

# RESolve™ Low Melt Agarose

## Introduction

BIOzym's RESolve™ low melting point agarose offers the highest gel strength in the market. At the same time, resolution and DNA cloning recovery rates have been improved considerably, with respect to other low melting point agaroses. RESolve™Low agarose has greater sieving properties than the standard agaroses. RESolve™Low is recommended for DNA/RNA separations greater than 1000 bp, as well as preparative protein electrophoresis. The low melting temperature (65°C) allows recovery of nucleic acids, thus below their denaturation temperature. Low gelling temperature (24°C - 28°C) assures a liquid state at a temperature range for in-gel manipulations (such as in gel-PCR®, enzyme digestion, labelling, ect.).

## Specifications

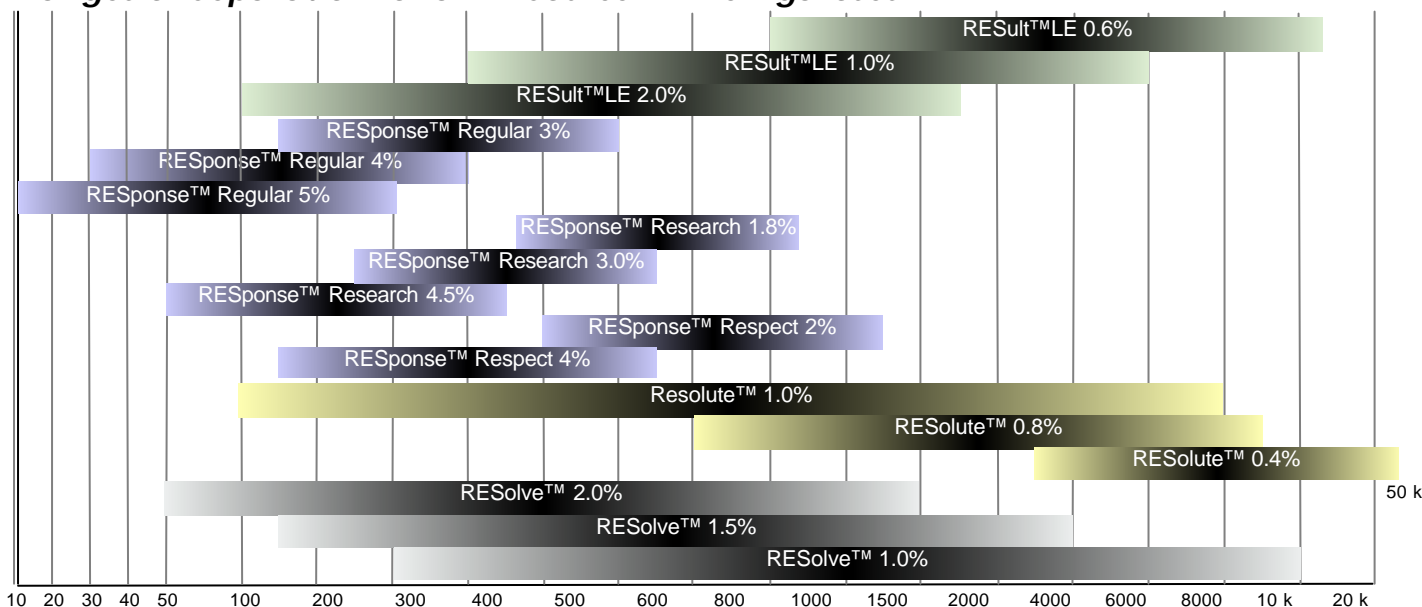
Gelling temperature (1.5%)	± 27°C
Melting temperature (1.5%)	± 65°C
EEO (-Mr)	< 0.111
Gel strength (g/cm <sup>2</sup> )	1% > 370
	1.5% > 750

## Approximate ranges of separation

(in 1x TAE buffer)

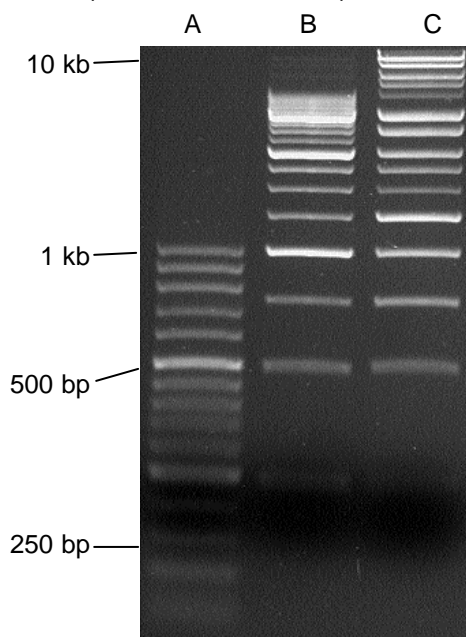
2.0%	50 - 2000 bp
1.5%	150 - 6000 bp
1.0%	300 - 20.000 bp

## Ranges of Separation for all RESource™ Line Agaroses



Approximate ranges of separation, size in basepairs (in 1x TAE)

Separation of DNA markers in 1% RESolve™Low gel. Lane A: BIOzym Low Ladder. Lane B: BIOzym Medium/Mass Ladder. Lane C: BIOzym High/mass ladder. Running conditions: 1x TBE buffer, 1.5 hour at 5 V/cm.



