GIBCO BRL®

Instruction Manual

HORIZON® 58 Gel Casting System

CAT. NO. 21065-040

LIFE TECHNOLOGIES™

Table of Contents

Figure

Table

1 Notice to Customer

This product is authorized for laboratory research use only. The product has not been qualified or found safe and effective for any human or animal diagnostic or therapeutic application. Uses for other than the labeled intended use may be a violation of applicable law.

The HORIZON™ 58 Gel Casting System is a stand-alone system for casting gels for the HORIZON 58 Horizontal Gel Electrophoresis Apparatus. With the gel casting system, you can cast gels in advance and while the electrophoresis unit is in use.

This instruction manual provides operating procedures for the use of the Horizon 58 Gel Casting system *only.* For operating procedures for the HORIZON 58 Apparatus, as well as general guidelines, practical applications, and suggestions for agarose gel electrophoresis, please refer to the Instruction Manual for the HORIZON 58 Apparatus.

2 Overview

The components of the HORIZON 58 Gel Casting System (figure 1) are as follows:

- Gel casting tray
- Gel deck
- Two gel casting dams
- Instruction manual

Well-forming combs are not included. To form sample wells, use the combs supplied with the HORIZON 58 Apparatus or purchased separately.

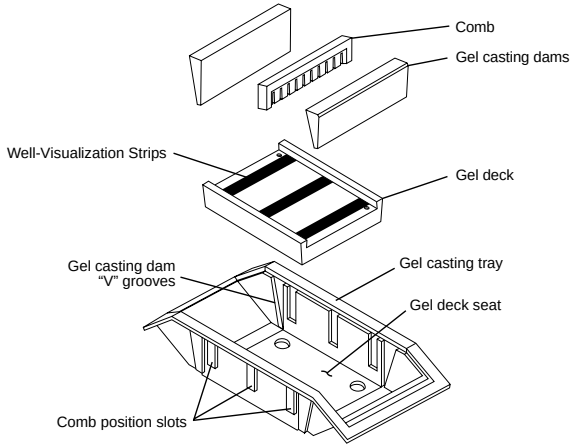

Figure 1. HORIZON 58 Gel Casting System.

3

Operating Instructions

The procedure for casting a gel in the HORIZON 58 Gel Casting System is virtually identical to that for casting a gel in the HORIZON 58 Apparatus itself (for additional details and formulations of common buffers, see the Instruction Manual for the HORIZON 58 Apparatus). Review figure 1, as necessary, to identify the components of the gel casting system.

1. Place the gel casting tray on a level surface. Place the gel deck in the gel deck seat of the casting tray.
2. Slide the gel casting dams into the "V" grooves of the gel casting tray at both ends of the gel deck. Apply gentle pressure to both dams simultaneously to seat the flat surfaces against the gel deck. Do not force the dams down as this may displace the gel deck out of level.
3. Insert a comb or combs (sold separately) into the desired alignment slots. The supporting ends of the comb(s) should rest on the raised edges of the gel deck. Check that the surface of the gel deck is level, using a small "bull's eye" level.

   Note: if you are using a 4-strip gel deck supplied with the HORIZON 58 Apparatus, combs placed in the center slot of the gel casting tray will not align precisely with the red well visualization strips.

4. Pipette the desired volume of molten agarose (containing electrophoresis buffer) into the assembled gel casting system. The agarose does not need to be cooled before pouring. Use the pipette tip to distribute the agarose solution evenly over the surface of the gel casting deck and to remove any air bubbles. See table 1 to determine agarose solution volumes required for various gel thicknesses and sample well capacities.

   Note: Low percentage gels (<0.6%) and low melting point agarose gels may have lower sample volume capacities.

   Note: If molten agarose leaks under the gel casting dams, check that dams are seated properly (see step 2).

5. Allow the agarose to cool until thoroughly solidified. Gently remove the gel casting dams and comb(s) before transferring the gel and gel deck to the buffer tray of the HORIZON 58 Apparatus. Be sure that the gel deck is properly seated in the buffer tray and that the gel is level before loading samples or starting electrophoresis.

