Data sheet

peqGOLD

Universal Agarose

Cat. No.: PEQL35-1010 / PEQL35-1020

Lot No.: .....

Introduction:
peqGOLD Universal Agarose is ideally suited for use as standard agarose for analytical as well as preparative nucleic acid electrophoresis of fragments from 50 bp to 50 kbp. Even at low concentrations the gel produced is very firm.

Separation range:
DNA: approx. 0.05 kbp – 50 kbp
RNA: approx. 0.30 kb – 20 kb

Cat. No. / ECN:
PEQL35-1010 / 732-2788	Universal-Agarose, 100 g
PEQL35-1020 / 732-2789	Universal-Agarose, 500 g

Quality:
- 'Molecular Biology Grade'
- Certified free of DNases and RNases
- No DNA binding
- High lot-to-lot consistency

Characteristics:
- High separation properties and sharp band patterns
- Easy solubility without foaming
- Excellent optical transparency

Analytical specifications:
- Gelling temperature: ≤ 37 °C
- Melting temperature: ≤ 90 °C
- Electroendosmosis: ≤ 0.140
- Gel strength (1.5 %): ≥ 2300 g / cm^2
- Sulphate content: ≤ 0.10 %
- Water content: ≤ 10.0 %

Safety instructions:
Always wear eye protection when preparing agarose gel solutions and protect yourself and others against boiling liquids. Refer to the material safety data sheet for further safety and handling instructions.

- Manufactured and quality-controlled in accordance with ISO 9001:2000
- Shipment at ambient temperatures
- Storage at room temperature
- With appropriate storage, stable for minimum 2 years

Note:

For preparing 100 ml of 1% agarose gel solution use 1 g agarose in 100 ml appropriate electrophoresis buffer.

Preparing agarose:

Method 1: Microwave oven

1. Pour buffer (approx. 90 % of final volume) into an appropriate flask that can accommodate up to four times the final gel volume and add a magnetic stir bar.
2. Put the flask onto a magnetic stirrer and slowly add agarose powder while stirring constantly to avoid clotting.
3. Remove magnetic stir bar.
4. Add remaining buffer up to the desired final volume.
5. Weigh and record the weight of the flask prior to heating. Heat for 1 – 2 minutes in a microwave oven (600 Watt). Gently swirl the flask to mix the solution. Warning: there may be a delay in the liquid boiling!
6. Using the microwave oven, heat in short bursts of 5 – 10 seconds or until the solution is boiling, with breaks of 10 – 15 seconds between heating phases to disperse bubbles by gently swirling the flask. Beware of hot glass ware and liquid. Continue until the agarose is completely dissolved.
7. Again, weigh the flask and top up lost volume with warm, deionized water. Gently swirl the flask to ensure complete mixing.
8. Let the solution cool down at room temperature for 15 – 20 minutes or until a gel temperature of 50 – 60 °C is reached.

Method 2: Simmering water bath

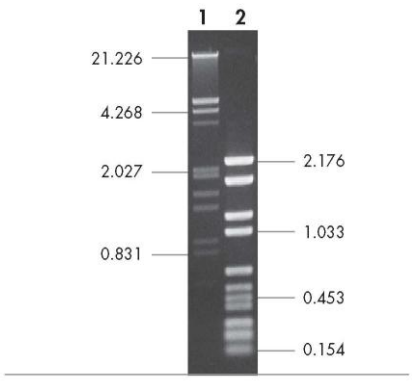
1. see method 1: steps 1 – 2 and 4
2. Weigh and record the weight of the flask prior to heating. Heat agarose suspension up in a simmering water bath with constant stirring.
3. Leave the flask in the water bath for further 15 – 20 minutes, or until the agarose is completely dissolved.
4. Switch off the magnetic stirrer and leave the flask in the bath for further 15 minutes.
5. Again, weigh the flask and top up lost volume with warm, deionized water. Gently swirl the flask to ensure complete mixing.
6. Let the solution cool down at room temperature for 15 – 20 minutes or until a gel temperature of 50 – 60 °C is reached.

Troubleshooting

Problem	Likely cause	Suggestion
Strong foaming	Flask too small	Flask should have at least twice the volume of the gel
	Wrong container	Erlenmeyer flasks are better suited than beakers due to their conical form
Agarose burns	Inappropriate heating method	Use a microwave oven or water bath for heating. Do not use stirrers with hot plate (if absolutely needed let cool down slowly with continuous stirring)

peqGOLD Universal Agarose

DNA separation with peqGOLD Universal Agarose



1% 1x TAE peqGOLD Universal Agarose gel showing separation of λ-DNA digested with *EcoR I/Hind III* (1) and a mixture from pBR328-DNA digested with *Bgl I* and *Hinf I* (2). Data in kbp.

The PEQLAB electrophoresis range also includes:

- PerfectBlue™ Horizontal Mini Gel Systems
- PerfectBlue™ Horizontal Maxi Gel Systems
- PerfectBlue™ Vertical Double Gel Systems
- Power Supplies
- Marker (RNA and DNA Ladders, DNA-Sizer)

You already use peqGOLD Universal Agarose, but do you know our broad range of specialised agaroses for various applications in nucleic acid separation?

Product	Application	Separation range	Quantitiy	Cat. No.
peqGOLD Universal Agarose	Standard agarose for universal applications	0.05 – 50 kbp	100 g 500 g	PEQL35-1010 PEQL35-1020
peqGOLD 'Low Melt' Agarose	Specialist agarose melting at lower temperatures and suitable for 'in gel' techniques	0.08 – 20 kbp	25 g 100 g	PEQL35-2010 PEQL35-2020
peqGOLD MoSieve™ Agarose MS-500	Specialist agarose for separating small nucleic acid fragments with low electro-endosmosis	10 – 1000 bp	25 g 100 g	PEQL35-3010 PEQL35-3020
peqGOLD MoSieve™ Agarose MS-1000	Specialist agarose for separating small nucleic acid fragments between 50 bp and 2000 bp and high gel strength for easy handling	50 – 2000 bp	25 g 100 g	PEQL35-4010 PEQL35-4020
peqGOLD MegaBase™-Agarose	Agarose for separating large nucleic acid fragments	0.2 – 50 kbp	25 g 100 g	PEQL35-5010 PEQL35-5020