microdrop
TECHNOLOGIES

APPLICATION NOTE

STANDARDIZED ANALYSIS OF BEAD ARRAYS WITH FLUORESCENCE-BASED IMAGING SYSTEMS AND PRINTING

BACKGROUND

Reproducibility in bead array experiments is a core challenge. To enable monitoring of day-to-day performance and comparison of different fluorescence-based instruments, PolyAn offers specially designed beads for the calibration of fluorescence imaging systems for bead arrays. These beads can be used to evaluate the instrument's sensitivity regarding fluorescence intensity, size determination, and particle counting.

METHOD

Here we show that Fluorescent Spectrum Calibration Beads from PolyAn GmbH (Berlin, Germany) can be spotted by dispensing systems from microdrop Technologies GmbH (Norderstedt, Germany) into a bead-based microarray at the inlet/outlet ports of a microfluidic chip manufactured by Little Things Factory GmbH (Elsoff, Germany).

CONCLUSIONS

The spots give clear distinctive signals (Figure 1). This suggests that the combination of PolyAn's Spectrum Calibration Beads with printing can be used to standardized performance readouts in small bead arrays.

PolyAn
molecular surface engineering

LTF Little Things FACTORY

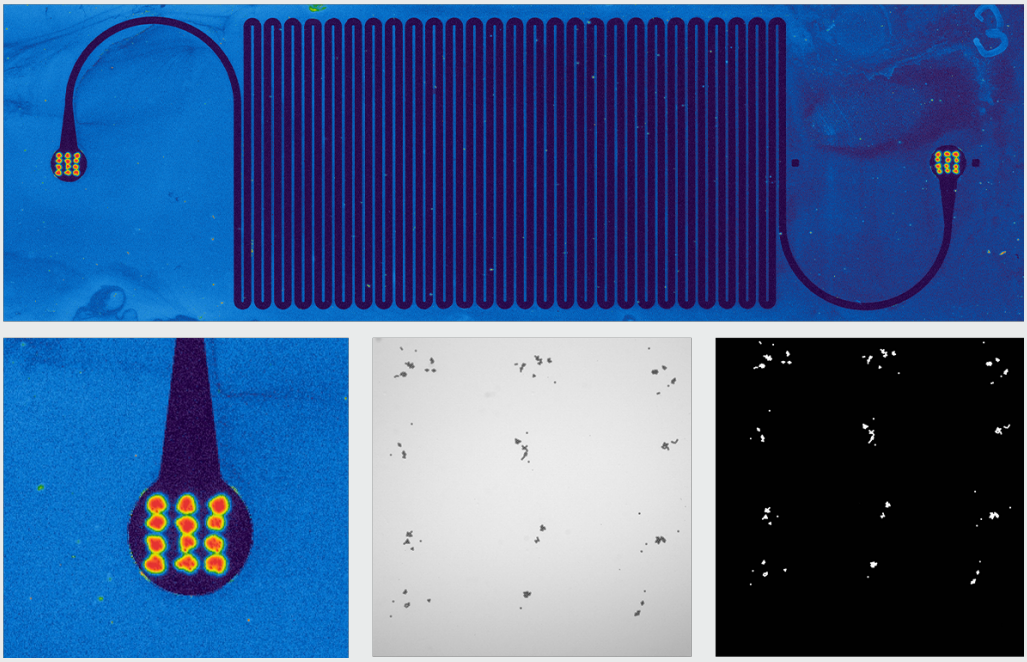

Figure 1: PolyAn's Spectrum Calibration Beads are designed for calibration, performance evaluation, and comparison of fluorescence-based imaging systems such as imaging cytometry. The beads contain a mixture of fluorophores that can be excited at any wavelength from 365–650 nm, and allow a performance validation within most common detection channels.

microdrop Technologies GmbH
Tycho-Brahe-Kehre 1
22844 Norderstedt
Germany

Tel. +49 40 | 535383-0
info@microdrop.de
www.microdrop.de
www.microdrop-lifescience.de