

RunBlueTM

Protein Electrophoresis



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PROTEIN SOLUTIONS
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Dual Run & Blot Unit Instruction Manual

info@expedeon.com

Expedeon Protein Solutions - Babraham Hall - Cambridge CB22 3AT - United Kingdom

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RunBlue Dual Run & Blot Unit Instructions

IMPORTANT USER INFORMATION

This Instruction Manual will explain how to use this product safely and effectively. Please read and carefully follow the instruction manual in its entirety.



The triangle/exclamation mark symbol alerts the user of the product to important operational, maintenance, and/or warranty requirements.



The triangle/lightning bolt symbol alerts the user of the product to potentially hazardous electrical exposure.



Failure to adhere to the instructions could result in personal and/or laboratory hazards, as well as invalidate any warranty. Always turn off the DC power source prior to disconnecting power cords from the product. Disconnect power cords from the power source first and then from the product. For maximum safety, always operate this system in an isolated, low traffic area, not accessible to unauthorized personnel. Never operate damaged or leaking equipment.

WARRANTY AND LIABILITY

This product was produced utilizing the highest practical standards of materials, workmanship, and design. Expedeon Protein Solutions (“Expedeon”) warrants that the product has been tested and will meet or exceed published specifications. This warranty is valid only if the product has been operated and maintained according to the instructions provided.

Expedeon warrants this product to be free from defects in materials and workmanship under normal service for one year from date of shipment. If the product proves defective during this period, Expedeon will repair or replace it at our option, free of charge, if returned to us postage prepaid. This warranty does not cover: damage in transit, damage caused by carelessness, misuse or neglect, normal wear through frequent use, damage caused by solvent corrosion, damage caused by improper handling or user alteration, nor unsatisfactory performance as a result of conditions beyond our control. **Proper use of the unit requires thorough rinsing of the components, including immersing the buffer core in water after use as further described in section 5.** Expedeon shall in no event be liable for incidental nor consequential damages, including without limitation, lost profits, loss of income, loss of business opportunities, loss of use and other related damages, however caused, nor any damage arising from the incorrect use of the product.

