MagPlex® Monitoring Microspheres Product Information Sheet

For Further Manufacture Only.

Description

MagPlex® Monitoring Microspheres are magnetic polystyrene microparticles that have been color coded to classify to a specific region and provide reporter median fluorescent intensity (MFI) values specific to instrument type and reporter modes. These microspheres may be used during assay development for customers to monitor reporter values and reporter channel performance well by well. Customers may also choose to incorporate these microspheres into their assay design. The use of these microspheres does not replace the need for weekly system calibration and daily system verification.

MagPlex Monitoring Microspheres are available in two varieties based on the reporter value that is being monitored. The RP1 monitoring microspheres are compatible with all xMAP® instruments, including the MAGPIX®, Luminex® 200™, FLEXMAP 3D®, xMAP INTELLIFLEX and xMAP INTELLIFLEX DR-SE Systems. However, the RP2 monitoring microspheres are only compatible with the INTELLIFLEX DR-SE System. A table showing the MagPlex Monitoring Microsphere regions and the instruments with which they are compatible is provided in the Ordering Section. Please contact your Luminex representative to inquire about lead times.

NOTE: MagPlex Monitoring Microspheres require the use of xPONENT® or INTELLIFLEX Software.

All microspheres are general use components for further manufacture of xMAP bioassays. MagPlex Monitoring Microspheres are available at a concentration of 1.25×10^7 microspheres/mL and can be ordered in 1 mL vial sizes only.

Limitations

To ensure consistency, please consider the following limitations when handling MagPlex® Monitoring Microspheres:

- Minimize exposure to light to maintain the integrity of the microspheres.
- The microspheres will settle if left undisturbed, requiring re-suspension prior to dispensing.
- The microspheres are hydrophobic in the aqueous medium provided.
- Do not use this product with strong organic solvents.

Safety Precautions

Although this product is not known to contain hazardous or carcinogenic components at toxic levels, it may be harmful if inhaled, comes in contact with skin, or 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 an accident or if you feel unwell, seek medical attention immediately. A Safety Data Sheet (SDS) is available upon request.

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This product is intended to be used with very strong permanent magnets. Persons with pacemakers or implants shall 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.

Wear appropriate personal protective equipment (PPE), including a lab coat and disposable gloves, when performing procedures. Fresh clean gloves must be worn in each area and must be changed before leaving that area. Wash your hands thoroughly after performing the test.

Adhere to standard laboratory safety practices when handling hazardous, toxic, or flammable reagents and chemicals. Contact Luminex Technical Support when in doubt about compatibility of cleaning and decontamination agents or materials.

Storage and Handling

Store MagPlex® Monitoring Microspheres refrigerated at 2°C to 8°C upon receipt. Avoid freezing. Avoid exposure to heat >55°C for durations greater than 24 hours. The product expires on the expiration date printed on the label. If removed from the original container, protect the microspheres from light at all times.

Handling Instructions

To maintain microsphere concentration integrity, always ensure that microspheres are homogeneously suspended prior to dispensing. Microspheres will settle if left undisturbed.

1. Remove the MagPlex® Monitoring Microspheres from the refrigerator and allow the microsphere suspension to equilibrate to room temperature.
2. Place the microspheres on the rotator and gently rotate for 1 to 2 minutes.
3. Mix the microspheres 5 to 10 times by gentle inversion and gently tap the sample container bottom on the bench top to minimize the sample retention in the cap immediately prior to dispensing.

NOTE: Protect the MagPlex Monitoring Microspheres from light if they are removed from the original container.

Product Numbering and Ordering Information

The MagPlex® Monitoring Microspheres are available at concentrations of 1.25×10^7 microspheres/mL in 1.0 mL aliquots for both part numbers. The product part number is composed of a prefix indicating the product purpose (M for Monitoring), the applicable reporter channel (RP1 or RP2), "region number," and a suffix indicating the product volume.

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Table 1. Part Numbers

Product Number	Region	Volume/Container Size	Concentration (microspheres/mL)	Instrument Compatibility
MRP1-045-01	045	1.0 mL/4 mL	1.25×10^7	MAGPIX® Luminex® 200™ FLEXMAP 3D® xMAP® INTELLIFLEX xMAP INTELLIFLEX DR-SE
MRP2-222-01	222	1.0 mL/4 mL	1.25×10^7	xMAP INTELLIFLEX DR-SE only

Symbols Glossary

LOT	Batch Code.		Manufacturer.		Temperature Limit.
	Use-by date.		Consult instructions for use.	REF	Catalog(ue) Number.
	Caution.		Keep away from sunlight.		

Technical Product Description

MagPlex® Monitoring Microspheres are provided in purified water containing <0.1% w/v ProClin® as a preservative.

	MRP1-045-01	MRP2-222-01
Composition	Superparamagnetic Carboxylated Polystyrene	Superparamagnetic Carboxylated Polystyrene
Magnetic	Yes	Yes
Microsphere Size	6.5 µm	6.5 µm
Concentration (microspheres/mL)	1.25×10^7	1.25×10^7
Fill Volume Configuration	1 mL	1 mL

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	MRP1-045-01	MRP2-222-01
Median Microsphere Density (g/mL)	1.10 ± 0.06	1.10 ± 0.06
Mode Microsphere Diameter (µm)	6.5 ± 0.2	6.5 ± 0.2
Iron Content	2% to 4%	2% to 4%
Assigned Region	045	222
Classification Efficiency	≥80%	≥80%
Misclassification	MAGPIX and Luminex 200 • ≤2% FLEXMAP 3D and xMAP INTELLIFLEX Systems • ≤4%	xMAP INTELLIFLEX DR-SE • ≤4%

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	MRP1-045-01	MRP2-222-01
RP1 MFI Value Range	**MAGPIX** • 2,000 to 3,000 **Luminex 200** • Default PMT: 2,000 to 3,000 • High PMT: 9,100 to 13,650 **FLEXMAP 3D** • Standard PMT: 2,000 to 3,000 • High PMT: 9,100 to 13,650 **xMAP INTELLIFLEX Sytems** • Luminex 200 mode Low PMT: 2,000 to 3,000 • Luminex 200 mode High PMT: 9,100 to 13,650 • FLEXMAP 3D mode Low PMT: 3,400 to 5,100 • FLEXMAP 3D mode High PMT: 15,470 to 23,205 • xMAP INTELLIFLEX Dual Reporter mode: 2,000 to 3,000 • xMAP INTELLIFLEX High Sensitivity mode: 260,000 to 390,000	N/A
RP2 MFI Value Range	N/A	**xMAP INTELLIFLEX DR-SE** • xMAP INTELLIFLEX Dual Reporter mode: 2,000 to 3,000
Instrument Compatibility	MAGPIX Luminex 200 FLEXMAP 3D xMAP INTELLIFLEX xMAP INTELLIFLEX DR-SE	xMAP INTELLIFLEX DR-SE

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