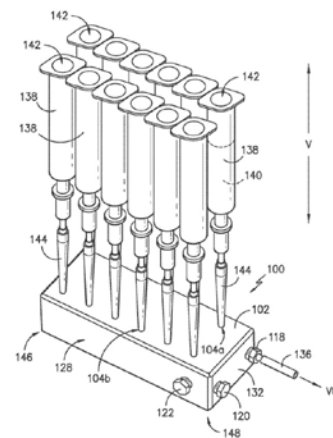
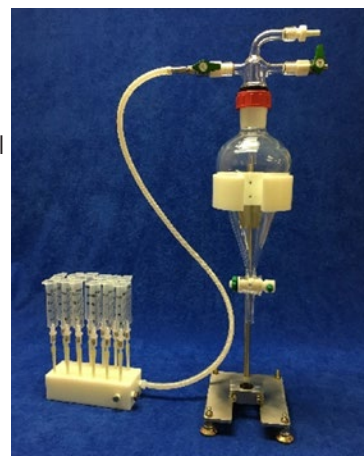
Savannah River National Laboratory (SRNL) has developed a device for collecting residue from separations columns. Column separation processes are commonly used in chemical analysis for the identification of one or more analytes.

Description

SRNL has invented a device for collection of residue from separation columns. A manifold provides for multiple sample ports that are fluidly connected to a vacuum port by at least one channel. Residue from the separation columns is pulled through the sample ports, into the channel, and then to the vacuum port. From the vacuum port the residue can be moved, under the force of the vacuum, directly to a drain or to a collection vessel connected with a drain. Because the manifold does not include internal collection chambers, a worker is not required to place the manifold in a vacuum box, disassemble the manifold, or replace collection chambers in the manifold. As such, this invention allows a user to minimize exposure to the residue.

Intellectual Property

This technology has been granted U.S. Patent No. 10,549,214 B2 (February 4, 2020), "Device for Residue Handling Minimization with Vacuum-Assisted Separations" and is available for licensing.



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Technology transfer

The Savannah River National Laboratory (SRNL) is the U.S. Department of Energy's (DOE) applied research and development laboratory at the Savannah River Site (SRS).

With its wide spectrum of expertise in areas such as homeland security, hydrogen technology, materials, sensors, and environmental science, SRNL's cutting edge technology delivers high dividends to its customers.

The management and operating contractor for SRNL is Battelle Savannah River Alliance, LLC. BSRA is responsible for transferring its technologies to the private sector so that these technologies may have the collateral benefit of enhancing U.S. economic competitiveness.

Partnering opportunities

SRNL invites interested companies with proven capabilities in this area of expertise to develop commercial applications for this process under a cooperative research and development agreement (CRADA) or licensing agreement. Interested companies will be requested to submit a business plan setting forth company qualifications, strategies, activities, and milestones for commercializing this invention. Qualifications should include past experience at bringing similar products to market, reasonable schedule for product launch, sufficient manufacturing capacity, established distribution networks, and evidence of sufficient financial resources for product development and launch.

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