Product Specification

Material	35-1020 & 443666A
Material description	Agarose, universal
Grade	peqGOLD molecular biology grade ELECTRAN® - DNA pure grade - Electrophoresis grade
CAS Number	9012-36-6
Molecular formula	(C□H□□O□)n

Characteristics	Specifications
Performance test	Passes test
Appearance:	.
Fine white homogeneous powder	Passes test
DNases	None detected
RNases	None detected
Clarity	≤ 4.00 NTU
Gel strength (1 %; water)	≥ 1000 g/cm²
Gel strength (1.5 %; water)	≥ 2000 g/cm²
Gelling temperature (1.5 %; water)	34.0 - 37.5 °C
Melting point (1.5 %; water)	86.0 - 90.0 °C
pH (1.5 %; in gel)	6.00 - 9.00
pH (1.5 %; in solution)	6.00 - 9.00
Ignition residue	≤ 1.0 %
Water	≤ 10.0 %
SO□ (Sulphate)	≤ 0.15 %

Signature

We certify that this batch conforms to the specifications listed above.

This document has been produced electronically and is valid without a signature.

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Manual - Universal Agarose

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

Product numbers:
35-1010 - Universal-Agarose, 100 g
35-1020 + 443666A - Universal-Agarose, 500 g

Quality:
- Molecular Biology Grade, DNA pure grade
- ELECTRAN® - Electrophoresis 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: 34.0 ≤ 37.5 °C
- Melting temperature: 86 ≤ 90 °C
- Gel strength (1.5 %): ≥ 2000 g / cm2
- Sulphate content: ≤ 0.15 %
- 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.