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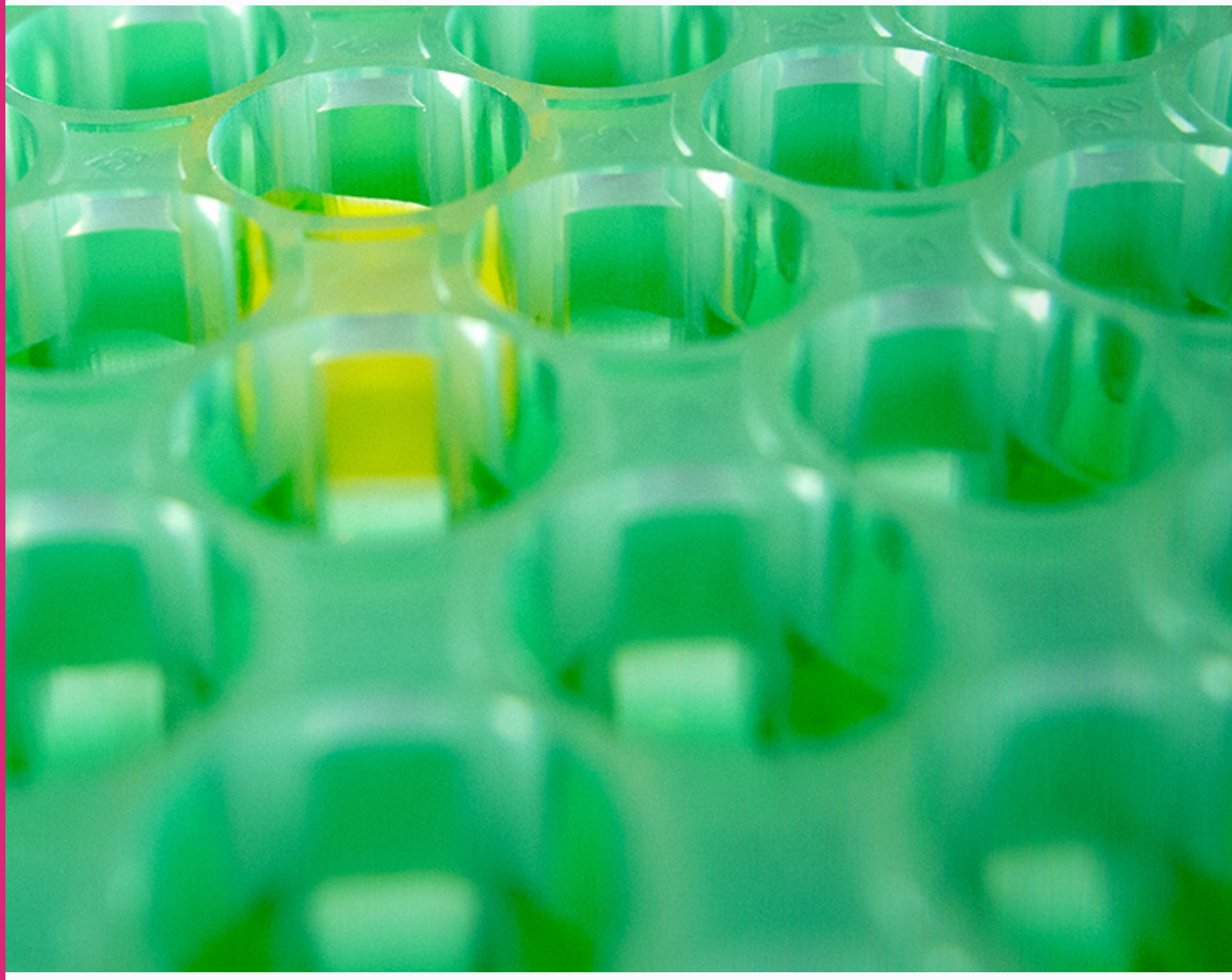

Collection & Filter Plates

Biological & Analytical Sample Preparation

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Collection Plates

Thomson Well Plates in both 24- and 96-well configurations are ideal for sample preparation or concentration and feature various well and well bottom shapes to suit your analytical needs. To compliment Thomson well plates we also offer various sealing options including capmats, airporous seals, foil seals and plastic lids.

