1. DNA Loading Dye / Buffer:

1. Add 1 µL of DNA loading dye[1] per 5 µL of sample and mix thoroughly.
2. The dyes separate in agarose as approximate bp size markers as shown below:

Notes:

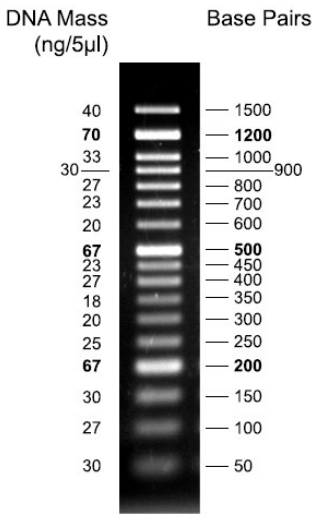
[1] DNA loading dye 6X is usually supplied in a 1 mL vial containing 10mM Tris-HCl pH 7.6, 0.03% **bromophenol blue**, 0.03% **xylene cyanol FF**, 60% glycerol, 60mM EDTA. It is a non-denaturing loading buffer for native polyacrylamide and agarose gel applications.

In 1% agarose gels bromophenol blue co-migrates with ~300 bp fragment and xylene cyanol FF – with ~4000 bp fragment. Add 1/6 volume of 6X DNA Loading dye to the DNA sample

2. DNA Ladders:

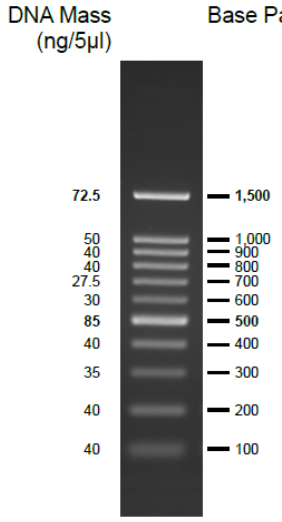
1. DNA ladders (50 bp, 100 bp or 1 Kb) are provided ready-to-use in loading dye .
2. The 50 bp ladder usually contains fragments ranging from 50 bp to 1,500 bp in 50 bp increments with double intensity reference bands at 200 bp, 500 bp and 1,200 bp. Tracking dye is orange G.
3. The 100 bp DNA ladder usually contains fragments ranging from 100 bp to 1,500 bp, with a high intensity reference band at 500 and 1,500 bp. Tracking dyes are orange G & xylene cyanol FF.
4. The 1Kb DNA ladder usually contains ranging from 250-10,000 bp with high intensity reference bands at 1K and 3K. Tracking dyes are bromophenol blue & xylene cyanol FF.

<u>50 bp DNA ladder</u>



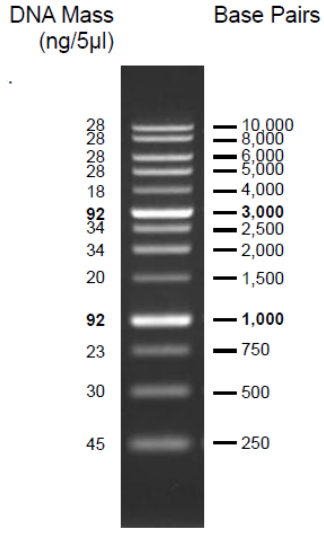
2% TAE agarose gel

<u>100 bp DNA ladder</u>



1.7 % TAE agarose gel

<u>1 Kb DNA ladder</u>



1 % TAE agarose gel