



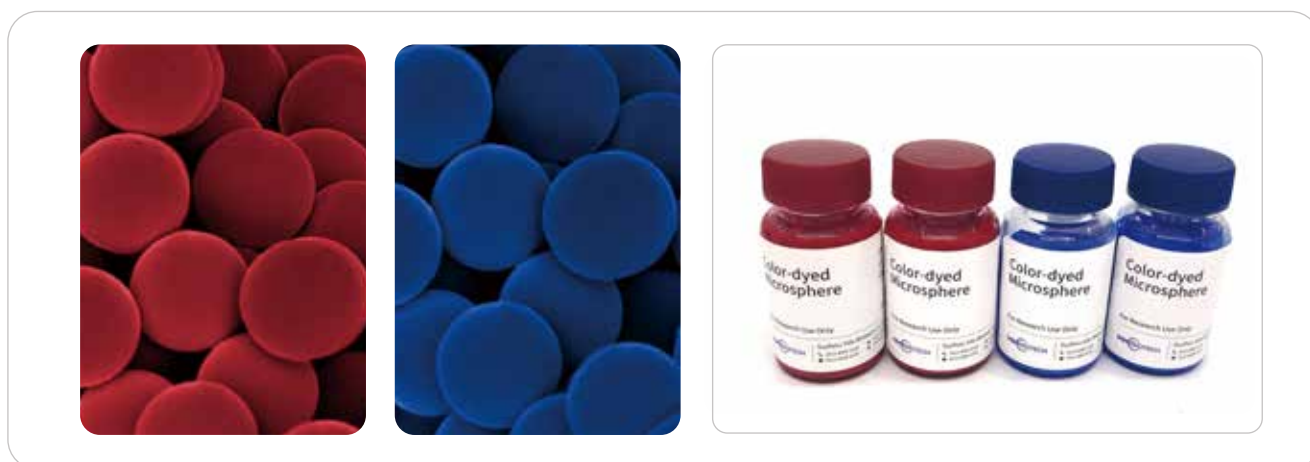
# Color-dyed/Fluorescent Microspheres

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For Lateral Flow

## Color-dyed Microspheres for Lateral Flow

Utilizing our proprietary internal saturation dyeing process, VDO Biotech has developed a series of color-dyed microspheres. This series of products are bright and diverse in color, suitable for qualitative and semi-quantitative detections. The product covers the colors of the rainbow series, which can help avoid the background interference of sample, and also provide an effective tool for multiple chromatography detection. Color-dyed microspheres are ideal for technology platforms such as agglutination testing and lateral flow.



### Features

Abundant surface groups

Higher protein binding capacity

Higher sensitivity

Ideal alternative to colloidal gold

Large scale production

Production capacity is up to 500 million tests/batch

Internal dyeing method

Rich colors, no dye on the particle surface, easy to couple

Customized production

Various options of particle size, surface group content, and color/fluorescence dyeing



### Technical Parameters

Material:	Polystyrene polymer
Uniformity:	CV<5%
Particle Size:	200nm - 400nm
Surface Functional Groups:	Carboxyl (COOH), Streptavidin (SA)
Additive:	Contains trace amount of surfactant
Storage Condition:	Carboxyl-coated microspheres: 2-25°C; do not freeze Streptavidin-coated microspheres: 2-8°C; do not freeze

Note: the technical parameters are also applied to fluorescent microspheres and time-resolved fluorescent microspheres.

