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A Microfluidic Dynamic Vapor Control System

Tech ID: 18850 / UC Case 2004-150-0

BACKGROUND

Controlling the chemistry of small drops is troublesome owing to the difficulty in handling and metering small volumes. To change the chemistry of a 50nl drop by 10% would require adding or removing a 5nl quantity - very difficult. As a result, most nanovolume assays are set up once and never modified afterwards. Large environmental systems have been built to provide vapor controlled change of chemistry. However, these are far too bulky and inconvenient to be of use to a typical researcher and have seldom been used in nanovolume assays.

TECHNOLOGY DESCRIPTION

University researchers have developed a small, integrated system to dynamically change the chemistry of a small drop by controlling the vapor. This system uses microfluidic vapor lines and on-board vapor reservoirs that can be actuated to produce vapor on demand. It also identifies storing the reagents or materials needed to generate the vapor on the same device for a convenient, disposable cartridge.

APPLICATIONS

This device is useful for small volume assays such as protein crystallization.

PATENT STATUS

Country	Type	Number	Dated	Case
United States Of America	Issued Patent	7,811,443	10/12/2010	2004-150

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OTHER INFORMATION

CATEGORIZED AS

- » **Nanotechnology**
- » Other
- » **Research Tools**
- » Screening Assays

RELATED CASES

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