## Applications

- Preparative protein electrophoresis
- Analytical determination of DNA/RNA (< 1000 bp)
- Recovery of nucleic acids below their denaturation temperature
- In-gel manipulations (in gel-PCR®, enzyme digestion, labelling, ect)
- Tissue culture and viral plaque applications.

**BIOzymTC BV**  
**Rötscherweg 61**  
**6374 XW Landgraaf**  
**The Netherlands**  
**Phone: +31+(0)45-5 32 77 55**  
**Fax: +31+(0)45-5 32 77 33**  
**E-Mail: info@biozymtc.com**  
**Internet: www.biozymtc.com**

BIOzymTC BV is part of the BIOzym group

# Dissolving RESolve Low Melt Agarose

## **Microwave instructions**

Choose a beaker that is 2-4 times bigger than the volume of the solution.

Place it on a magnetic stirrer and slowly sprinkle the agarose powder at room temperature into the buffer while stirring rapidly, to prevent the formation of clumps.

Remove the stir bar if not Teflon® coated.

Soak the agarose in the buffer for 15 minutes before heating, to reduce the tendency of the agarose solution to foam during heating.

Weigh the beaker and solution before heating. Cover the beaker with plastic wrap and pierce a small hole in the plastic for ventilation.

Heat the beaker in the microwave oven at high power for 1-2 minutes

Gently swirl to resuspend any agarose particles not yet dissolved.

**Caution: Any microwave solution may come superheated and foam over when agitated.**

Reheat 5-15 seconds until the solution comes to boil, leaving 10 seconds between each heating phase to allow any foam to settle. Continue until all of the agarose particles are dissolved.

Remove the beaker from the microwave oven, and gently swirl the agarose solution. Replace the lost weight by adding warm distilled water and mixing the solution gently.

Let the solution cool at room temperature for 15-20 minutes or until it reaches a temperature of 50-60°C. (Alternatively the solution can be left in a heated bath at 55°C for over 30 minutes.

## **Boiling water Bath instructions**

Choose a beaker that is 2-4 times bigger than the volume of the solution.

Place on a magnetic stirrer and slowly sprinkle the agarose powder at room temperature into the buffer while stirring rapidly, to prevent the formation of clumps.

Soak the agarose in the buffer for 15 minutes before heating, to reduce the tendency of the agarose solution to foam during heating.

Weigh the beaker and solution before heating. Cover the beaker with plastic wrap and pierce a small hole in the plastic for ventilation.

Place the beaker in the bath and bring to boil while stirring constantly. Keep the flask in the bath for 15-20 minutes after starting to boil, or until the agarose is completely dissolved.

Stop stirring while keeping the beaker in the bath for an additional 15 minutes. Replace the lost weight by adding warm distilled water and mixing the solution gently.

Let the solution cool at room temperature for 15-20 minutes or until it reaches a temperature of 50-60°C. (Alternatively the solution can be left in a heated bath at 55°C for over 30 minutes.

## **Autoclave instructions**

Choose a beaker that is 2-4 times bigger than the volume of the solution.

Place on a magnetic stirrer and slowly sprinkle the agarose powder at room temperature into the buffer while stirring rapidly, to prevent the formation of clumps.

Weigh the beaker and solution before heating. Cover the beaker with aluminum foil, sealing the opening completely to prevent spillover.

Autoclave at 121°C for 15 minutes.

Replace the lost weight by adding warm distilled water and mixing the solution gently.

Let the solution cool at room temperature for 15-20 minutes or until it reaches a temperature of 50-60°C. (Alternatively the solution can be left in a heated bath at 55°C for over 30 minutes.

## **Hot Plate instructions**

Choose a beaker that is 2-4 times bigger than the volume of the solution.

Place on a magnetic stirrer and slowly sprinkle the agarose powder at room temperature into the buffer while stirring rapidly, to prevent the formation of clumps.

Soak the agarose in the buffer for 15 minutes before heating, to reduce the tendency of the agarose solution to foam during heating.

Weigh the beaker and solution before heating. Cover the beaker with plastic wrap and pierce a small hole in the plastic for ventilation.

Bring the solution to boil while stirring and maintain gently boiling until all agarose is dissolved.

Replace the lost weight by adding warm distilled water and mixing the solution gently.

Let the solution cool at room temperature for 15-20 minutes or until it reaches a temperature of 50-60°C. (Alternatively the solution can be left in a heated bath at 55°C for over 30 minutes.