ONE LAMBDA, INC.
21001 Kittridge Street, Canoga Park, CA 91303-2801 Tel: (818) 702-0042 Fax: (818) 702-6904 www.onelambda.com

PRODUCT INSERT

DNA SIZE MARKER

Catalog #SSP-SM

General Use Reagent.

INTENDED USE

DNA Size Markers are to be used for sizing DNA fragments that are less than 2,000 bp in size.

SUMMARY AND EXPLANATION

Ten microliters of the DNA Size Markers in a single-well electrophoresed on a 2.5% agarose gel with 1X TBE buffer visualized by ethidium bromide staining will show 5 bands corresponding to 50, 150, 400, 750, 2,564 bp.

PRINCIPLE(S)

Double stranded DNA fragments of known molecular weights are used as standards in agarose gel electrophoresis.

REAGENTS

A. Identification

The DNA Size Markers are plasmids digested with restriction enzymes. The DNA fragments are supplied at a concentration of approximately 350 ng per 10 µl. The DNA Size Markers are provided in electrophoresis buffer (10 mM Tris-HCl (pH 8.0), 1 mM EDTA, 40 mM NaCl and 0.002% cresol red, 6% sucrose) ready for direct use.

B. Warning or Caution

1. General Use Reagent.
2. **Caution:** Protect eyes from UV light when photographing or visualizing gels.
3. **Warning:** Ethidium bromide, which is used with this product, is a known carcinogen. Handle with appropriate caution.
4. No Material Safety Data Sheet is required for this product. There are no hazardous ingredients.

C. Instructions for Use

DNA Size Markers are a pre-mixed, ready-to-load molecular weight marker containing 0.002% cresol red dye, which serves as a visual aid to monitor the progress of migration during electrophoresis.

D. Storage Instructions

Store the DNA Size Markers at -80º to -20° C (up to 1 year) or at 2º to 8° C (up to 1 month).

E. Purification or Treatment Required for Use

None.

F. Instability Indications

None.

INSTRUMENT REQUIREMENTS

None.

SPECIMEN COLLECTION AND PREPARATION

None.

PROCEDURE

A. Materials Provided

1 - 500 µl vial Size Markers

B. Materials Required, But Not Provided

- Pipette and disposable tips
- 2.5% agarose gels
- Microcentrifuge

C. Step-by-step procedure.
See "Directions For Use."

DIRECTIONS FOR USE

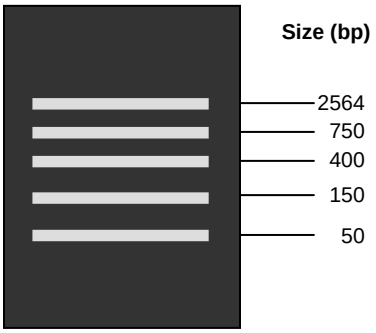
1. Mix well and briefly centrifuge the tube in a microcentrifuge for 5 seconds.
2. Draw 10 µl of the DNA Size Markers into a pipette tip and dispense into the loading well of a 2.5% agarose gel.

   Note: *Addition of loading dye is not necessary.*

3. Add test DNA samples to the other lanes, and begin electrophoresis.
4. Stop the electrophoresis when the red tracking dye reaches the desired position near the **middle** of the gel.
5. Visualize the DNA bands under UV light with ethidium bromide or another DNA indicator dye.

RESULTS

The figure below shows the expected pattern for 10 µl of the Size Markers electrophoresed on a 2.5% agarose gel with 1x TBE buffer and visualized by ethidium bromide staining.



LIMITATIONS OF THE PROCEDURE

1. DNA Size Markers are not designed for precise quantification of DNA mass.
2. The formation of concentration gradients has been observed in frozen products over time. Mix well before using.

EXPECTED VALUES

DNA Size Markers consist of five double-stranded DNA fragments with sizes of 50, 150, 400, 750 and 2564 bp.

SPECIFIC PERFORMANCE CHARACTERISTICS

None.

BIBLIOGRAPHY

Sambrook, J., Fritsch, E. F. and Maniatis, T. (1989). *Molecular Cloning: A Laboratory Manual*, (2nd ed.), (pp. 10.51–10.67). Cold Spring Harbor: Cold Spring Harbor Laboratory Press.

DISCLAIMER

REVISION HISTORY

Revision	Date	Revision Description
1	2006/09	Change storage temperatures and update template.