TriDye™ 100 bp DNA Ladder

1-800-632-7799
info@neb.com
www.neb.com

N3271S 013120914091

N3271S

125 gel lanes (1.25 ml) Lot: 0131209 50 µg/ml

Store at 4°C Exp: 9/14

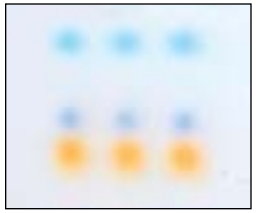
Description: TriDye™ 100 bp DNA Ladder is a pre-mixed, ready-to-load molecular weight marker containing 3 dyes which serve as visual aids to monitor the progress of migration during agarose gel electrophoresis.

The DNA ladder consists of proprietary plasmids which are digested to completion with appropriate restriction enzymes to yield 12 bands suitable for use as molecular weight standards for agarose gel electrophoresis. The digested DNA includes fragments ranging from 100–1,517 base pairs. The 500 and 1,000 base pair bands have increased intensity to serve as reference points.

More Lanes, Lower Price
Ready-to-load, Stable at 25°C

Supplied in: 0.006% xylene cyanol FF, 0.006% bromophenol blue, 0.06% orange G, 10% glycerol, 10 mM Tris-HCl (pH 7.9) and10 mM EDTA.

TriDye During Electrophoresis



– xylene cyanol FF

– bromophenol blue

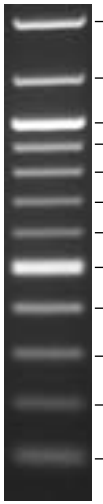
- orange G

On a standard 1% agarose gel in 1X TBE, xylene cyanol FF migrates at approximately 4 kb, bromophenol blue at approximately 300 bp and the orange G at approximately 50 bp. As the percentage of agarose changes, the migration rates of the dyes relative to migration rates of the DNA will change.

TriDye Relative Migration Rates (approximate)

% agarose	xylene cyanol FF	bromophenol blue	orange G
0.5	20–40 kb	4,000 bp	150 bp
0.8	8,000 bp	400 bp	75 bp
1.0	4,000 bp	300 bp	50 bp
1.3	1,800 bp	150 bp	15 bp
1.5	1,200 bp	100 bp	10 bp
2.0	700 bp	65 bp	< 10 bp

Usage Recommendation: We recommend loading 10 µl (0.5 µg) of TriDye 100 bp DNA Ladder per gel lane. The TriDye 100 bp DNA Ladder was not designed for precise quantification of DNA mass but can be used for approximating the mass of DNA in comparably intense samples of similar size. The approximate mass of DNA in each of the bands in our TriDye 100 bp DNA Ladder is indicated assuming a 10 µl (0.5 µg) load:



Base Pairs	Mass (ng)
1,517	45
1,200	35
1,000	**95**
900	27
800	24
700	21
600	18
500/517	**97**
400	38
300	29
200	25
100	48

100 bp DNA Ladder visualized by ethidium bromide staining on a 1.3% TAE agarose gel. Mass values are for 0.5 µg/lane

(See other side)

CERTIFICATE OF ANALYSIS

TriDye™ 100 bp DNA Ladder

1-800-632-7799
info@neb.com
www.neb.com

N3271S 013120914091

N3271S

125 gel lanes (1.25 ml) Lot: 0131209 50 µg/ml

Store at 4°C Exp: 9/14

Description: TriDye™ 100 bp DNA Ladder is a pre-mixed, ready-to-load molecular weight marker containing 3 dyes which serve as visual aids to monitor the progress of migration during agarose gel electrophoresis.

The DNA ladder consists of proprietary plasmids which are digested to completion with appropriate restriction enzymes to yield 12 bands suitable for use as molecular weight standards for agarose gel electrophoresis. The digested DNA includes fragments ranging from 100–1,517 base pairs. The 500 and 1,000 base pair bands have increased intensity to serve as reference points.