RunBlue Dual Run & Blot Unit Instructions

<p>FRANÇAIS INFORMATION IMPORTANTE À L'USAGE DES UTILISATEURS</p> <p>Le présent manuel d'utilisation explique la manière de se servir efficacement du produit en conditions de sécurité. Il est recommandé de soigneusement lire la totalité du manuel, avec ses consignes et ses instructions.</p> <p> Le triangle avec point d'exclamation est un symbole destiné à avertir l'utilisateur du produit de l'importance de certaines exigences relatives au fonctionnement, à l'entretien et/ou à la garantie.</p> <p> Le triangle avec flèche en zigzag est un symbole destiné à avertir l'utilisateur du produit de la possibilité d'exposition à des décharges avec danger de secousses électriques.</p> <p> Tout manquement à l'observation des consignes et des instructions peut exposer les personnes et les biens à des dommages corporels et/ou matériels et peut annuler toute garantie. Il faut toujours interrompre l'alimentation de courant continu avant de déconnecter les cordons d'alimentation du produit. Déconnecter d'abord les cordons d'alimentation branchés sur la source de tension (alimentation de secteur) puis ceux branchés sur le produit. Pour une sécurité maximum, il faut toujours faire fonctionner ce système dans un lieu isolé, peu fréquenté, où le personnel non autorisé n'a pas accès. Ne jamais faire fonctionner un matériel endommagé ou affecté par des fuites.</p> <p>GARANTIE ET RESPONSABILITÉ</p> <p>Le produit a été fabriqué conformément aux normes applicables les plus exigeantes en matière de matériaux, de main d'œuvre, de conception et d'ingénierie. Expedeon Protein Solutions ("Expedeon") garantit que le produit a subi des essais et que ses performances rempliront les conditions des spécifications publiées ou leur seront même supérieures. La présente garantie n'est valide que si le produit a fonctionné et a été entretenu conformément aux consignes et instructions fournies.</p> <p>Expedeon garantit que le produit sera dépourvu de vices de matériaux et de main d'œuvre, en conditions de service normales, pendant un an à compter de la date d'expédition. Au cas où le produit s'avérerait défectueux pendant cette période de garantie, Expedeon réparera ou remplacera le produit, à sa discrétion et gratuitement, si le produit lui est retourné port payé d'avance. La garantie ne couvre pas les dommages de transport; les dommages causés par l'imprudence, le manque de soins, l'abus ou la négligence; l'usure normale résultant d'une utilisation fréquente; les dommages causés par la corrosion des solvants; et les dommages causés par la manipulation inadéquate ou des changements apportés par l'utilisateur. La garantie ne couvre pas non plus les performances non satisfaisantes résultant de conditions hors du contrôle de Expedeon. ne pourra en aucun cas être tenue responsable de dommages indirects, y compris, de manière non limitative, la perte de bénéfices, le manque à gagner, la perte d'occasions d'affaires, l'impossibilité d'usage ou tous autres dommages associés, quelle qu'en soit la cause, ni de dommages résultant de l'usage incorrect du produit.</p>	<p>ESPAÑOL INFORMACIÓN IMPORTANTE PARA EL USUARIO</p> <p>El presente instructivo explica la manera de usar este producto en forma segura y efectiva. Sírvase leerlo en su totalidad y seguir detenidamente las indicaciones que contiene.</p> <p> El símbolo del triángulo con exclamación llama la atención del usuario a requisitos importantes para el uso y mantenimiento del producto, así como para la validez de la garantía.</p> <p> El símbolo del triángulo con rayo llama la atención del usuario a la posibilidad de riesgos eléctricos.</p> <p> El incumplimiento de las instrucciones aquí señaladas podría dar lugar a riesgos a la persona, al laboratorio o a ambos y podría anular toda garantía. Siempre apague la fuente de corriente continua antes de desenchufar los cables eléctricos del producto. Primero desconecte los cables de la fuente de energía y después del producto. Para mayor seguridad, siempre use este sistema en un área aislada, de poco movimiento de personas e inaccesible a personal no autorizado. Jamás use equipo que presenta algún daño o fuga.</p> <p>GARANTÍA Y RESPONSABILIDAD</p> <p>Este producto fue fabricado de acuerdo con las normas más estrictas que sean factibles en cuanto a materiales, mano de obra y diseño. Expedeon Protein Solutions ("Expedeon") garantiza que se sometió el producto a pruebas y que cumplirá o excederá las especificaciones publicadas. Esta garantía será válida únicamente si se usa y se da servicio de mantenimiento al producto de acuerdo con las instrucciones señaladas.</p> <p>Expedeon garantiza que este producto se encontrará libre de defectos de materiales y mano de obra por un período de servicio normal de un año a partir de la fecha de embarque. Si el producto resulta defectuoso durante este período, Expedeon lo reparará o lo repondrá, a criterio de Expedeon, libre de cargos, si se devuelve el producto a Expedeon porte pagado. Esta garantía no cubre daños sufridos en tránsito, daños provocados por descuido, mal uso o negligencia, desgaste normal como consecuencia del uso excesivo, daños atribuibles a corrosión provocada por solventes, daños causados por el uso indebido o alteraciones realizadas por el usuario ni rendimiento insatisfactorio atribuible a circunstancias fuera del control de Expedeon. Expedeon en ningún caso asumirá responsabilidad por daños incidentales o subsecuentes, incluyendo, en forma no limitativa, la pérdida de utilidades, de ingresos, de oportunidades comerciales o del uso del producto y otros daños afines, fuere cual fuere su origen, ni por daños derivados del uso incorrecto del producto.</p>