- **Well Shape –** Square or Round to fit your cell type and culture condition requirements
- **Well Bottom Shape –** Pyramid, Round and V-bottom to fit your applications
- **Well Plate Orientation –** Fixed for Robotic Liquid-Handling Systems

Filter Plates

Thomson Filter Plates in both 24- and 96-well configurations are designed for analytical sample preparation. Depending on your application we may recommend using a positive pressure manifold, centrifugation or a Thomson Vacuum Manifold.

- **Versatility –** solid phase extraction and affinity phase adsorption applications involving high throughput robotic Liquid Handling Systems
- **Solvent Compatibility –** PVDF and PTFE Filter Plates are similar in principle to Thomson Filter Vials but in a 96-well plate
- **Long funnel design –** Eliminates cross-contamination between sample collection wells by fully inserting below the top of the collection plate

Materials:

- **96-Well Plate, 2mL, Square Well, Pyramid Bottom, Individually Wrapped with Lid | Sterile: p/n 931137**

96-Well Screening Protocol for Mammalian/Insect Cells

Methods:

1. Maintain cell stocks in appropriate growth medium. Split cultures the day before transfection to an appropriate density to ensure log phase growth at the time of transfection.
2. Seed cells at 500µL/well. The optimal seeding density will depend on the cell line, please use cell line recommended density.
3. Transfect cells according to established transfection protocol. Scale transfection reagent/DNA/feeds on a volumetric basis from what is used for larger scale cultures.
4. Seal plates with plastic lids or Airporous Seals and transfer to shaker overnight at 800rpm on a 3mm orbit at 37°C.
5. Harvest cells at the time point established for larger scale cultures. Pellet cells by centrifugation at 1000-2500g for 10-20min at 4°C.
6. Reserve either the culture media or the pellet depending on the application and proceed to downstream processing.

Notes:

- The most critical factor in cell viability is aeration. Optimal results will be achieved using shakers with 3mm orbit diameters. We do not recommend working in 96-well format using shakers with standard 25mm throws.
- Thomson filter plates are a great complimentary product for downstream purification applications.
  - 96-Well Filter Plate, 2mL, Long Drip | 25µm Polypropylene: p/n 931919
  - Maximum suggested centrifugation: 3000g

Materials:

- **24-Well Plate, 10.4mL, Square Well, Round Bottom, Individually Wrapped with Lid | Sterile: p/n 931568**
- **24-Well Plate, 10.8mL, Square Well, Pyramid Bottom, Individually Wrapped with Lid | Sterile: p/n 931571**

24-Well Screening Protocol for Mammalian/Insect Cells

Methods:

1. Maintain cell stocks in appropriate growth media. Split cultures the day before transfection to an appropriate density to ensure log phase growth at the time of transfection.
2. Seed cells at 4-5mL/well. The optimal seeding density will depend on the cell line, please use cell line recommended density.
3. Transfect cells according to established transfection protocol. Scale transfection reagent/DNA/feeds on a volumetric basis from what is used for larger scale cultures.
4. Cover plates with plastic lids and transfer to shaker overnight at 350rpm on a 12.5mm orbit at 37°C.
5. Harvest cells at the time point established for larger scale cultures. Pellet cells by centrifugation at 1000-2500g for 10-20min at 4°C.
6. Reserve either the culture media or the pellet depending on the application and proceed to downstream processing.

Notes:

- The most critical factor in cell viability is aeration. For 24-well plates optimal results will be achieved using shakers with 12.5mm. Cultures grown in shakers with standard 25mm throws, will likely need increased rotational speed or decreased culture volume.

96-Well Screening Protocol for *E. coli* and other Microbes

Methods:

1. Pipette 750µL of bacterial growth media containing the appropriate selective antibiotic into each well of a 96-well plate.
2. Add the selected colony to each well from either an agar plate or glycerol stock.
3. Gently triturate each well manually.
4. Seal plates with Airporous Seals and transfer to shaker overnight at 850rpm on a 3mm orbit at 37°C.
5. Harvest the plates by centrifugation @ 2500g for 20 minutes.
6. Invert the plate to discard the media.
7. Process samples according to downstream application (plasmid purification, protein extraction etc.).

