



US 20130244339A1

(19) **United States**

(12) **Patent Application Publication**

**Ehrenkranz et al.**

(10) **Pub. No.: US 2013/0244339 A1**

(43) **Pub. Date: Sep. 19, 2013**

(54) **DEVICE AND METHOD FOR PERFORMING  
A DIAGNOSTIC TEST**

(76) Inventors: **Joel R.L. Ehrenkranz**, Salt Lake City,  
UT (US); **Pamela J. Turbeville**,  
Scottsdale, AZ (US); **Jeong-Yeol Yoon**,  
Tucson, AZ (US); **David J. You**, Tucson,  
AZ (US)

(21) Appl. No.: **13/612,293**

(22) Filed: **Sep. 12, 2012**

**Related U.S. Application Data**

(60) Provisional application No. 61/533,959, filed on Sep.  
13, 2011.

**Publication Classification**

(51) **Int. Cl.**  
**G01N 21/49** (2006.01)

(52) **U.S. Cl.**  
CPC ..... **G01N 21/49** (2013.01)  
USPC ..... **436/501; 422/554; 422/70**

(57) **ABSTRACT**

A device and method for performing a point of care diagnostic test for detecting and quantifying at least one analyte in a biological sample (e.g., a body fluid). A device may include an immunoassay apparatus and a holder with an adjustable variable angle stage for positioning the immunoassay apparatus relative to a light source and a detector device so as to optimize the angle of incidence and angle of radiation to optimize an elastic light scattering signal from the immunoassay apparatus. The elastic light scattering signal may be used to quantify the amount of the analyte(s) of interest present in the sample. The device is based upon elastic light scattering, so the variation in the angle of incidence and angle of reflection are optimized to maximize signal generation due to elastic light scattering.