<p>DEUTSCH WICHTIGE INFORMATION FÜR DEN BENUTZER</p> <p>Diese Bedienungsanleitung beschreibt wie man dieses Produkt sicher und wirksam benutzt. Bitte lesen und befolgen Sie alle Anweisungen in dieser Anleitung.</p> <p> Das Dreieck mit Ausrufezeichen weist den Benutzer des Produktes darauf hin, daß wichtige Bedienungs-, Wartungs- und/oder Garantievorschriften zu beachten sind.</p> <p> Das Dreieck mit Zickzackblitz warnt den Benutzer des Produktes vor möglichen Gefahren durch elektrische Spannungen.</p> <p> Nichtbeachtung dieser Anweisungen kann zu persönlichen und/oder labortechnischen Schäden führen und gleichzeitig alle Garantien als nichtig erklären. Die DC Stromzufuhr muß immer, vor dem Entfernen der Stromkabel vom Produkt, abgeschaltet werden. Die Stromzufuhrkabel müssen zuerst von der Steckdose und erst dann vom Produkt entfernt werden. Um höchste Sicherheit zu gewährleisten sollte dieses System in einem abgesonderten und besonders ruhigen Bereich eingesetzt werden und vor Unbefugten sicher sein.</p> <p>GARANTIE UND HAFTUNG</p> <p>Dieses Produkt wurde unter Anwendung von Produkten mit höchster Qualität und aus Materialien mit bester Verarbeitung und modernstem Design hergestellt. Expedeon Protein Solutions ("Expedeon") garantiert, daß das Produkt getestet wurde und alle publizierten Spezifikationen übertrifft. Diese Garantie ist jedoch nur gültig, wenn das Produkt nach der beigefügten Bedienungsanleitung bedient und gewartet wurde.</p> <p>Expedeon garantiert, daß dieses Produkt bei normaler Bedienung aus fehlerfreiem Material besteht und fehlerfrei in der Ausführung ist. Diese Garantie gilt für ein Jahr ab Lieferdatum. Sollte das Produkt in diesem Zeitraum fehlerhaft werden, bietet Expedeon eine kostenlose Reparatur bzw. kostenlosen Ersatz, einschließlich freiem Rückporto. Diese Garantie schließt folgendes aus: Transportschaden, Schaden durch Nachlässigkeit, Mißbrauch oder Vernachlässigung, normale Abnutzung durch regelmäßigen Gebrauch, Schaden durch Säureangriff, Schaden durch falsche Handhabung, Veränderung des Produktes durch den Benutzer, oder unzureichende Leistungen die sich nicht im Verantwortungsbereich von Expedeon befinden. Expedeon kommt unter keinen Umständen für folgende Schäden auf: Sachschadensverlust, Einkommensverlust, Verlust von Geschäftsmöglichkeiten, Verlust der Anwendung und andere damit verbundene Schäden die auf irgend eine Art und Weise entstanden sind, oder Schäden die aus falscher Anwendung des Produktes entstanden sind.</p>	<p>ITALIANO INFORMAZIONI IMPORTANTI PER L'UTENTE</p> <p>Questo manuale spiega come utilizzare questo prodotto in maniera sicura ed efficiente. Si preghi di leggere e seguire con cautela le istruzioni di ogni parte di questo manuale.</p> <p> Il triangolo contenete il simbolo di un punto esclamativo avverte l'utente di importanti requisiti relativi al funzionamento, manutenzione e/o garanzia del prodotto.</p> <p> Il triangolo contenete il simbolo di un lampo avverte l'utente del prodotto della possibilità di pericoli dovuti a corrente elettrica.</p> <p> La mancata osservanza delle istruzioni può essere causa di pericolo alla propria persona ed al laboratorio, oltre a poter annullare la garanzia. Prima di distaccare il cordone d'alimentazione dal prodotto, spegnere sempre la sorgente di corrente continua. Distaccare i cordoni d'alimentazione prima dal lato della sorgente di tensione e poi dal lato del prodotto. Per maggior sicurezza, mettere sempre in funzione il prodotto in un'area isolata con poco traffico che non sia accessibile al personale non autorizzato. Non mettere mai in funzione un'apparecchiatura che sia danneggiata o abbia perdite.</p> <p>GARANZIA E RESPONSABILITÀ</p> <p>Questo prodotto è stato fabbricato seguendo gli standard più elevati per i materiali, la manodopera e la progettazione. La Expedeon Protein Solutions ("Expedeon") garantisce il prodotto è stato sottoposto a prova e raggiunge o supera i valori pubblicati per i dati tecnici. Questa garanzia è valida solo se il prodotto è messo in esercizio e soggetto a manutenzione secondo le istruzioni fornite.</p> <p>La Expedeon garantisce che questo prodotto è libero di difetti di materiali e manodopera, in normali condizioni d'esercizio, per la durata di un anno dalla data di spedizione. Se, in questo periodo, il prodotto si dimostrerà difettoso, la Expedeon, a suo giudizio, lo riparerà o sostituirà. 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RunBlue Dual Run & Blot Unit Instructions