Notes:

- 96-well cultures grown in Plasmid+® medium (p/n 446300) typically provide the appropriate biomass for MINI scale plasmid preps.
- The most critical factor in cell viability is aeration. Optimal results will be achieved using shakers with 3mm orbit diameters. We do not recommend working in 96-well format using shakers with standard 25mm or 50mm throws.
- If high levels of evaporation are encountered, the well plate & plastic lid (p/n 931134) is recommended to alleviate the issue.
- Thomson Instrument Company's filter plates are a great complimentary product for downstream purification applications. Add appropriate resin.
  - 96-Well Filter Plate, 2mL, Long Drip | 25µm Polypropylene: p/n 931919

Materials:

- **96-Well Plate, 2mL, Square Well, V-Bottom, Raised Lettering | Sterile: p/n 951652C**
- **96-Well Plate, 2mL, Square Well, Round Bottom | Irreversible: p/n 931130**
- **Airporous Seal For Growing Cultures: p/n 899410**

24-Well Growth Protocol for *E. coli* and Other Microbes

Methods:

1. Pipette 4-5mL of bacterial growth media containing the appropriate selective antibiotic into each well of a 24-well plate.
2. Add the selected colony to each well from either an agar plate or glycerol stock.
3. Gently triturate each well manually.
4. Seal plates with Airporous Seals and transfer to shaker overnight at 350-400rpm on a 12.5mm orbit at 37°C.
5. Harvest the plates by centrifugation @ 2500g for 20 minutes.
6. Invert the plate to discard the media.
7. Process samples according to downstream application (plasmid purification, protein extraction etc.).

Notes:

- 24-well cultures grown in Plasmid+® medium (p/n 446300) typically provide the appropriate biomass for MIDI scale plasmid preps.
- The most critical factor in cell viability is aeration. For 24-well plates optimal results will be achieved using shakers with 12.5mm. Cultures grown on shakers with standard 25mm throws will likely need increased rotational speed or decreased culture volume.
- If high levels of evaporation are encountered, use a 24-well plate & plastic lid (p/n 931568) is recommended to alleviate the issue.

Materials:

- **24-Well Plate, 10.4mL, Square Well, Round Bottom, Individually Wrapped | Sterile: p/n 931565-G-1X**
  - **Plus: Airporous Seal for Growing Cultures: p/n 899410**
- **24-Well Plate, 10.8mL, Square Well, Pyramid Bottom, Individually Wrapped | Sterile: p/n 931569-G-1X**
  - **Plus: Airporous Seal for Growing Cultures: p/n 899410**
- **24-Well Plate, 10.4mL, Square Well, Round Bottom, Individually Wrapped with Lid | Sterile: p/n 931568**
- **24-Well Plate, 10.8mL, Square Well, Pyramid Bottom, Individually Wrapped with Lid | Sterile: p/n 931571**

Materials:

- Thomson Rapid Clear® 2, 96-Well 0.2µm Filter Plate, Sterile | CS20 p/n 921746
- Culture plate: 96-Well Plate, 2mL, Square Well, Pyramid Bottom, Individually Wrapped w/ Lid, Sterile | CS20 p/n 931137
- Optional: Airporous Plate Seal, For Growing Cultures, Sterile | Use w/ All Plates | CS100 p/n 899410
- Collection plate: 96-Well Plate, 2mL, Square Well, Round Bottom, Irreversible, Sterile | CS20 p/n 931130
- Adhesive Foil Seal | Use w/ All 96- & 24- Well Plates | CS100 p/n 899405-1

96-Well Media Clarification Protocol for Mammalian Cells:

Cell Lines Expi293 and ExpiCHO transient expressing 130kDa, IgG-type protein

Methods:

1. Maintain cell stocks in appropriate growth medium with 0.8mL of media / well. Split cultures the day before transfection to an appropriate density to ensure log phase growth at the time of transfection.
2. Seed cells at 500µL/well. The optimal seeding density will depend on the cell line, please use cell line recommended density.
3. Transfect cells according to established transfection protocol. Scale transfection reagent/DNA/feeds on a volumetric basis as needed.
4. Cover plates with plastic lids or airporous seals and transfer to shaker*:
   A. Expi293 shake speed: 1000 RPM (3mm throw)
   B. ExpiCHO shake speed: 900 RPM (3mm throw)
5. Culture cells for recommended time period.
6. Determine viable cell count. Target VCC should be approximately:
   A. Expi293 7-9 x e6 / mL
   B. ExpiCHO: 12-15 x e6 / mL
7. Pellet cells by centrifugation at 1000-2500 x g for 10-20min at 4°C.
8. Assemble Rapid Clear® 2 (RC2) on top of 96-well collection plate.
9. Add 400µL of sterile PBS to each RC2 well as rinse.
10. Pipette full culture volume, minus cell pellet, into wells of RC2 (700-800µL/well). Place RC2/collection plate assembly into centrifuge swinging bucket and centrifuge for 5 min at 750-1000 x g.
11. Add 600µL of sterile PBS flush to each RC2 well and repeat centrifugation step.
12. Disassemble RC2/collection plate assembly and, to prevent evaporation, seal collection plate with foil seal.
13. Proceed to Octet column chromatography for protein purification, expect 95% yield (70% yield w/o PBS flush).

Notes:

*The most critical factor in cell viability is aeration. Optimal results will be achieved using shakers with 3mm orbit diameters. We do not recommend working in 96-well format using shakers with standard 25mm or 50mm throws.

96-Well Media Clarification Protocol for Microbial Cells:

E. coli expressing known protein

Methods:

1. Maintain cell stocks in appropriate growth medium* with 0.8mL of media/well. Split cultures the day before transfection to an appropriate density to ensure log phase growth at the time of transfection.
2. Transfect cells according to established transfection protocol. Scale transfection reagent/DNA/feeds on a volumetric basis as needed.
3. Cover plates with plastic lids or airporous seals and transfer to shaker**. Shake at 1000 RPM (3mm throw) for 24 hours.
4. Pellet cells by centrifugation at 1000-2500 x g for 10-20min at 4°C.
5. Assemble Rapid Clear® 2 (RC2) on top of 96-well collection plate.
6. Add 400µL of sterile PBS to each RC2 well as rinse.
7. Pipette full culture volume, minus cell pellet, into wells of RC2 (700-800µL). Place RC2/collection plate assembly into centrifuge swinging bucket and centrifuge for 5 min at 750-1000 x g.
8. Add 600µL of sterile PBS to each RC2 well and repeat centrifugation step.
9. Disassemble RC2/collection plate assembly and, to prevent evaporation, seal collection plate with foil seal.
10. Proceed to plasmid purification, expect 95% yield (70% yield w/o PBS flush).

Notes:

*24-well cultures grown in Plasmid+® medium (p/n 446300) typically provide the appropriate biomass for MIDI scale plasmid preps.

**The most critical factor in cell viability is aeration. Optimal results will be achieved using shakers with 3mm orbit diameters. We do not recommend working in 96-well format using shakers with standard 25mm or 50mm throws.

Materials:

- Thomson Rapid Clear® 2, 96-Well 0.2µm Filter Plate, Sterile | CS20 p/n 921746
- Culture plate: 96-Well Plate, 2mL, Square Well, Pyramid Bottom, Individually Wrapped w/ Lid, Sterile | CS20 p/n 931137
- Optional: Airporous Plate Seal, For Growing Cultures, Sterile | Use w/ All Plates | CS100 p/n 899410
- Plasmid+® Media, Sterile, 1L | CS6 p/n 446300
- Collection plate: 96-Well Plate, 2mL, Square Well, Round Bottom, Irreversible, Sterile | CS20 p/n 931130
- Adhesive Foil Seal | Use w/ All 96- & 24- Well Plates | CS100 p/n 899405-1

