Luminex®

Product Information Sheet

MagPlex® Low Concentration Microspheres

MagPlex® Low Concentration Microspheres are Superparamagnetic Carboxylated xMAP® Microspheres internally labeled with fluorescent dyes with magnetite encapsulated in a functional polymer outer coat containing surface carboxyl groups for covalent coupling of ligands. MagPlex Low Concentration Microspheres respond rapidly and efficiently to an applied magnetic field, but have negligible magnetic remanence, allowing rapid re-dispersion for further processing. MagPlex Low Concentration Microspheres are available in the following universal Luminex platform regions: 12, 13, 14, 15, 18, 19, 20, 21, 22 and 25 of the standard MagPlex Bead at 2.5 million beads/ ml at a 1ml volume while retaining their function as general purpose reagents. MagPlex Low Concentration Microspheres are intended for general laboratory use and may be used in conjunction with other reagents to develop assays using xMAP technology. For specific use instructions and protocols refer to the system manual provided with your instrumentation for the MAGPIX®, Luminex® 100/200™ and FLEXMAP 3D®.

Product Specifications

MagPlex Low Concentration Microspheres are provided in purified water containing <0.1% w/v ProClin® as a preservative. Product specifications are assured up to the expiration date stated on the label with proper handling and storage. The expiration date is intended to be the latest date at which the material should be transformed for its further use. Although continued conformance to specifications is expected subsequent to further manufacture of the microspheres, users must characterize and control their formulations to assure assay specific performance.

Package Configuration	**Specification**
Microsphere Concentration (microspheres/mL)	$2.12 \times 10^6 – 2.87 \times 10^6$
1mL Volume	1.00mL, -0.02/+0.20mL
Medium	<0.1% ProClin in Water
Microsphere Properties	**Specification**
Median Microsphere Density (g/mL)	1.10 ± 0.06
Mode Microsphere Diameter (µm)	6.5 ± 0.2
RP1 background	≤ 100
Classification Efficiency	≥ 80%
Misclassification	≤ 2.0%
Doublet Discrimination Peak	9000-14000
Progenitor Microsphere Properties	**Specification**
Median Microsphere Density (g/mL)	1.10 ± 0.06
Mode Microsphere Diameter (µm)	6.5 ± 0.2
Diameter Coefficient of Variation[1]	≤ 5%
Functional groups	Carboxyl (COOH)
Iron Content	2-4%

1. Established from intermediate material, core particles.

Limitations

These instructions must be followed to ensure consistency when using the microspheres. Minimize exposure of contents to light to maintain product integrity. The microspheres are hydrophobic in the aqueous medium provided. Do not use this product with strong organic solvents. For specific solvent and buffer compatibility, go to Luminex website Support page FAQ's Tech Tips section http://www.luminexcorp.com/support/tech_tips.html.

Safety Precautions

Although this product is not known to contain hazardous or carcinogenic components at toxic levels, it may be toxic if inhaled, if it comes in contact with skin, or if swallowed. There may be danger of cumulative effects. Keep away from food, drink, and animal feeding stuffs. If product comes in contact with skin, wash immediately with plenty of water. Wear suitable protective clothing. In case of accident or if you feel unwell, seek medical advice immediately and show this product label or container to your medical provider. Material Safety Data Sheet is available at http://www.luminexcorp.com/products/reagents/magnetic_microspheres.html.

This product is intended to be used with very strong permanent magnets. Persons with pacemakers or implants should avoid direct contact. Keep all magnetic media, watches, and sensitive electronic devices away from the magnetic separator. Refer to magnetic separator manufacturer's product insert for further safety information.

Storage

Store product upright at 2-8ºC dark. Avoid freezing. Avoid exposure to heat ≥55ºC for durations greater than 24 hours.

Handling

The MagPlex Low Concentration Microspheres settle if left undisturbed. To maintain microsphere concentration integrity, ensure that microspheres are homogeneously resuspended prior to dispensing. The uncoupled microspheres are hydrophobic in the water medium, so care must be taken to avoid excessive or vigorous agitation during resuspension. This promotes microsphere agglutination and container surface adherence, which reduces the available microsphere concentration. Repetitive resuspension and pipetting from the container may also promote container surface adherence. If microsphere agglutination or container surface adherence is observed, apply bath sonication for 1-minute to exterior of container to re-disperse microspheres.

MagPlex Low Concentration Microspheres are provided in a single volume configuration for use on the MAGPIX®, Luminex® 100/200™ and FLEXMAP 3D®Follow the instructions below to achieve a homogenous resuspension:

For 1 mL volume configuration:

Remove from 2-8ºC and allow equilibration to room temperature. Prior to dispensing, rotate at approximately 20 rpm for 1 -2 minutes or mix by gentle inversion for an equivalent amount of time. Dispense immediately. Do not vortex. Do not rotate for extended periods of time.

Protect the microspheres from light at all times during use. For specific use instructions and protocols, refer to the system manual provided with your instrumentation or refer to the Luminex website Support page Support FAQ's section http://www.luminexcorp.com/support/faqs.html. Recommended microtiter plates and magnetic separators are also included at this site location.

Product Numbering / Order Information

MagPlex Low Concentration Microspheres are available in the following configuration. The product number on the container label relates to the software target region and contains a suffix identifying the reagent as a low concentration MagPlex product. See the following example:

Product Number	Region Number	Volume	Container Size	Conc. (beads/mL)
MC10**012-ID**	012	1.0 mL	4 mL	2.50x 10^6/mL
MC10**013-ID**	013	1.0 mL	4 mL	2.50x 10^6/mL
MC10**014-ID**	014	1.0 mL	4 mL	2.50x 10^6/mL
MC10**015-ID**	015	1.0 mL	4 mL	2.50x 10^6/mL
MC10**018-ID**	018	1.0 mL	4 mL	2.50x 10^6/mL
MC10**019-ID**	019	1.0 mL	4 mL	2.50x 10^6/mL
MC10**020-ID**	020	1.0 mL	4 mL	2.50x 10^6/mL
MC10**021-ID**	021	1.0 mL	4 mL	2.50x 10^6/mL
MC10**022-ID**	022	1.0 mL	4 mL	2.50x 10^6/mL
MC10**025-ID**	025	1.0 mL	4 mL	2.50x 10^6/mL

For ordering information go to http://www.luminexcorp.com/products/orderinginfo.html.

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