SECTION 1

General Information

1.1 Introduction

Expedeon's RunBlue Dual Cell & Blot Unit performs vertical electrophoresis separations and electroblotting. The unit provides the capability of running and transferring two gels simultaneously under identical conditions. The unique voltage gradient during blotting (patent pending) provides a field-strength gradient inversely proportional to the distance the protein or polynucleotide has run in the gel. Units include a white plastic buffer dam when running and blotting one gel at a time.

1.2 Specifications

Materials:

Reservoir chamber, safety cover	Acrylic/Polycarbonate
Electrophoresis Core Assembly	Polycarbonate, stainless steel
Electrodes	Platinum wire .012" diameter
Power cords	FR Urethane rated 7500VDC, 200mA, 65°C

Safety Certification EN61010-1-1993 (IEC1010-1)

Unit Dimensions

Width	7 inches (17cm)
Depth	5 inches (13cm)
Height	8 inches (20cm)

Shipping Weight 4 pounds (2 kg)

1.3 Safety



Power to the RunBlue Dual Cell & Blot Unit is to be supplied by an external DC voltage power supply that must be ground isolated so that the DC voltage output floats with respect to ground. For any power supply used, the maximum specified operating parameters for the unit are:

Maximum Operating Limits

Voltage:	250 VDC
Power	50 watts
Current	300 mA
Ambient temperature	60 °C

Current to the unit, provided from the external power supply, must enter the unit through the Safety Cover, providing a safety interlock to the user. Current to the unit is broken when the cover is removed. **Do not attempt to use the unit without the Safety Cover, and always turn the power supply off before removing the cover, or when working with the unit in any way. Follow other safety precautions specified by the power supply manufacturer.**

RunBlue Dual Run & Blot Unit Instructions

SECTION 2

Description of Parts

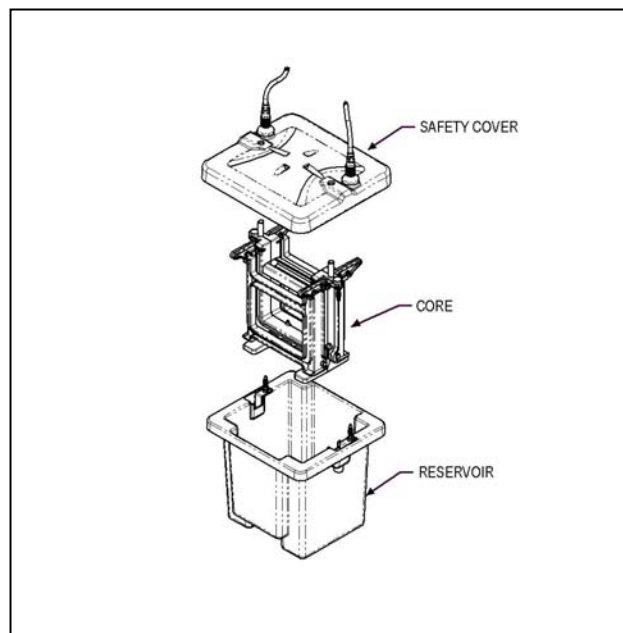
2.1 Unpacking

Please verify that your unit comes complete with the following components:

RunBlue Dual Run & Blot Unit Package Contents

- Lower Reservoir Assembly
- Safety Cover with attached DC power leads
- Electrophoresis Core Module
- Blotter Cassettes, 2 each
- Package of 6 foam pads
- Buffer Dam
- Cooling Blocks, 2 each

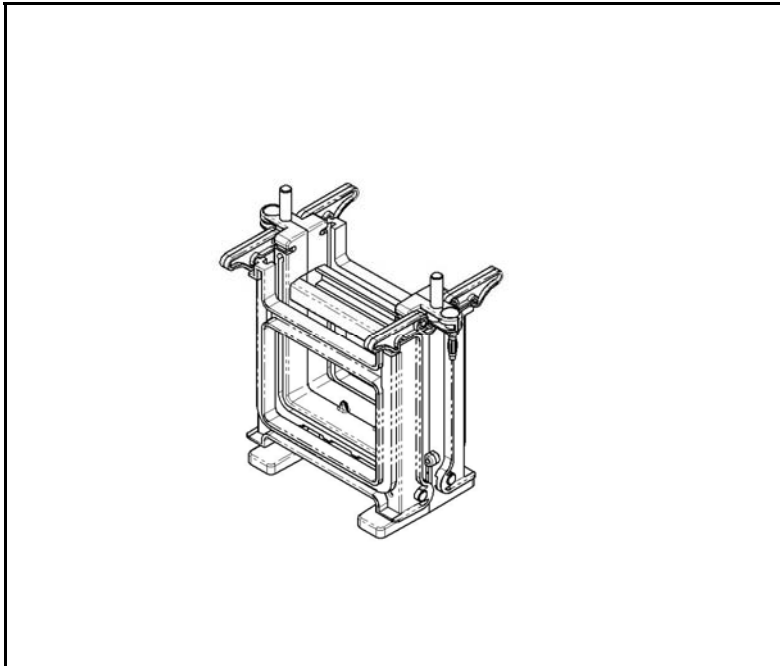
“Figure 1: RunBlue Dual Run & Blot Unit ”



