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(54) Title: IMPROVED METHOD AND APPARATUS FOR ALIGNING MICROBEADS IN ORDER TO INTERROGATE THE SAME

(57) Abstract: A method and apparatus are provided for aligning optical elements or microbeads (8), wherein each microbead has an elongated body with a code embedded therein along a longitudinal axis thereof to be read by a code reading device. The microbeads (8) are aligned with a positioning device (or cell) (500) having a plate or platform (200, 1252) with grooves (205, 1258) so the longitudinal axis of the microbeads is positioned in a fixed orientation relative to the code reading device. The microbeads (8) are typically cylindrically shaped glass beads having a diffraction grating-based code embedded in the bead (8) disposed along an axis, which requires a predetermined alignment between the incident code readout laser beam and the code readout detector in two of three rotational axes. The geometry of the grooves (205) are designed to allow for easy loading and unloading of beads from a cell, and the grooves (205) may be straight or curved. Also, the cell may be segmented into regions each associated with a different reaction or used for a different identification process/ application, and may have many different geometries depending on the application.

INTERNATIONAL SEARCH REPORT

Information on patent family members

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