# Fluorescent Microspheres & Time-resolved Fluorescent Microspheres for Immunochromatography

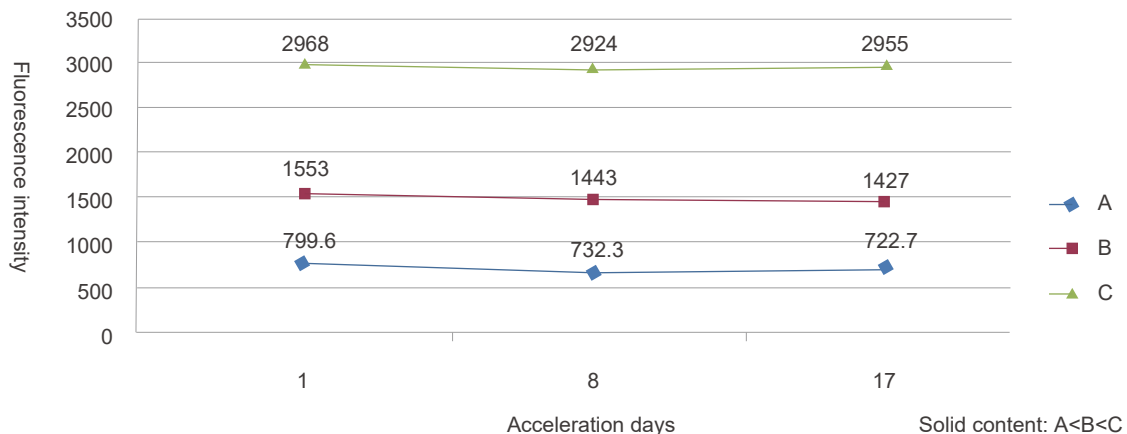
VDO Biotech's fluorescent microspheres are designed for ultra-sensitive lateral flow detection. The data can be read by fluorescence detector to achieve a more sensitive quantitative detection, and it is the preferred material for ultra-sensitive lateral flow detection. The dyes of this product series are embedded in the microspheres and filled firmly. With strong and long-lasting fluorescence intensity, our fluorescent microspheres are ideal for the quantitative detection reagents development.



## Advantages of time-resolved fluorescence immunochromatography

- High Sensitivity** 100-1,000 times higher than colloidal gold
- Easy Operation** Fast detection, ideal for POCT (point of care testing)
- Anti-interference** Rare earth ion markers, long half-life, and large Stokes Shift value
- Quantitative Detection** The sample concentration can be detected according to the built-in standard curve

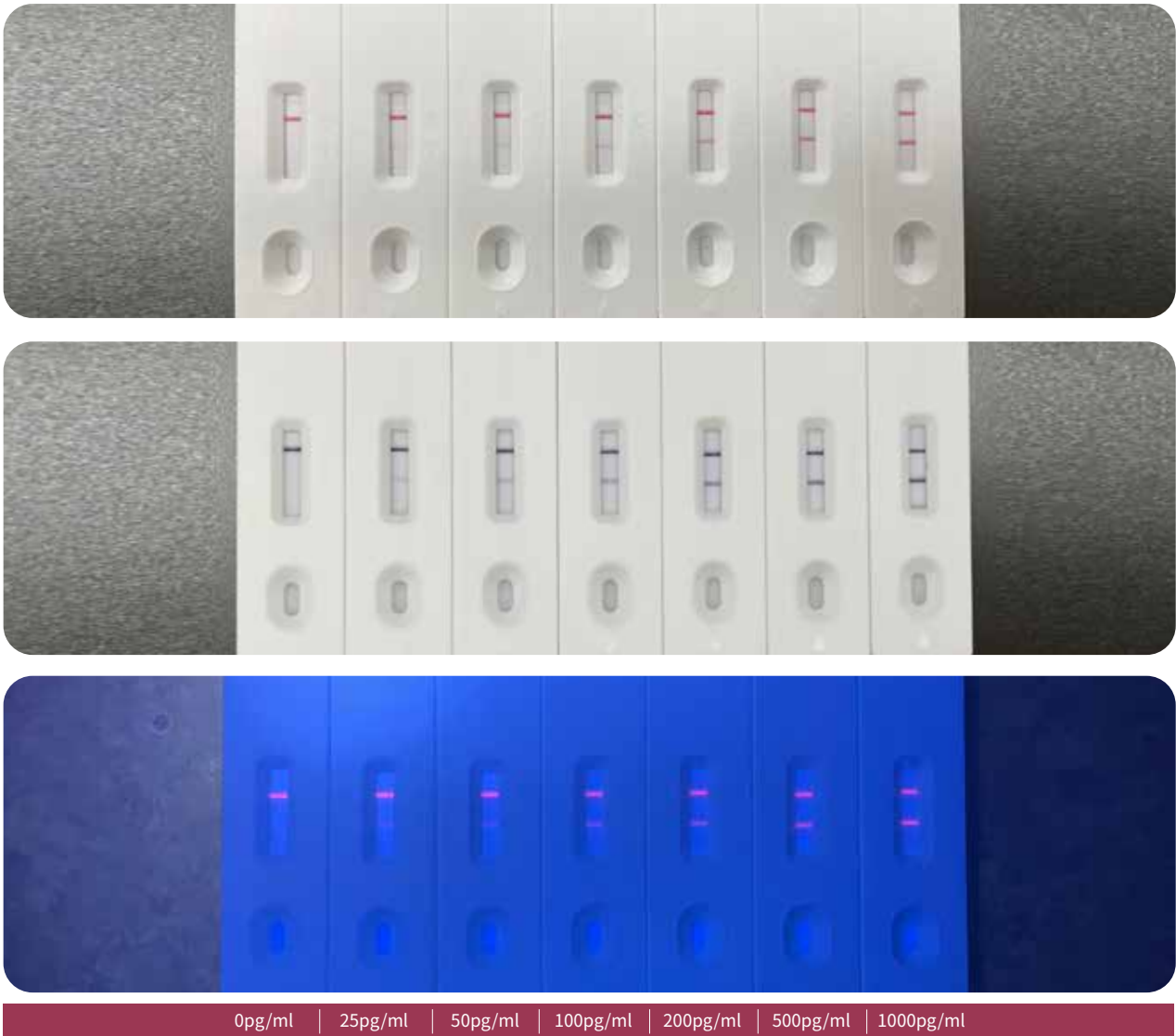
## Stability verification of Time-resolved Fluorescent Microspheres (particle size: 200nm, temperature: 37°C, acceleration time: 17 days)