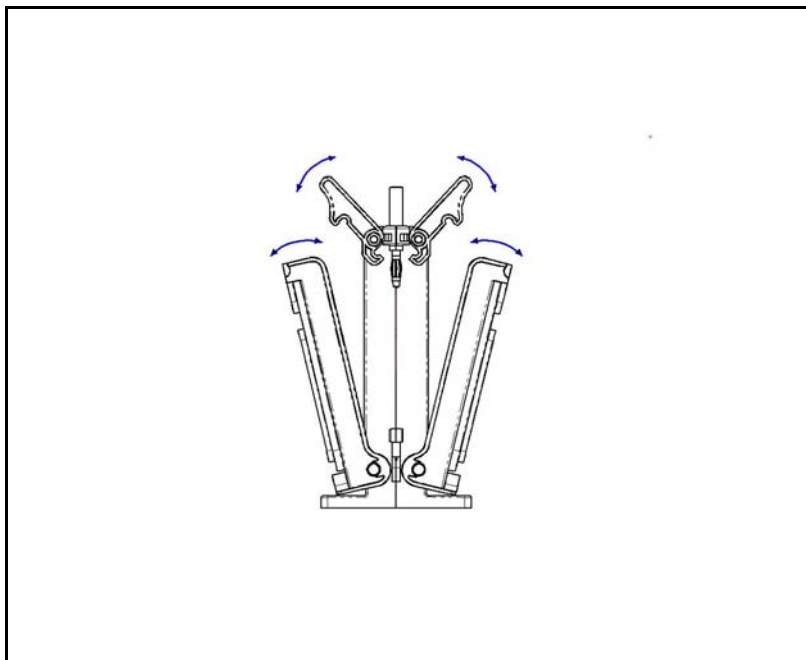
RunBlue Dual Run & Blot Unit Instructions
Components / Assembly

“Figure 2: Electrophoresis Core Module ”

“Figure 2A: Core Module - Closed Position ”

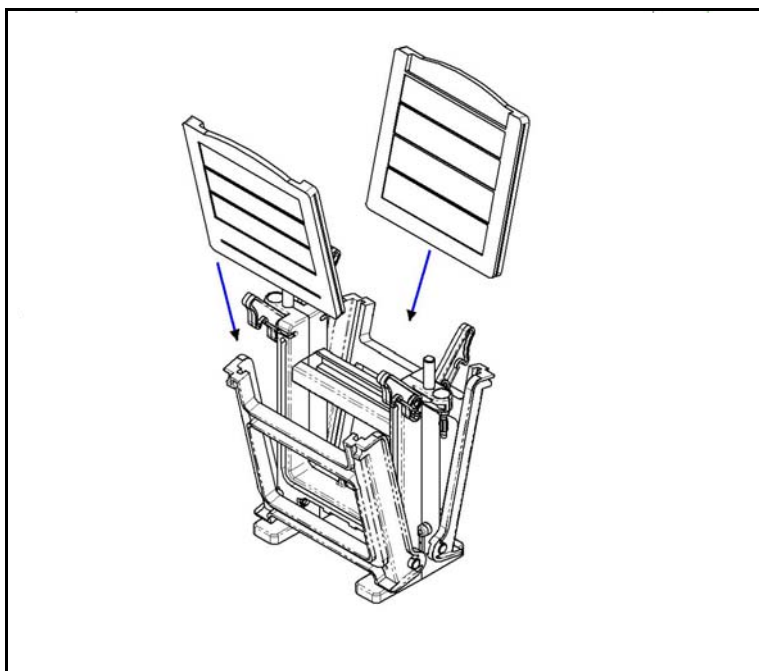


“Figure 2B: Core Module - Open Position ”



RunBlue Dual Run & Blot Unit Instructions

“Figure 2C: Inserting RunBlue Gel Cassettes into the Core Module”



SECTION 3

INSTRUCTIONS FOR RUNNING RUNBLUE CASSETTE GELS

3.1 Running Buffer Preparation

To enhance resolution our gels have been formulated with a different ion system. Expedeon's RunBlue Running Buffer must be used with RunBlue cassette gels (NXB60500).

To prepare 800 ml of 1x running buffer:

Reagent	Reduced	Not Reduced
20x SDS Running Buffer (NXB50500)	40 ml	40 ml
800x Anti-oxidant (NXA30010)	1 ml	--
Ultrapure water	759 ml	760 ml
Total volume	800 ml	800 ml

We recommend using fresh buffer for each run for both the inner and outer chamber. **Never use old buffers for the inner chamber (cathode).**

RunBlue Dual Run & Blot Unit Instructions

3.2 Sample Preparation

We recommend using Expedeon's RunBlue LDS Sample Buffer (4x Concentrated) which has been specifically formulated for use with our gels. The ions in the sample buffer match the gel buffer and it has a higher density, making it compatible with the density running buffer.

