

## Biodyne® Nylon Transfer Membranes

High sensitivity and low background for enhanced detection and resolution



- ▶ Will not crack, shrink, or tear when subjected to multiple cycles of hybridization, stripping, and reprobing.
- ▶ Membranes are intrinsically hydrophilic for easy wetting.
- ▶ Offers superior performance with radioactive (Biodyne B membrane) and non-radioactive (Biodyne A membrane) detection systems.

### Applications

Four chemistries provide versatile adsorption properties:

#### Biodyne A Membrane

(Amphoteric Nylon 6,6) Membrane zeta potential can be modulated by changes in pH. Ideal for single probe or multiple rehybridizations, and applications where background is troublesome.

#### Biodyne B Membrane

(Positively-charged Nylon 6,6) Pore surfaces are populated by a high density of quaternary ammonium groups. Our highest sensitivity nylon membrane for nucleic acid applications.

#### Biodyne C Membrane

(Negatively-charged Nylon 6,6) Can be derivatized by coupling reactions through the carboxyl groups on the pore surfaces.

#### Biodyne Plus Membrane

(Positively-charged Nylon 6,6 with an extremely high isoelectric point) With certain non-radioactive detection systems, it is more sensitive than Biodyne A membrane while exhibiting lower background than Biodyne B membrane.

### Specifications

#### Filter Media

Biodyne A Membrane: Amphoteric Nylon 6,6

Biodyne B and Plus Membranes:

Positively-charged Nylon 6,6  
Biodyne C Membrane: Negatively-charged Nylon 6,6

#### Pore Size

0.2, 0.45, and 1.2  $\mu\text{m}$

#### Typical Thickness

Membrane	$\mu\text{m}$	mils
Biodyne A	5.5 - 7.0	139.7 - 177.8
Biodyne B	5.7 - 6.7	144.8 - 170.2
Biodyne Plus	5.7 - 6.7	144.8 - 170.2
Biodyne C	11.0 - 13.0*	279.4 - 330.2

\*Dual layer measurements

#### Solvent Compatibility

Resistant to common solvents such as acetone, alcohol, chlorinated aliphatic hydrocarbons, formamide, 2M NaOH, DMSO, and dimethylformamide. Not compatible with concentrated formic acid (> 50%), HCl (> 4M), oxidizing agents, and long exposures (days to weeks) to pH < 2.

### Ordering Information

#### Biodyne A Membrane

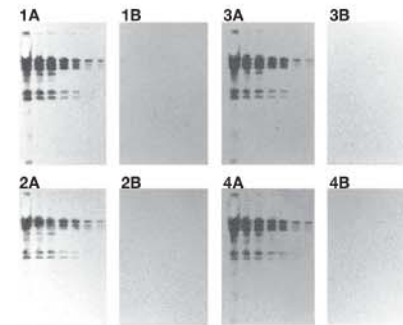
Part Number	Description	Pkg
60113	0.2 $\mu\text{m}$ , 30 cm x 3 m roll	1/pkg
60102	0.45 $\mu\text{m}$ , 82 mm discs	50/pkg
60103	0.45 $\mu\text{m}$ , 85 mm discs	50/pkg
60104	0.45 $\mu\text{m}$ , 132 mm discs	50/pkg
60105	0.45 $\mu\text{m}$ , 137 mm discs	50/pkg
60101	0.45 $\mu\text{m}$ , 7 x 8.5 cm sheets	10/pkg
60100	0.45 $\mu\text{m}$ , 20 x 20 cm sheets	10/pkg
60120	0.45 $\mu\text{m}$ , 20 cm x 3 m roll	1/pkg
60106	0.45 $\mu\text{m}$ , 30 cm x 3 m roll	1/pkg
60108	1.2 $\mu\text{m}$ , 30 cm x 3 m roll	1/pkg

#### Biodyne B Membrane, 0.45 $\mu\text{m}$

Part Number	Description	Pkg
60202	82 mm discs	50/pkg
60203	85 mm discs	50/pkg
60204	132 mm discs	50/pkg
60205	137 mm discs	50/pkg
60201	7 x 8.5 cm sheets	10/pkg
60200	20 x 20 cm sheets	10/pkg
60209	20 cm x 1 m roll	1/pkg
60208	20 cm x 3 m roll	1/pkg
60207	30 cm x 3 m roll	1/pkg

### Performance

#### Biodyne® B Membrane Withstands Multiple Cycles of Stripping and Reprobing



Lambda-HindIII fragments were separated in an agarose gel and transferred to Biodyne B membrane using the Pall Improved Alkaline Transfer. The blot was stripped completely and reprobed four times without loss of signal intensity. Bands were detected using a chemiluminescent detection system.

1A - 4A: blot after (re)probing  
1B - 4B: blot after stripping, prior to (re)probing

#### Fluorescent Detection of DNA Using Biodyne Plus Membrane



Dilutions of HindIII-digested *I*-DNA (1000 - 1 ng/lane) were separated in an agarose gel and transferred to Biodyne Plus membrane. Signal was generated using a fluorescein-labeled probe, anti-fluorescein-alkaline phosphatase conjugate, and precipitating substrate. The image was generated by scanning the blot with a FluorImager® system.

