interchim

GelAmp™ Electrophoresis Kit

Code	Description
K935-KIT	GelAmp™ Electrophoresis Kit *Includes:* GelAmp™ Agarose, 25g GelAmp™ Running Buffer, 20X, 500 mL GelAmp™ Additive, 15 mL

Reagents and Equipment Not Included:

- Horizontal gel electrophoresis equipment
- Power supply
- Agarose Gel Loading Dye (See AMRESCO's wide selection of electrophoresis loading dyes for DNA electrophoresis.)

GelAmp™ Electrophoresis Procedure

1. Prepare 1X GelAmp™ Running Buffer by diluting the 20X stock concentrate with distilled water.

2. Suspend GelAmp™ Agarose (1-2 %) in 1X GelAmp™ Running Buffer. Refer to the table below for easy reference:

FINAL GEL VOLUME

	30mL		**60mL**		**90mL**		**120mL**	
	1%	**2%**	**1%**	**2%**	**1%**	**2%**	**1%**	**2%**
GelAmp™ Agarose (g)	0.3	0.6	0.6	1.2	0.9	1.8	1.2	2.4
GelAmp™ Running Buffer, 1X (mL)	15	15	30	30	45	45	60	60
GelAmp™ Squeeze Packs (each)	1	1	2	2	3	3	4	4

**Ethidium Bromide or other DNA fluorescent stain may be added to the mixture prior to pouring gel. However, addition of the dye prior to electrophoresis has been reported to alter mobility of DNA fragments. Electrophoresis. 1996 Oct;17(10):1524-7.*

3. In a microwave oven, heat the GelAmp™ agarose and buffer solution to a boil or until the agarose has dissolved completely (Use Caution-mixture is extremely hot).

4. Tear the flag tip from each tube of GelAmp™ additive and add entire contents to the molten agarose solution (The number of GelAmp™ squeeze packs required is explained in the chart above).

5. Using a gentle swirling motion, slowly mix the GelAmp™ Additive into the molten agarose. ***NOTE:*** *Rapid stirring will cause excessive foaming and air bubbles to form. If this occurs, see Technical Hints.*

6. Cast the gel using an appropriate sized casting tray and gel comb. After the agarose has completely solidified, remove the comb and completely submerge the gel in 1X GelAmp™ Running Buffer. *See Technical Hints.*

7. Using a pipettor, carefully flush out each well of the submerged gel by placing the end of a gel loading tip into the well and repeatedly pipette back and forth. **NOTE:** *This will eliminate any residual GelAmp™ additive that may have collected in the wells during casting and prevent loss of samples when loading.*

8. Combine DNA samples with loading dye and load gel.

9. Run gel at 100-150V for 1-2 hours. For reference, see Technical Hints for help determining the appropriate run times and voltage required for separation of various size DNA fragments.

Technical Hints:

- If air bubbles form in the GelAmp™ agarose and additive mixture during step 4, proceed with step 5. After the gel has been poured, drag the gel comb through the molten agarose mixture to push the air bubbles to the end of the gel. Large air bubbles can be pierced with the end of a pipette tip.

- Once the gel has solidified following step 5, a swirling pattern and/or residue may be noticeable on the surface of the gel. This is normal and will not have any effect on final results.

- Optimal run conditions may vary depending upon the molecular weight range(s) and concentration of the sample. However, for fragments up to approximately 25kbp, 100V for approximately 2-3 hours can be used as a starting point. For fragments exceeding 25kbp, longer run times (up to 18hours) at a lower voltage setting (20-50V) may be necessary.

- Addition of the GelAmp™ Additive to agarose gels less than 0.8% is not recommended. The reagents included in the GelAmp™ Electrophoresis kit have been optimized for use with 1-2% agarose gels.

- For resolving smaller fragments (10kb or less) or for achieving greater separation of similarly sized bands, 2% GelAmp™ gels may be better suited. Conditions may, however, vary and will require some optimization depending upon the desired results.

- Use of electrophoresis run buffers (ie: TBE, TAE) or agaroses other than what is included with the GelAmp™ Electrophoresis kit may not produce optimal results.

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