Reagent	Reduced	Not Reduced
Sample	x μ l	x μ l
Water	to 13 μ l	to 15 μ l
4x Sample Buffer (NXB31002)	5 μ l	5 μ l
10x Reducing Agent (NXA32001)	2 μ l	--
Total volume	20 μ l	20 μ l

- Heat the samples, reduced or non-reduced, for 10 minutes at 70°C
- Reduced samples should be run within 2 hours to prevent re-oxidation
- Maximum volume that can be loaded in the wells is 35 μ l

Shortly before loading the samples, rinse the wells two times with ultrapure water. Use thin pipette tips to load up to 35 μ l of each of the samples near the bottom of the well.

3.3 Running the Gels

1. Open doors on the Core Module by pulling up on the white latches (See Figures 2A & 2B). The gel cassettes are placed in the cell with the shorter plate facing in towards the inner chamber (See Figure 2C). Slide the gel cassette(s) into the Core Module. If running one gel, use the buffer dam to seal the other side. Close doors and re-latch.
2. Place Core Module with the gels into Lower Reservoir Assembly (See Figure 1). The anode and cathode electrode are identified on the Core Module and on the Lower Reservoir Assembly with a red or black circle. Ensure the red dot on the cassette assembly is on the same side as the red dot on the lower reservoir.
3. Fill the inner chamber with 200 ml fresh 1x Running Buffer until it overflows into the outer chamber. Check whether the cell has been assembled properly so that there are no leaks, then pour at least 400 ml running buffer into the outer chamber.
4. Attach the Safety Cover and connect the leads to the power supply, matching the color code: red to red, and black to black. Run the gel(s) under the following conditions until the blue dye front nears the bottom of the cassettes (40 to 90 minutes, depending on gel percentage).



Gel%	Run Voltage	Starting Current	Ending Current	Run Time
8%, 4-8%, 10%, 4-12%	150V	60mA/gel	30mA/gel	45-60 minutes
12%, 4-20%, 16%, 10-20%	180V	90mA/gel	40mA/gel	30-70 minutes

Ensure to adjust the power limit to 20 W to ensure constant voltage during the run.

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3.4 Removing the Gel



1. Turn the power supply off and disconnect the leads from the power supply. Remove the Safety Cover from the unit, by placing thumbs on white posts next to red & black connectors, then pushing down while pulling up with fingers under lid. DO NOT pull on the power cables.
2. Pull up on gel door latches, and open gel door. Remove gel cassette(s) from the Core Module. Open the cassette using a comb or gel knife, gently lever apart four corners of the cassette, first on one side, then the other.



3. Rinse chamber, lid and buffer core thoroughly with de-ionized water. The buffer core must be immersed in water to rinse buffer contaminants of the cavities. Failure to properly rinse the buffers out of the cell components can lead to chemical attack and will void your warranty.

3.5 Staining the Gel

Remove the gel from the cassette and place directly into a staining tray and cover with 25 ml InstantBlue (Product Code: ISB1L). Protein bands should be visible within minutes.

For silver staining, fix proteins for 10 minutes with a solution of 50% methanol, 10% acetic acid and 20mM sodium bisulfite. Substitute this fix step with stain manufacturer protocol and follow the remaining manufacturer's method.

SECTION 4

INSTRUCTIONS FOR BLOTTING

The RunBlue Dual Cell & Blot Unit can blot one or two RunBlue Cassette gels. For uniform transfers, using a magnetic stir bar and stirrer facilitates buffer circulation and heat exchange.

4.1 Blotting Setup

Recommended Transfer Buffer and Transfer Conditions for RunBlue SDS Cassettes Gels

Follow the general guidelines for your blotting unit. Novexin's '10x RunBlue Transfer Buffer' contains 0.25M Tris (base), 1.92M Glycine, and 1% SDS. Dilute the transfer buffer:

- 10x for use in the RunBlue Dual Run & Blot System or semi-dry blotters (SDB)
- 20x for other Tank Blotters and (TB) for the XCell II™ Blot Module.