More Lanes, Lower Price
Ready-to-load, Stable at 25°C

Supplied in: 0.006% xylene cyanol FF, 0.006% bromophenol blue, 0.06% orange G, 10% glycerol, 10 mM Tris-HCl (pH 7.9) and10 mM EDTA.

TriDye During Electrophoresis

– xylene cyanol FF

– bromophenol blue

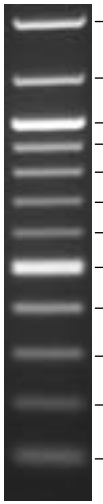
- orange G

On a standard 1% agarose gel in 1X TBE, xylene cyanol FF migrates at approximately 4 kb, bromophenol blue at approximately 300 bp and the orange G at approximately 50 bp. As the percentage of agarose changes, the migration rates of the dyes relative to migration rates of the DNA will change.

TriDye Relative Migration Rates (approximate)

% agarose	xylene cyanol FF	bromophenol blue	orange G
0.5	20–40 kb	4,000 bp	150 bp
0.8	8,000 bp	400 bp	75 bp
1.0	4,000 bp	300 bp	50 bp
1.3	1,800 bp	150 bp	15 bp
1.5	1,200 bp	100 bp	10 bp
2.0	700 bp	65 bp	< 10 bp

Usage Recommendation: We recommend loading 10 µl (0.5 µg) of TriDye 100 bp DNA Ladder per gel lane. The TriDye 100 bp DNA Ladder was not designed for precise quantification of DNA mass but can be used for approximating the mass of DNA in comparably intense samples of similar size. The approximate mass of DNA in each of the bands in our TriDye 100 bp DNA Ladder is indicated assuming a 10 µl (0.5 µg) load:



100 bp DNA Ladder visualized by ethidium bromide staining on a 1.3% TAE agarose gel. Mass values are for 0.5 µg/lane

(See other side)

CERTIFICATE OF ANALYSIS

Fragment	Base Pairs	DNA Mass
1	1,517	45 ng
2	1,200	35 ng
3	**1,000**	**95 ng**
4	900	27 ng
5	800	24 ng
6	700	21 ng
7	600	18 ng
8	**500, 517**	**97 ng**
9	400	38 ng
10	300	29 ng
11	200	25 ng
12	100	48 ng

Preparation of DNA: The double-stranded DNA is digested to completion with appropriate restriction enzymes, phenol extracted and equilibrated in storage buffer.

Notes:

TriDye 100 bp DNA Ladder is stable for at least 6 months at 25°C.

For long term storage, store at 4°C or –20°C. If stored at –20°C, mix well after thawing.

Reference: Sambrook, J., Fritsch, E. F. and Maniatis, T. (1989). *Molecular Cloning: A Laboratory Manual*, (2nd ed.), (pp. 10.51–10.67). Cold Spring Harbor: Cold Spring Harbor Laboratory Press.

Fragment	Base Pairs	DNA Mass
1	1,517	45 ng
2	1,200	35 ng
3	**1,000**	**95 ng**
4	900	27 ng
5	800	24 ng
6	700	21 ng
7	600	18 ng
8	**500, 517**	**97 ng**
9	400	38 ng
10	300	29 ng
11	200	25 ng
12	100	48 ng

Preparation of DNA: The double-stranded DNA is digested to completion with appropriate restriction enzymes, phenol extracted and equilibrated in storage buffer.

Notes:

TriDye 100 bp DNA Ladder is stable for at least 6 months at 25°C.

For long term storage, store at 4°C or –20°C. If stored at –20°C, mix well after thawing.

Reference: Sambrook, J., Fritsch, E. F. and Maniatis, T. (1989). *Molecular Cloning: A Laboratory Manual*, (2nd ed.), (pp. 10.51–10.67). Cold Spring Harbor: Cold Spring Harbor Laboratory Press.

Page 2 (N3271)