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**Cox**

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(54) **LIQUID PROCESSING DEVICE INCLUDING GAS TRAP, AND SYSTEM AND METHOD**

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(\* ) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 788 days.

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(58) **Field of Classification Search** ..... 436/50, 436/94, 518; 422/103, 102, 100; 435/6, 435/286.6

See application file for complete search history.

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(57) **ABSTRACT**

A device is provided that can include at least one gas trap that can be arranged in fluid communication with a sample-containment feature formed in or on the device. The gas trap can be arranged to trap gas or air displaced from the sample-containment feature as the sample-containment feature is loaded with a liquid. The trapped gas in the gas trap can assist in breaking-up and expelling the liquid from the sample-containment feature during a subsequent liquid transfer operation, for example, to an adjacent sample-containment feature. Systems for processing such a device and methods using such a device are also provided.

**33 Claims, 6 Drawing Sheets**

