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Multi-Color Cavity Ringdown Based Detection Method and Apparatus

Scott W. Reeve

Arkansas State University - Main Campus

Susan Davis Allen

Arkansas State University - Main Campus, allens17@erau.edu

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(54) **MULTI-COLOR CAVITY RINGDOWN BASED
DETECTION METHOD AND APPARATUS**

(75) Inventors: **Scott W. Reeve**, Jonesboro, AR (US);
Susan Davis Allen, Jonesboro, AR (US)

(73) Assignee: **Arkansas State
University—Jonesboro**, State
University, AR (US)

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U.S.C. 154(b) by 82 days.

This patent is subject to a terminal dis-
claimer.

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G01N 21/00 (2006.01)

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73/23.3, 23.2, 23.31; 250/227.18, 343, 559.4,
250/345, 339.12-339.13

See application file for complete search history.

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Primary Examiner — Tri T Ton

(74) *Attorney, Agent, or Firm* — Joe D. Calhoun; Rashauna
A. Norment

(57) **ABSTRACT**

A multi-color cavity ringdown based spectrometer system is
housed in a light tight enclosure to detect the presence of trace
quantities of gas phase molecules emanating from a subject,
explosives, drugs, or hazardous materials. A method is also
disclosed for simultaneous real time detection of gas phase
molecules emanating from explosives, drugs, hazardous
materials, a subject's breath skin or bodily fluid.

13 Claims, 9 Drawing Sheets

