Loading dye	Cat. #	Size, ml	Composition	Features	Applications	Migration of dyes (1% agarose, TAE or TBE buffers)	Picture of tracking dyes*
6X DNA Loading Dye	R0611	5x1	**6X Solution** • 10 mM Tris • 0.03% bromophenol blue • 0.03% xylene cyanol FF • 60% glycerol • 60 mM EDTA (pH 7.6 adjusted with NaOH)	• Two-color tracking of DNA migration during electrophoresis. • Dyes do not interfere with UV visualization of DNA fragments. • EDTA inhibits metal dependent nucleases.	• Preparation of DNA for loading on agarose or polyacrylamide gels.	**Xylene cyanol FF:** TAE: 4160 bp TBE: 3030 bp **Bromophenol blue:** TAE: 370 bp TBE: 220 bp	
6X MassRuler DNA Loading Dye	R0621	5x1	**6X Solution** • 10 mM Tris • 0.03% bromophenol blue • 60% glycerol • 60 mM EDTA (pH 7.6, adjusted with NaOH)	• One-color tracking of DNA migration during electrophoresis. • Dyes do not interfere with UV visualization of DNA fragments. • EDTA inhibits metal dependent nucleases.	• Analysis of large DNA molecules. • Preparation of DNA for loading on agarose or polyacrylamide gels.	**Bromophenol blue:** TAE: 370 bp TBE: 220 bp	
6X Orange DNA Loading Dye	R0631	5x1	**6X Solution** • 10 mM Tris • 0.15% orange G • 0.03% xylene cyanol FF • 60% glycerol • 60 mM EDTA (pH 7.6, adjusted with NaOH)	• Two-color tracking of DNA migration during electrophoresis. • Dyes do not interfere with UV visualization of DNA fragments. • EDTA inhibits metal dependent nucleases.	• Analysis of small DNA molecules. • Preparation of DNA for loading on agarose or polyacrylamide gels.	**Xylene cyanol FF:** TAE: 4160 bp TBE: 3030 bp **Orange G:** TAE/TBE: <50 bp	
6X TriTrack DNA Loading Dye	R1161	5x1	**6X Solution** • 10 mM Tris • 0.03% bromophenol blue • 0.03% xylene cyanol FF • 0.15% orange G • 60% glycerol • 60 mM EDTA (pH 7.6, adjusted with NaOH)	• Three-color tracking of DNA migration during electrophoresis. • Dyes do not interfere with UV visualization of DNA fragments. • EDTA inhibits metal dependent nucleases.	• Preparation of DNA for loading on agarose or polyacrylamide gels.	**Xylene cyanol FF:** TAE: 4160 bp TBE: 3030 bp **Bromophenol blue:** TAE: 370 bp TBE: 220 bp **Orange G:** TAE/TBE: <50 bp	
6X DNA Loading Dye & SDS Solution	R1151	5x1	**6X Solution** • 0.03% bromophenol blue • 0.03% xylene cyanol FF • 60% glycerol • 1% SDS • 100 mM EDTA (pH 7.6, adjusted with Tris)	• 1% SDS eliminates DNA-protein interactions, prevents appearance of additional bands due to annealing of DNA molecules with cohesive ends. • EDTA inhibits metal-dependent nucleases.	• Analysis of DNA samples containing h igh amounts of DNA binding proteins. • Kinetic experiments. • DNA agarose gel analysis following restriction digestion, ligation or dephosphorylation reactions.	**Xylene cyanol FF:** TAE: 4160 bp TBE: 3030 bp **Bromophenol blue:** TAE: 370 bp TBE: 220 bp	
2X RNA Loading Dye	R0641	1	**2X Solution** • 95% formamide • 0.025% SDS • 0.025% bromophenol blue • 0.025% xylene cyanol FF • 0.025% ethidium bromide • 0.5 mM EDTA	• Two-color tracking of DNA and RNA fragment migration during electrophoresis. • Dyes do not interfere with UV visualization of DNA or RNA fragments. • Formamide based denaturation DNA and RNA fragments.	• Preparation of DNA for loading on denaturing gels • Preparation of RNA for loading on agarose or polyacrylamide gels.	**Xylene cyanol FF:** TAE: 4160 bp TBE: 3030 bp **Bromophenol blue:** TAE: 370 bp TBE: 220 bp	

***** for more detailed information regarding the migration rates of dyes in agarose and polyacrylamide gels *see* Table 7.1 and Table 7.2 on p.374.