



## Product Specifications

Gene Detection Systems, Non-Radioactive Detection, GeneProber™  
Chemiluminescent detection, PCRProber™  
Hybridization and Detection Reagents

### Lumisol™ II & III Hybridization Solutions

Specifically formulated for chemiluminescent detection

	Catalog Number	Description	Qty
<input type="checkbox"/>	40-5023-20	Lumisol™ II Hybridization Solution; for non-toxic hybridizations	200 mL
<input type="checkbox"/>	40-5024-20	Lumisol™ III Hybridization Solution; for oligonucleotide probes	200 mL

#### Product Description

Lumisol™ II & III are ready-to-use hybridization solutions specifically formulated for non-radioactive chemiluminescent hybridization.

#### Lumisol™ II

Lumisol™ II is for use with digoxigenin or biotin labeled DNA or RNA probes in Southern & Northern blot protocols. It can also be used with radioactive labeled probes.

#### Lumisol™ III

Lumisol™ III is specifically formulated for use with oligonucleotide probes labeled with biotin, digoxigenin, alkaline phosphatase or other detection ligand or enzymes.

#### Applications

**Lumisol™ II** hybridization solution can be used for all stringent types of nucleic acid blot hybridization conditions, particularly using non-radioactive digoxigenin labeled probes. Lumisol™ II hybridization solution can be used for prehybridization and hybridization. The hybridization temperature should be calculated for proper results. Duration of hybridization can be reduced to 6 hours and overnight hybridization can be used for high sensitivity requirements and for convenience.

**Lumisol™ III** hybridization solution is specifically formulated for oligonucleotide probes that require only 30 minute pre-hybridization and 30 minute hybridization. Longer hybridization is not recommended. The hybridization temperature should be calculated for proper results and should not be more than 55°C for alkaline phosphatase labeled oligo probes.

#### Hybridization Temperature for Lumisol™ II

Hybridization temperature is an essential criterion for obtaining reliable hybridization results and should preferably be calculated. A rule of the thumb hybridization temperature of 50°C is satisfactory for perfectly homologous probes greater than 100 bp; probes of this and larger fragment length are usually achieved by random prime labeling method.

The appropriate hybridization temperature is calculated according to GC content according to the following equation:

$$T_m = 49.82 + 0.41 (\% G + C) - (600/l)$$

[l = length of hybrid in base pairs]

$$T_{opt.} = T_m - (20 \text{ to } 25^\circ\text{C})$$

(The given numbers of the equation are according to a standard equation for denaturing hybridization solutions)

T<sub>opt.</sub> can be regarded as a stringent hybridization temperature allowing up to 18 % mismatches between probe and target. When the degree of homology of the probe to template is less than 80%, the T<sub>opt.</sub> should be lowered; approximately 1.4°C below T<sub>m</sub> per 1 % mismatch. Likewise the stringent washing steps should be adjusted accordingly by increasing the SSC concentration and/or lowering the washing temperature.

**Example** For hybridization of human genomic DNA with a 100% homologous probe use 50°C to 55°C, depending on the GC content of the probe.

## Ordering Information

### Hybridization Solutions

Product	Catalog No.	Size*	Price \$
Lumisol™ I Hybridization Solution; contains formamide	40-5022-20	200 ml	85.00
Lumisol™ II Hybridization Solution; for non-toxic hybridizations	40-5023-20	200 ml	85.00
Lumisol™ III Hybridization Solution; for oligo probes	40-5024-20	200 ml	85.00

## Related Products Ordering Information

### Genetic Tools and Reagents

Product	Catalog No.	Size	Price \$
Hybwash A, Hybridization Wash Solution	40-5020-20	200 ml	65.00
Hybwash B, Hybridization Wash Solution	40-5021-10	100 ml	50.00
Buffer M (Maleic Acid) 10X	40-5025-20	200 ml	125.00
Blocking solution 10X	40-5026-10	100 ml	75.00
Seq. Loading buffer	40-5027-00	1 ml	10.00
Alkaline Phosphatase Detection buffer 10X	40-5031-10	100 ml	65.00

### Omni-Marker™

Product	Catalog No.	Size*	Price \$
Omni-Marker™ Universal unlabeled	40-3005-01	100 µl	15.00
Omni-Marker™ Universal unlabeled	40-3005-05	500 µl	50.00
Omni-Marker™ Universal unlabeled	40-3005-10	1 ml	90.00
Omni-Marker™ Low unlabeled	40-3006-01	100 µl	15.00
Omni-Marker™ Low unlabeled	40-3006-05	500 µl	50.00
Omni-Marker™ Low unlabeled	40-3006-10	1 ml	90.00
Omni-Marker™ GScan-2 Tamra labeled 50 bp - 600 bp	40-3062-01	100 µl	75.00
Omni-Marker™ GScan-2 Tamra labeled 50 bp - 600 bp	40-3062-05	500 µl	325.00

### Loading Buffers

Product	Catalog No.	Size	Price \$
Loading Buffer 5X BPB/XC non-denaturing	40-3002-01	100 µl	5.00
Loading Buffer 5X BPB/XC non-denaturing	40-3002-10	1 ml	10.00
Loading Buffer 5X Orange G/XC non-denaturing	40-3004-01	100 µl	5.00
Loading Buffer 5X Orange G/XC non-denaturing	40-3004-10	1 ml	10.00
Loading Buffer 2X BPB/XC Denaturing for Sequencing	40-5027-01	100 µl	5.00
Loading Buffer 2X BPB/XC Denaturing for Sequencing	40-5027-10	1 ml	10.00

**Prices subject to change without notice. Current pricing are posted at [www.genelink.com](http://www.genelink.com)**  
**All Gene Link products are for research use only.**