

## 6× NZYDNA loading dye

Catalogue number: MB13101, 5 × 1 mL

### Description

6× NZYDNA loading dye is a ready-to-use buffer used to prepare DNA samples for loading on agarose gels. The buffer contains three different dyes (xylene cyanol, bromophenol blue and orange G) which migrate to the same point as dsDNA of the sizes indicated on Table 1. Dye mobility depends on gel concentration. 6× NZYDNA loading dye allows users to monitor DNA migration distance and control the gel run time.

**Table 1: Loading dye mobility** - approximate migration rates of dyes in different agarose concentrations in 1× TAE buffer.

Agarose Concentration	Xylene Cyanol FF	Bromophenol Blue	Orange G
0.8 %	5000 bp	800 bp	100 bp
1.0 %	3000 bp	400 bp	50 bp
1.5 %	1800 bp	250 bp	20 bp
2.0 %	1000 bp	200 bp	< 10 bp
2.5 %	700 bp	100 bp	< 10 bp

### Storage conditions

6× NZYDNA loading dye can be stored at room temperature or at 2°C to 8°C for up to 12 months. For longer periods, store at -85°C to -15°C.

### Shipping conditions

Dry Ice to Room temperature.

### Recommended protocol

Add 1 volume of loading dye to 5 volumes of sample. Mix well by pipetting and spin briefly. Load on agarose gel and run.

### Troubleshooting

<b>Buffer is not sinking upon loading</b>
Vortex briefly before use
<b>To prevent degradation caused by DNase contamination after opening</b>
Make aliquots with a small quantity of the loading dye

### Quality control assay

#### Nuclease assay

To test for DNase activity, 6× NZYDNA loading dye is incubated for 14-16 hours at 37°C with plasmid pNZY28 and DNA integrity analysed through agarose gel electrophoresis.

#### Functional assay

To check the viscosity and the pattern of the dye, 1 volume of 6× NZYDNA loading dye and 5 volumes of a DNA sample are loaded onto a 1% (w/v) agarose gel with TAE buffer and separated by agarose gel electrophoresis.

### Certificate of Analysis

Assay	Result
Nuclease assay	Pass
Functional assay	Pass

Approved by:



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*For research use only.*



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