

LBL-Beads® – Improved Particles for Diagnostic Tests



Diagnostic tests often are based on small particles. Accordingly, diagnostic particles usually have to combine several functions, e.g. magnetism, dyes and specific binding. However, since functions often offset each other, the production of these complex particles by conventional technologies is only possible to a limited extent, thus rendering the resulting particles less effective in their application.

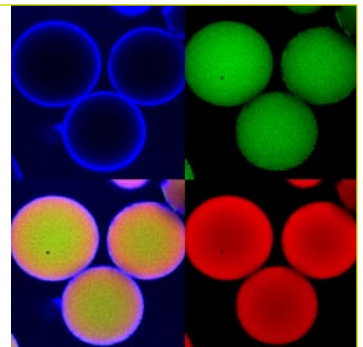
The product LBL-Beads® brings substantial increases in effectiveness of diagnostic systems. LBL-Beads® are particles manufactured according to the LBL-Technology®. They are prepared as monodisperse particles with diameters between 200 nm and 50.000 nm.

LBL-Beads® can be engineered to provide the following benefits:



*Rodamin labeled particles
encapsulated with PAH/CY5.*

- ANALYTE-SPECIFIC FUNCTIONS
- INCREASED SOLVENT STABILITY
- EASY RESUSPENSION
- MULTIPLE FLUORESCENCE CATEGORIES
- ENHANCED SEPARATION PROPERTIES



The increased sensitivity is achieved by a high number of functional groups added to the particle surface. They can be embedded into or onto the capsule wall structure. Analyte-specific functions are also provided by the reaction of analyte molecules with particle surface molecules, resulting in a swelling or shrinking of the capsule and a subsequent signal change. LBL-Beads® show an increased solvent stability based on the resistance of the particles against organic or inorganic solvents.

Due to the predefined high charge of the surface, the particles can also be resuspended easily. Multiple fluorescence categories are achieved by the incorporation of different fluorescent dyes in the wall structure and/or in the particle core.

By incorporating nanoparticles into the layer structure, i.e. incorporation of superparamagnetic particles, enhanced separation properties are additionally available.

LBL-Beads® can be engineered to individual assay formats by providing a high flexibility in:



- MATERIALS
- SIZE
- COLORS
- MULTIPLE FUNCTIONS
- PAYLOAD
- BIOCOMPATIBILITY

In addition, LBL-Beads® can be used as part of composite materials or composite assay formats. LBL-Beads® are patent protected worldwide, thus providing several technological niches in specific assay formats.

Please feel free to contact us. We will engineer the right particle for you.

