

Section II: Preparation of Agarose Gels

Agarose Types

Introduction

Nucleic acid applications take advantage of the specific properties of different agaroses and derivatized agaroses. The appropriate choice of agarose depends on the size of the DNA to be analyzed and any subsequent manipulations required. Gelling/melting temperatures, electroendosmosis and gel strength are all important factors in choosing the right agarose for your application. Refer to page 79 for analytical specifications of Lonza agarose.

Genetic Technology Grade™ (GTG®) Agaroses

Our Genetic Technology Grade™ (GTG®) Agarose Products are specially prepared and certified for demanding molecular biology applications for nucleic acids, including PCR amplified products. Lonza's GTG® Agarose quality tests go beyond standard assays such as, DNase and RNase testing, to include enzymatic performance measurements. Our additional testing provides a more realistic index of overall product quality and reliability. You no longer need to screen agarose lots to find those that yield biologically active DNA.

■ **The following agaroses are GTG® Certified:**

- SeaKem® GTG® Agarose
- SeaPlaque® GTG® Agarose (low melting temperature agarose)
- NuSieve® GTG® Agarose (low melting temperature agarose)
- SeaKem® Gold Agarose

■ **Lonza performs the following tests on GTG® Certified Agaroses:**

- DNA binding
- DNase and RNase activity
- DNA resolution
- Gel background-gel exhibits low background fluorescence after ethidium bromide staining
- In-gel cloning (low melt agarose)
- In-gel restriction digestion (low melt agarose)
- Restriction-ligation assay (SeaKem® GTG®)

Molecular Biology Grade Agaroses

Molecular biology grade agaroses are suitable for general analytical separation of DNA.

■ **The following agaroses are considered molecular biology grade agaroses:**

- MetaPhor® Agarose
- SeaKem® LE Agarose
- NuSieve® 3:1 Agarose
- SeaPlaque® Agarose (low melting temperature agarose)

■ **Lonza screens our molecular biology grade agaroses for the following parameters:**

- DNA binding
- DNase and RNase activity
- Gel background staining

FDA Listing

Lonza agarose types are listed as Class 1 Medical Devices under registration number 1219614.