

Guide to MSD[®] Read Buffers

MSD Read Buffers are formulated to provide superior sensitivity and dynamic range, and to optimize the performance of certain types of assays using MSD MULTI-ARRAY[®] technology. This guide outlines the various characteristics of each type of Read Buffer, and can help you choose which buffers will best suit the applications you wish to perform. For more information on MSD Read Buffers, MULTI-ARRAY technology or related biological applications, visit our website at www.mesoscale.com.

Choose the ideal Read Buffer for your application

- Buffers optimized for washed or non-washed assays
- Surfactant-containing or surfactant-free buffers
- Phosphate or phosphate-free buffers
- Buffers available in concentrated form - can be diluted as needed

MSD Read Buffer S

- Phosphate-based buffer
- Tripropylamine (TPA) as a co-reactant for light generation
- Highest signal; most useful in washed assays, or when there is little free label in solution

MSD Read Buffer T

- Tris-based buffer; useful in assays that are negatively affected by phosphate
- TPA as a co-reactant for light generation
- Highest signal (similar to MSD Read Buffer S), low background in washed assays
- Useful in some non-washed assay formats
- Applications: ultra-high sensitivity in washed immunoassays; assays using immobilized membranes; cAMP and ubiquitylation assays

MSD Read Buffer P

- Phosphate-based buffer
- Alternative co-reactant for light generation
- Optimized for use in non-washed assays - minimizes signal from free label in solution
- Applications: non-washed immunoassays or kinase assays



Surfactants

All MSD Read Buffers contain surfactant (MSD Read Buffer T is also available without surfactant)

Surfactant-containing Read Buffers:

- The surfactant used is Triton X-100
- The presence of surfactants in other assay components will not affect performance
- Care should be taken to avoid the generation of bubbles during fluid dispensing

Surfactant-free Read Buffer T:

- Surfactant-free Read Buffer T has been developed for assays using whole cells or membranes, and for other applications that are negatively affected by detergents

General Characteristics of MSD Read Buffers

Features	S	T	P
High signal	+++	+++	++
Free label signal	++	+	
Phosphate buffer	Yes	No	Yes
TPA co-reactant	Yes	Yes	No
Non-Washed Assay		Preferred	Preferred
Washed Assay	Preferred	Preferred	

This table represents general trends in performance for MSD Read Buffers.

MSD Read Buffer Selection Guide

Application	Read Buffer	Surfactant	Final Conc.
Biomarker (+/- wash)	T	+	1.0 - 2.0x
cAMP assay	T	+	1.0 - 2.0x
Cellular receptor binding	T	-	1.0 - 2.0x
Hybridoma screen (+/- wash)	T / P	+	1.0 - 2.0x
Kinase assay (+/- wash)	T	+	1.0 - 2.0x
Membrane receptor binding	T	-	1.0 - 2.0x
Protein-protein binding	T	+	1.0 - 2.0x
Ubiquitination (E3 ligase)	T	+	1.0 - 2.0x
Other assays (+/- wash)	T	+	1.0 - 2.0x

Use this table to help choose an appropriate Read Buffer for your application. Other MSD Read Buffer choices may provide better performance with your specific assay. Optimum final concentration is assay-dependent, and may be determined empirically.

9238 Gaither Rd. Gaithersburg, MD 20877
Phone: 1-301-947-2085 . Fax: 1-301-990-2776 . Email: customerservice@mesoscale.com
www.mesoscale.com

©2009 Meso Scale Diagnostics, LLC. All Rights Reserved.

MULTI-ARRAY, Meso Scale Discovery, Meso Scale Diagnostics, MSD and MSD (design) are all trademarks and/or servicemarks of Meso Scale Diagnostics, LLC.
Triton is a registered trademark of Rohm and Haas.



Meso Scale Discovery®
A division of Meso Scale Diagnostics, LLC.