



Direct elution caps for reducing autosampler cross-vial contamination

A screw cap that interfaces a pipette tip and autosampler vial, creating a sturdy connection and an elevated pipette tip position within the vial.

IP Status: Provisional Patent Application Filed

Applications

- Analytical chemistry instrumentation employing automated sampling such as mass spectrometry, gas chromatograph, HPLC, etc.

Technology Overview

Researchers at the University of Minnesota have developed a screw cap that interfaces a pipette tip and autosampler vial, creating a sturdy connection and an elevated pipette tip position within the vial. The screw cap prevents the distal end of the pipette tip from contacting the inner surface of the autosampler vial and the eluted liquid. Used as a key component in preparing microliter-sized samples for automated sampling, the screw cap mitigates quality concerns, including sample loss, sample contamination, and cross-vial contamination. This results in high elution recovery, increased autosampler precision, and reliable data collection. Additionally, the screw cap is compatible with the Glass Packaging Institute (GPI) design standards, allowing it to fit commercially available autosampler vials.

Phase of Development

TRL: 4-5

Direct elution caps have been 3D printed and used in the lab to manage the interaction between a pipette tip and autosampler vial.

Desired Partnerships

This technology is now available for:

- License
- Sponsored research
- Co-development

Please contact our office to share your business' needs and learn more.

Researchers

- [Justin Drake, PhD](#) Assistant Professor, Department of Pharmacology

Technology ID

2023-009

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