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Buffer Prep for Nitrocellulose	RunBlue DRB	TB	SDB	XCell II™
10x Transfer Buffer (NXB82500)	100 ml	100 ml	10 ml	25 ml
Methanol	200 ml	400 ml	20 ml	100 ml
Ultrapure water	720 ml	1540 ml	72 ml	385ml

Buffer Prep for PVDF	RunBlue DRB	TB	SDB	XCell II™
10x Transfer Buffer (NXB82500)	100 ml	100 ml	10 ml	25 ml
Methanol	100 ml	200 ml	10 ml	50 ml
Ultrapure water	820 ml	1740 ml	82 ml	435 ml

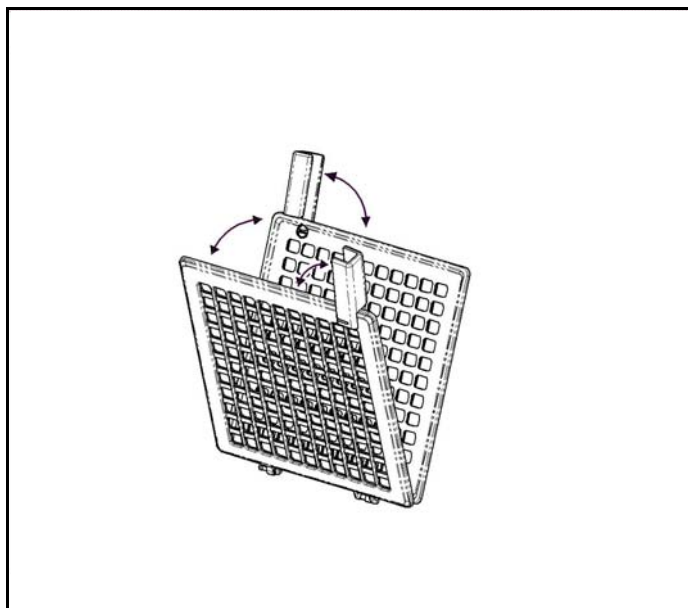
4.2 Preparation of Electroblothing Components

1. After running the RunBlue cassette gel and removal from the cassette, pre-equilibrate the gel with the 1x transfer buffer for 5-10 minutes prior transfer. Use room temperature buffer for best results.
2. Equilibrate pre-cut membranes (Nitrocellulose or PVDF) in 1x transfer buffer for 3-5 minutes. **PVDF membranes must be wetted in 100% methanol or ethanol prior to equilibration in buffer.**
3. Soak pre-cut 1 mm thick blotter paper and a foam pad in 1x transfer buffer.
4. Open the Blotting Cassette (see Figure 3A) and submerge the black (-) panel in a shallow dish. Fill with enough buffer to cover the entire cassette. Submerge the foam pad. Layer on top a piece of 1 mm thick blotter paper (optional).
5. Layer the gel on top of the foam pad or blotter paper (if used). Apply gel orientation with High Molecular Weight bands down and close to the blotting cassette connection point (see Figure 3B).
6. Apply blotting membrane. Remove trapped air bubbles at each layer by rolling a pipette over the surface. Note: Some proteins will begin transfer immediately upon contacting the transfer membrane. Disturbing the gel/membrane interface can result in a smeared blot.
7. Place the saturated 1 mm thick blotter paper to complete sandwich assembly and close the blotting cassette.
8. Remove entire assembly from the dish and load into desired position (slot) in buffer chamber with black screen(s) facing in towards the Core Module (see Figure 3C).
9. When blotting one gel, place the Buffer Dam in the unused position.

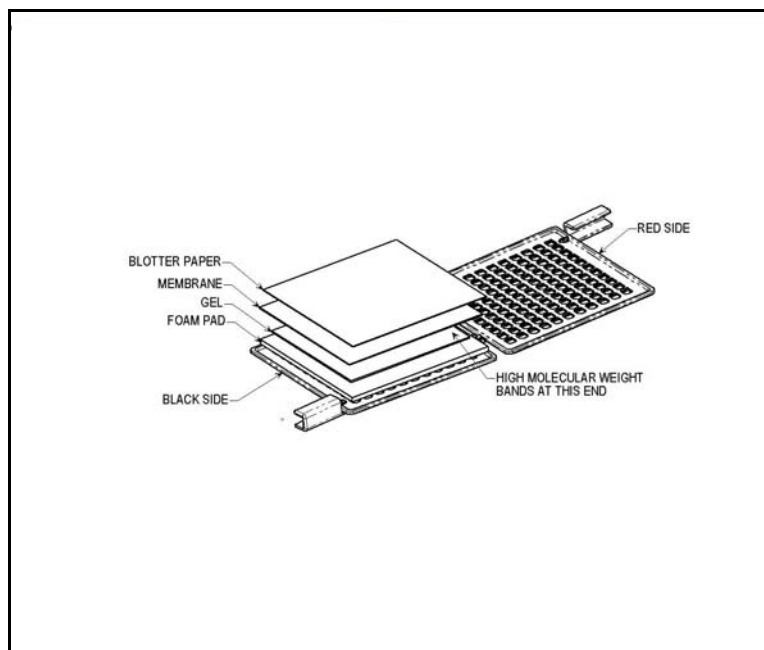
RunBlue Dual Run & Blot Unit Instructions