### Ordering Information

#### Biodyne C Membrane, 0.45 $\mu\text{m}$

Part Number	Description	Pkg
60316	82 mm discs	50/pkg
60317	85 mm discs	50/pkg
60318	132 mm discs	50/pkg
60319	137 mm discs	50/pkg
60315	7 x 8.5 cm sheets	10/pkg
60314	20 x 20 cm sheets	10/pkg

#### Biodyne Plus Membrane, 0.45 $\mu\text{m}$

Part Number	Description	Pkg
60402	82 mm discs	50/pkg
60403	85 mm discs	50/pkg
60404	132 mm discs	50/pkg
60405	137 mm discs	50/pkg
60401	7 x 8.5 cm sheets	10/pkg
60400	20 x 20 cm sheets	10/pkg
60406	30 cm x 3 m roll	1/pkg

In addition to standard sizes, these membranes are available in custom-cut sizes. For information on sizes and cuts, call your local Pall Life Sciences office.

## BioTrace™ NT Nitrocellulose Transfer Membrane

Pure, unsupported nitrocellulose membrane for nucleic acid and protein detection



- ▶ High binding capacity for proteins and nucleic acids.
- ▶ Lower protein burnthrough than competitors in electrophoretic transfers.

### Applications

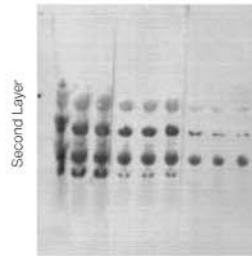
- ▶ Colony/plaque lifts.
- ▶ Protein transfers.

### Specifications

<b>Filter Media</b> BioTrace NT (nitrocellulose)	<b>Typical Thickness</b> 101.6 - 190.5 µm (4.0 - 7.5 mils)
<b>Pore Size</b> 0.2 µm	

### Performance

#### Low Burnthrough With Nitrocellulose Membranes



Brand A Membrane    Brand B Membrane    BioTrace NT Membrane

Prestained proteins were separated in a polyacrylamide gel and electrophoretically transferred to the indicated nitrocellulose membranes. A double layer of membrane was used, one directly against the gel, followed by the second layer. Signal intensity on the second layer is indicative of burnthrough, which can lead to loss of signal.

### Ordering Information

#### BioTrace NT Nitrocellulose Transfer Membrane

Part Number	Description	Pkg
66487	82 mm discs	50/pkg
66595	85 mm discs (gamma irradiated)	50/pkg
66518	132 mm discs	50/pkg
66488	137 mm discs	50/pkg
66593	7 x 8.5 cm sheets	10/pkg
66489	20 x 20 cm sheets	10/pkg
66485	30 cm x 3 m roll	1/pkg

#### Related Products

AcroWell™ 96-Well Membrane-Bottom Filter Plates With BioTrace NT Membrane	97
Stainless Steel Forceps	230, 280

## BioTrace™ PVDF Transfer Membrane

Ideally suited for Western Transfers with total protein stain



- ▶ Low background with chemiluminescent detection systems.
- ▶ Broad compatibility with commonly used solvents.

### Applications

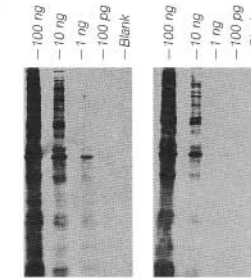
- ▶ Ideal for protein sequencing.

### Specifications

<b>Filter Media</b> BioTrace PVDF (hydrophobic polyvinylidene fluoride)	<b>Typical Thickness</b> 147 µm (5.8 mils)
<b>Pore Size</b> 0.45 µm	

### Performance

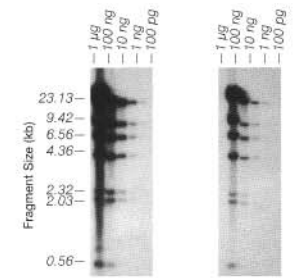
#### Western Transfer to BioTrace PVDF Membrane



BioTrace PVDF Membrane    Brand A PVDF Membrane

Serial dilutions of *E. coli* lysates were transferred from a 10 to 20% gradient gel to BioTrace PVDF and a competitive PVDF membrane, then probed with rabbit anti-*E. coli* antibodies. Proteins were visualized using peroxidase-conjugated goat anti-rabbit antibodies and 4-chloro-1-naphthol substrate solution.

#### Southern Transfer to BioTrace PVDF Membrane



BioTrace PVDF Membrane    Brand A PVDF Membrane

Dilutions of λ-DNA HindIII fragments were separated electrophoretically on a 0.8% agarose gel and transferred under alkaline conditions to Pall Life Sciences BioTrace PVDF membrane, as well as a competitive PVDF membrane. The DNA was fixed by baking at 80 °C (176 °F) for 1 hour and the fragments identified with a <sup>32</sup>P λ-DNA probe hybridized at 65 °C (149 °F) for 16 hours.

### Ordering Information

#### BioTrace PVDF Transfer Membrane

Part Number	Description	Pkg
66594	7 x 8.5 cm sheets	10/pkg
66542	20 x 20 cm sheets	10/pkg
66547	20 cm x 1 m roll	1/pkg
66543	30 cm x 3 m roll	1/pkg

#### Related Products

AcroWell™ 96-Well Membrane-Bottom Filter Plates With BioTrace NT Membrane	97
Stainless Steel Forceps	230, 280