6. To store gels prior to electrophoresis, remove the gel casting dams and combs, wet the surface with a small amount of electrophoresis buffer, and wrap the gel and gel deck with plastic wrap or seal in a plastic bag. Securely sealed gels may be stored at 4°C for up to one week.

Operating Instructions

Table 1. Loading Capacities for HORIZON 58 Combs Relative to Gel Thickness.

Gel Thickness (mm)	Agarose Volume (ml)	Comb Thickness (mm)	Number of of Teeth	Capacity Per Well (µl)
		0.8	5	15
			8	7
			14	3
3	15			
			3*	140
		1.5	5	30
			8	15
			14	7
			5	20
		0.8	8	10
			14	5
4	20			
			3*	200
		1.5	5	40
			8	20
			14	10
			5	30
		0.8	8	15
			14	7
5	25			
			3*	250
		1.5	5	50
			8	25
			14	13

*Includes one preparative well and two flanking reference analytical wells for standards (dimensions and capacity values are for the central, preparative well).

4

Related Products

Product	Cat. No.
Preparative DELRIN® Comb with marker lanes: 1.5-mm thick	21065-131
Analytical DELRIN Comb	
5-tooth	
0.8-mm thick	21065-099
1.5-mm thick	21065-107
8-tooth	
0.8-mm thick	21065-073
1.5-mm thick	21065-081
14-tooth	
0.8-mm thick	21065-115
1.5-mm thick	21065-123
Acrylic Gel Casting Dams (pair)	21065-057
Gel Deck (with three visualization strips)	21065-164
Gel Deck (with four visualization strips)	21065-032

5 Additional Information

5.1 Care and Handling

The components of the HORIZON 58 Gel Casting System are fabricated from PETG and cast-acrylic plastics. As with any laboratory instrument, adequate care yields consistent and reliable performance.

After each use, wash all components gently with water and nonabrasive soap or detergent, and rinse well in distilled water. Wipe dry with a soft cloth or paper towel, or allow to air dry. To remove grease and oils, use a light application of hexane, kerosene, or aliphatic naphtha. *Never* use abrasive cleaners, window sprays, or rough cloths to clean the components, as these can cause surface damage.

Additional cautions:

- Do not autoclave or dry-heat sterilize any components of the gel casting system.
- Do not expose any components to phenol, acetone, benzene, halogenated hydrocarbon solvents, or undiluted laboratory alcohols.
- Avoid prolonged exposure of the system to UV light.

5.2 Specifications

Weight.....0.41 lb (0.19 kg)

Dimensions: (W x L x H) .....9.5 x 16.5 x 4.8 cm (3.75 x 6.5 x 1.9 in.)

Construction .....PETG and acrylic plastic

Gel dimensions: (W x L x H).....5.7 x 8.3 x 0.5 cm (2.25 x 3.25 x 0.2 in.)

5.3 Warranty

Life Technologies, Inc. warrants apparatus of its manufacture against defects in materials and workmanship, under normal service, for one year from the date of receipt by the purchaser. This warranty excludes damages resulting from shipping, misuse, carelessness, or neglect. Life Technologies' liability under the warranty is limited to the repair of such defects or the replacement of the product, at its option, and is subject to receipt of reasonable proof by the customer that the defect is embraced within the terms of the warranty. All claims made under this warranty must be presented to Life Technologies within one year following the date of delivery of the product to the customer.

This warranty is in lieu of any other warranties or guarantees, expressed or implied, arising by law or otherwise. Life Technologies makes no other warranty, expressed or implied, including warranties or merchantability or fitness for a particular purpose. Under no circumstances shall Life Technologies be liable for damages either consequential, compensatory, incidental, or special, sounding in negligence, strict liability, breach of warranty, or any other theory, arising out of the use of the product listed herein.

Life Technologies reserves the right to make improvements in the design, construction, or appearance of this product without notice.

Part No. 11614

Lot No. KAQP02-0999