

## User Instructions: proBLUE

### Overview:

Agarose electrophoresis of DNA requires a staining step in order to visualise the DNA fragments. This can be done safely using methylene blue solution. Methylene blue binds to negatively charged DNA making DNA visible as blue bands within agarose following electrophoresis.

### Instructions:

Methylene blue solution is provided as a 10x concentrate. To use, dilute 10x concentrate by mixing one part of methylene blue with nine parts of water (Eg. 100 ml of 10x concentrate added to 900 ml water).

The 1x methylene blue can then be used for staining of DNA bands within agarose gels. Place your Agarose gel into a small, clean gel-staining tray. Pour sufficient 1x methylene blue stain into a suitable tray in order to cover the agarose gel. Allow to stand until DNA bands become visible within the agarose. This can take up to 16 hours (overnight). Once staining is complete, rinse the agarose gel with clean water. Improved resolution of DNA bands can be achieved by allowing the gel to destain in a new clean trays and cover with clean water. For best results leave for approx 20 minutes on a shaker with a slow shaking motion. Changing the water during the time will also improve the destaining action.

Alternatively, DNA can be stained using 10x methylene blue concentrate. Pour sufficient 10x methylene blue to cover the agarose gel and allow to stand for 5-10 minutes. Once staining is complete, rinse the agarose gel in clean water. Improved resolution of DNA bands can be achieved by allowing the gel to destain in clean water.

Once your gel has been stained and destained you can visualize your bands by placing the gel on a light table or if this is not available place the gel on a white surface.