

Frequently Asked Questions

Q: What is GoldRunner™ rapid electrophoresis buffer?

A: GoldRunner™ rapid electrophoresis buffer is a new generation of agarose gel electrophoresis buffer with an unique formulation for rapid gel analysis. It allows gel electrophoresis to be performed in high voltage without the problems (melting of the gel, DNA bands smiling, decrease of DNA bands resolution) caused by the high heat and high current associated with the traditional TAE and TBE buffer. An agarose gel electrophoresis performed in GoldRunner™ rapid electrophoresis buffer can be completed in 1/2 to 1/3 of the time required for a gel performed in the traditional TAE or TBE buffer. Best of all, there is no reduction in the resolution of DNA bands when the gel electrophoresis is performed in GoldRunner™ electrophoresis buffer under high voltage.

Q: How do I use GoldRunner™ rapidelectrophoresis buffer?

A: GoldRunner™ rapid electrophoresis buffer is formulated as a 10X concentrated solution. Dilute the 10X buffer to 1X with high quality deionized water. **DO NOT USE tap water to dilute the 10X GoldRunner™ rapid electrophoresis buffer. Tap water increases the ion content of the buffer, decreases gel resolution, and makes the high voltage electrophoresis process fire-hazardous.**

Q: Is GoldRunner™ rapid electrophoresis buffer compatible with pre-made mini TAE and TBE gels?

A: **GoldRunner™ rapid electrophoresis buffer is NOT compatible with pre-made mini TAE or TBE gels.**

Q: What percentage of agarose gel should I make for DNA alaysis?

A: Since the size of the horizontal agarose gel electrophoresis system varies from manufacture to manufacture, one can use the following agaorse gel analyses as a guild to determine the optimal agarose gel concentration for DNA analysis.

Q: How long should I run the agarose gel in GoldRunner™ rapid electrophoresis buffer?

A: Typical mini gel should be completed within 30 min. For best results, DO NOT run mini gel for more than 45 min. Typical standard gel should be completed within 45 min. For best results, DO NOT run standard gel for more than 60 min.

Since the size of the horizontal agarose gel electrophoresis system varies from manufacture to manufacture, one can use the following agaorse gel analyses as a guide to determine the optimal electrophoresis time for DNA analysis.

Guide for gel preparation and running time for GoldRunner™ rapid electrophoresis buffer

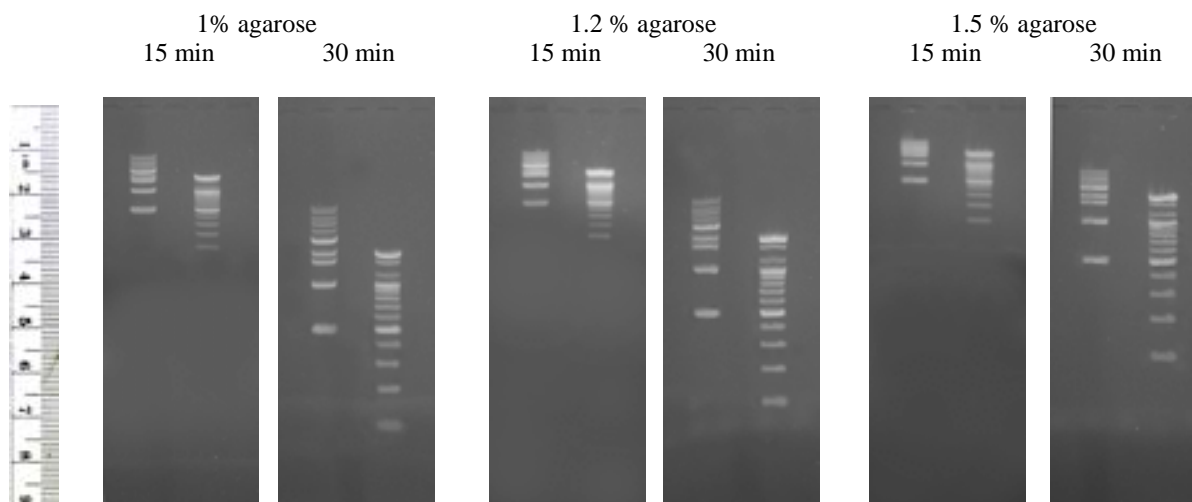


Figure: 1 kb DNA marker and 100 bp DNA marker were run on a 1%, 1.2% and 1.5% mini agarose gel prepared in GoldRunner™ rapid electrophoresis buffer for 15 and 30 min. as indicated. Electrophoresis was performed at constant 250 volts. The bands in the 1 kb marker lane are 10.2, 8, 6, 5, 4, 3, 2, 1.6, 1 and 0.5 kb. The bands in the 100 bp marker lane are 2000, 1600, 1200, 1000, 900, 800, 700, 600, 500, 400, 300, 200 and 100 bp.

Q: Can I reuse GoldRunner™ rapid electrophoresis buffer?

A: For best results, use fresh buffer. Used 1X GoldRunner™ rapid electrophoresis buffer in the electrophoresis chamber can be reused one more time in the same day without significantly affecting the resolution of the second gel. We recommend one should gently mix the used buffer in the chamber before use for the best results. If the used buffer is not used in the same day, transfer it to a bottle with a tight cap to prevent the evaporation of water from the buffer. Loss of water in the buffer can affect the effectiveness of the buffer.