

MagPlex[®] Microspheres

MagPlex[®] 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 Microspheres respond rapidly and efficiently to an applied magnetic field, but have negligible magnetic remanence, allowing rapid re-dispersion for further processing. The MagPlex Microspheres are used in conjunction with other reagents to develop or further manufacture assays using xMAP technology. For specific use instructions and protocols refer to the system manual provided with your instrumentation.

Product Specifications

MagPlex 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)	11.0 x 10 ⁶ - 14.5 x 10 ⁶
1mL Volume	1.00mL, -0.02/+0.20mL
4mL Volume	4.00mL, -0.05/+0.20mL
Custom Volumes	20 to 1000mL, -2%/+5% ¹
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%
Luminex [®] 100/200 [™] & MAGPIX [®] Misclassification	≤ 2.0%
FLEXMAP 3D [®] Misclassification	≤ 4.0%
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 Technology Tips section.

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. I Safety Data Sheet is available at <https://www.luminexcorp.com/documents/>.

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 2-8°C dark. Avoid freezing. Avoid exposure to heat ≥55°C for durations greater than 24 hours.

MagPlex[®] Microspheres**Handling**

The MagPlex 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 Microspheres are provided in multiple volume configurations and resuspension instructions vary for each configuration. Follow the instructions below based on the configuration in use to achieve a homogenous resuspension:

For 1 mL volume configuration:

Remove from 2-8°C 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.

For 4 mL volume configurations:

Remove from 2-8°C and allow equilibration to room temperature. Prior to dispensing, rotate at approximately 20 rpm for 10-15 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.

For Custom Volumes from 20 to 985 mL volume configurations:

Remove from 2-8°C and allow equilibration to room temperature. Prior to dispensing, rotate at approximately 12 rpm for 10 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 at <https://www.luminexcorp.com/customer-support/>. Recommended microtiter plates and magnetic separators are also included at this site location.

Product Numbering / Order Information

MagPlex Microspheres are available in the following standard and custom configurations. The product number on the container label relates to the software target region (XXX) and contains a suffix representing the product volume. See the following examples:

	Product Number	Region Number	Volume	Container Size	Conc. (beads/mL)
Standard Volumes	MC10012-01	012	1.0 mL	4 mL	1.25x 10 ⁷ /mL
	MC10012-04	012	4.0 mL	4 mL	1.25x 10 ⁷ /mL
	MC10012-C30*	012	20-30 mL	30 mL	1.25x 10 ⁷ /mL
Custom Volumes	MC10012-C60*	012	31-60 mL	60 mL	1.25x 10 ⁷ /mL
	MC10012-C125*	012	61-125 mL	125 mL	1.25x 10 ⁷ /mL
	MC10012-C250*	012	126-250 mL	250 mL	1.25x 10 ⁷ /mL
	MC10012-C500*	012	251-500 mL	500 mL	1.25x 10 ⁷ /mL
	MC10012-C1000*	012	501-985 mL	1000 mL	1.25x 10 ⁷ /mL

For additional information regarding instrument compatibility and region selection, visit www.luminexcorp.com.

*Custom Volumes are build-to-order and volumes may not be available to all regions. For specific ordering information for custom volumes, refer MagPlex Microspheres Custom Volume Ordering Guidelines on the Luminex website.

For ordering information go to <https://www.luminexcorp.com/ordering-information/>.



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