

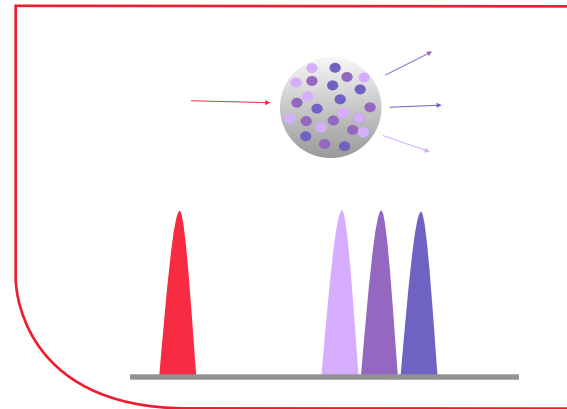
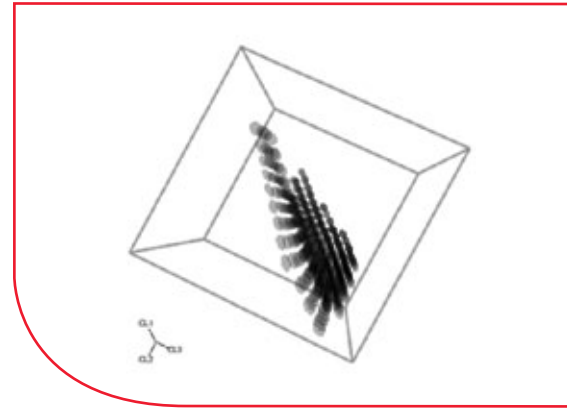
## High Density Screening

The new FLEXMAP 3D<sup>™</sup> system takes pioneering xMAP technology to the next dimension. The FLEXMAP 3D system combines differentially dyed fluorescent microsphere sets with an innovative instrument design to allow multiplexing of up to 500 unique assays within a single sample, both rapidly and precisely. Features such as automated probe height adjustment, simplified routine maintenance operations and an intuitive software interface make FLEXMAP 3D the most flexible and easy to use multiplexing platform to date.

### How do we build a 500 plex?

The FLEXMAP 3D system works in the same basic manner as the Luminex<sup>®</sup> 200<sup>™</sup> analyzer. Mixtures of internally dyed microspheres are used in an assay, each having been prepared to bind to a specific analyte of interest. After the assay has been performed the mixture of microspheres is aspirated into the system and then each individual microsphere is individually excited by a red and green laser.

Each microsphere is impregnated with different amounts of three internal dyes. All dyes excite at the same red laser wavelength, but fluoresce at three separate wavelengths. Monitoring the relative intensity of the three signals allows the system to discriminate up to 500 different microsphere sets. The green laser is then used to excite the reporter molecules, normally in the form of phycoerythrin, and the resulting fluorescence is measured to determine the amount of analyte present.



Reagent	Available Regions
MicroPlex <sup>®</sup> Microspheres	1-150
MagPlex <sup>®</sup> Microspheres	1-150
SeroMAP <sup>™</sup> Microspheres	1-100
xTAG <sup>®</sup> Microspheres	1-100
LumAvidin <sup>™</sup> Microspheres	1-100

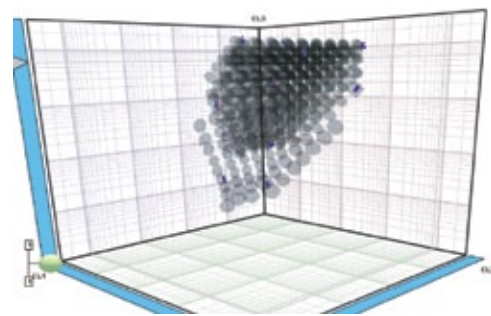
### What types of microspheres?

All current Luminex microsphere products are compatible with the FLEXMAP 3D easing conversion of current Luminex microsphere-based research products to the new system.\*

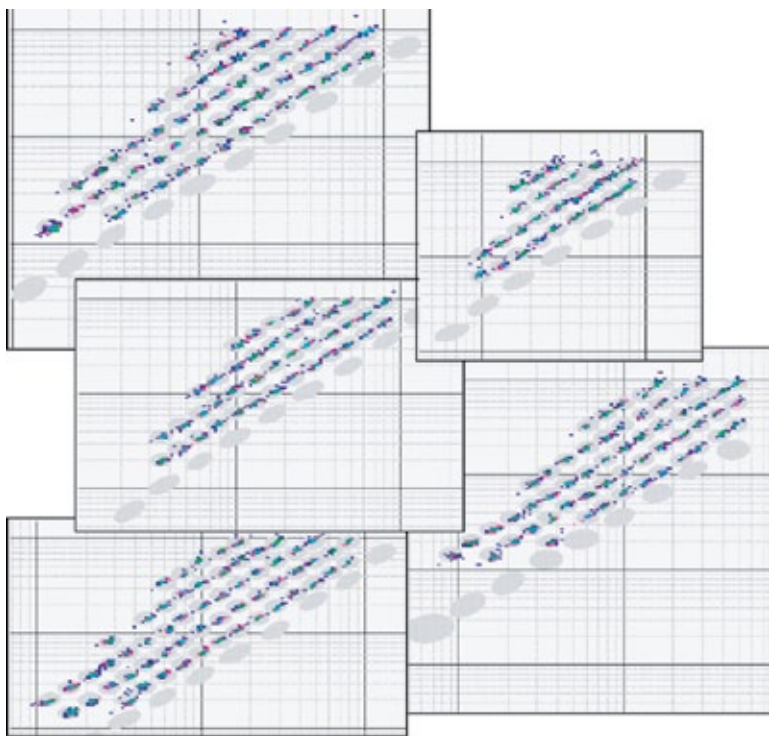
\*For commercially available assay kits, check with the assay kit manufacturer to confirm assay compatibility and available support with the FLEXMAP 3D system.

## What does the new bead map look like?

The new three-dimensional bead map is a matrix of the emitted fluorescence of the three internal dyes on the x, y, and z axis. It is a three dimensional graph with ellipsoid targets for each region. The original 1-100 bead map is the base of the 500 plex bead map with the new regions emerging from it as the third dye is added in increasing amounts.



Selected C12.CL3 slices of the 500 plex Bead Map:



## How do the new microsphere sets compare to the previous sets?

Each microsphere line, such as the MicroPlex® Microspheres and MagPlex® Microspheres, originates from a common progenitor microsphere lot per microsphere line. The common lot is then aliquotted and dyed into the various color-code signatures to ensure homology of microsphere functionality and surface chemistry across the microsphere line. Microsphere integrity is maintained within the expanded map as the addition of a new dye into the established processes does not affect microsphere functionality or surface chemistries.

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