Part Numbers

Collection Plates

Vol. Well	Well Shape	Sterility (SAL)	ANSI-SLAS	Ind. Wrap	Compatible with Capmat/Seal	Case/Qty	Part#	Avantor Part #
24-Well								
10.4mL		10^{-6}	Yes	Yes	899410, 899405-1, 899403, 899406	20	931565-G-1X	**76808-494**
10.4mL		10^{-6}	Yes	Yes	Lid Included	20	931568	**76808-482**
10.8mL		10^{-6}	Yes	Yes	899410, 899405-1, 899403, 899406	20	931569-G-1X	**76808-496**
10.8mL		10^{-6}	Yes	Yes	Lid Included	20	931571	**76808-484**
96-Well								
500µL		non-sterile	*Yes	No	899410, 899403, 899406, 359747, 899405-1	50	9356045	**76808-488**
650µL		non-sterile	Yes	No	899410, 899405-1, 899403, 899406	50	931512B	**76808-492**
2mL		non-sterile	*Yes	No	899410, 899405-1, 899403, 899406, 359747	50	951657	**76808-486**
2mL		10^{-6}	*Yes	Yes	899410, 899405-1, 899403, 899406, 359747	20	951657-S20	**76808-502**
2mL		non-sterile	†Yes	No	899410, 899405-1, 899403, 899406, A210100	20	931130	**76808-476**
2mL		10^{-6}	†Yes	No	899410, 899405-1, 899403, 899406, A210100	20	931130-S	**76808-490**
2mL		10^{-6}	Yes	Yes	899410, 899405-1, 899403 899406, A210100	20	931133	**76808-478**
2mL		10^{-6}	Yes	Yes	Lid Included	20	931137	**76808-480**

Filter Plates

Vol. Well	Well Shape	Sterility (SAL)	ANSI-SLAS	Ind. Wrap	Filter Membrane	Collection Plate	Case/Qty	Part#	Avantor Part #
24-Well Filter Plates									
10.8mL		non-sterile	Yes	No	25µm Polypropylene	931565-G-1X, 931568, 931569-G-1X, 931571	20	921550	**76808-466**
~9mL		10^{-6}	Yes	No	0.2µm Rapid Clear®	931565-G-1X, 931568, 931569-G-1X, 931571	20	921546	**76808-462**
96-Well Filter Plates									
2mL		10^{-6}	Yes	No	0.2µm Rapid Clear®	931130	20	921746	**76808-464**
2mL		non-sterile	Yes	No	25µm Polypropylene	931130	25	931919	**76808-468**
2mL		non-sterile	Yes	No	0.2µm PTFE	931130	20	921730	**76808-470**
2mL		non-sterile	Yes	No	0.45µm PTFE	931130	20	921740	**76808-474**
2mL		non-sterile	Yes	No	0.2µm PVDF	931130	20	921731	**76808-472**

* Meets ANSI-SLAS plate dimensions

† Irreversible Plate

Seals & Capmats

Description		Plate Compatibility	Case/Qty	Part#	Avantor Part #
96-Well Capmat, For Wide Round Wells	No	951657, 9356045, 951657-S20, 931512B	50	359747	**76808-356**
96-Well Capmat, For Square Wells	No	931130, 931130-S, 931133, 931137	100	A210100	**76808-358**
Adhesive Foil Plate Seal	No	All Plates	100	899405-1	**76808-526**
Pierceable Foil Heat Seal I PCR compatible	No	All Plates	100	899403	**76808-538**
Long Term Storage Foil Heat Seal	No	All Plates	100	899406	**76808-540**
Airporous Plate Seal For Growing Cultures	Yes	All Plates	100	899410	**76808-536**
Well Plate Lid for use with 96- & 24-Well Plates	No	All Plates	100	981945	**76808-458**
Well Plate Lid for use with 96- & 24-Well Plates	Yes	All Plates	100	981948	**76808-456**

Vacuum Manifold

Sterile	ANSI-SLAS	Filter Membrane	Case/Qty	Part#	Avantor Part #
No	Yes	n/a	1	981802	**76808-542**

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