▲ After accelerating at 37°C for 17 days, there was no significant change in the fluorescence intensity of the time-resolved fluorescent microsphere solutions with different solid contents, and the microspheres shows high stability.

## Case Studies:

### Application of color-dyed and fluorescent microspheres in Lateral Flow



- ▲ SARS-CoV-2 N protein was detected by VDO Biotech's color-dyed microspheres and fluorescent microspheres respectively, and the protein can still be detected when the concentration is as low as 25pg/mL.

Microsphere OEM services  
for global customers

Large scale protein-microsphere  
conjugation services

OEM services of microsphere  
intermediates



High quality microspheres of  
nanometer and micrometer level

Customized microsphere services

Overall solution for microsphere  
applications

## Ordering Information

### Carboxyl Color-dyed Microspheres

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DR0200CA	200nm	Red	COOH	4.0%	1ml, 25ml, 100ml, 500ml
DR0300CA	300nm	Red	COOH	4.0%	1ml, 25ml, 100ml, 500ml
DR0400CA	400nm	Red	COOH	4.0%	1ml, 25ml, 100ml, 500ml

Cat. No.	Particle Size	Color	Surface Groups	Solids	Size
DB0200CA	200nm	Blue	COOH	4.0%	1ml, 25ml, 100ml, 500ml
DB0300CA	300nm	Blue	COOH	4.0%	1ml, 25ml, 100ml, 500ml
DB0400CA	400nm	Blue	COOH	4.0%	1ml, 25ml, 100ml, 500ml

Microspheres of other colors can be customized upon request.

### Carboxyl Fluorescent Microspheres

Cat. No.	Particle Size	Fluorescence	Excitation	Emission	Surface Groups	Solids	Size
FG0200CA	200nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml
FG0300CA	300nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml
FG0400CA	400nm	Green fluorescence	488nm	520nm	COOH	1.0%	1ml, 10ml, 100ml

### Carboxyl Time-resolved Fluorescent Microspheres

Cat. No.	Particle Size	Excitation	Emission	Surface Groups	Solids	Size
FT0200CA	200nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml
FT0300CA	300nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml
FT0400CA	400nm	360nm	615nm	COOH	1.0%	1ml, 10ml, 100ml

Microspheres with specific particle size and special functional groups can be customized upon request.

Inspiring & Enabling Life Science Innovation



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