“Figure 3: Electrophoresis Blotting Cassette ”

“Figure 3A: Opening Blotting Cassette”

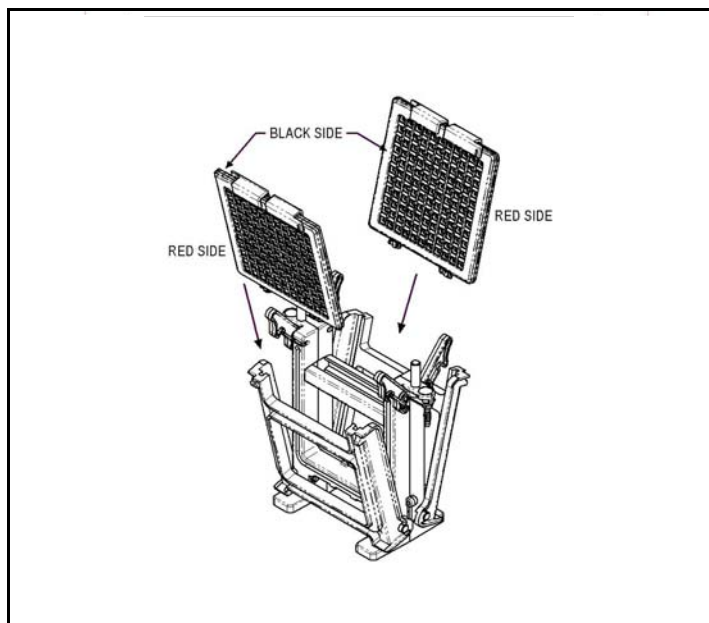


“Figure 3B: Assembly of Blotting Stack ”

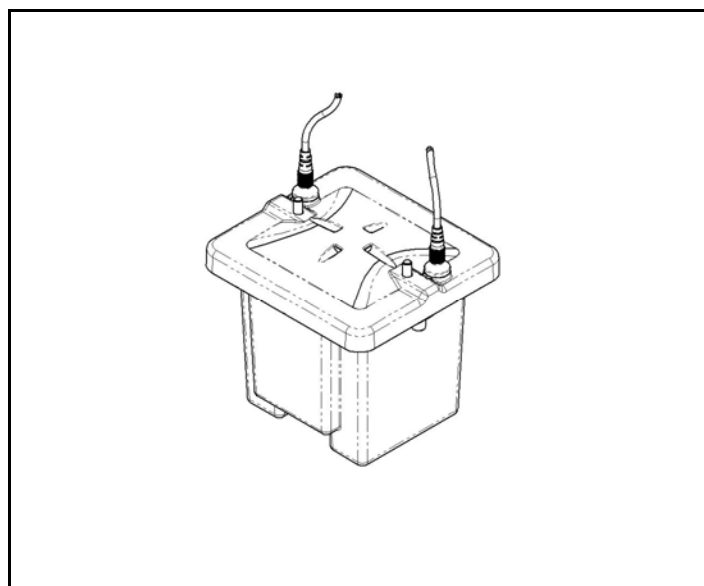


RunBlue Dual Run & Blot Unit Instructions

“Figure 3C: Insertion into Core Module.”




“Figure 4: RunBlue Dual Cell & Blot Unit – Closed”



RunBlue Dual Run & Blot Unit Instructions


4.3 Electroblotting

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1. Fill the Lower Reservoir Assembly after the Core Module is inserted with 1x transfer buffer. (Buffer should be prepared fresh with reagent grade chemicals). The transfer buffer should cover the blotting cassettes. The buffer should not come in contact with the banana plugs when the gel cassette sandwiches are immersed in the unit. With both ice blocks in place, about 1000ml of transfer buffer is required.
 2. Align Safety Cover over the unit and carefully attach.
 3. Connect the leads to the power supply, matching the color code: red to red and black to black.
 4. When using recommended transfer buffer at about 22°C at 200 V constant voltage transfer conditions with RunBlue cassette gels, one gel will generate about 180mA and two gels about 215mA. When blotting with the buffer and apparatus at 4°C, the current will be much lower (about one-half) and the blotting time should be doubled.

Typical Blotting Conditions	RunBlue DRB	Tank Blotters	Semi-dry Blotter	XCell II™
Voltage (V)	200	50	25	35
Blot time (hours)	1 to 1.5	2 to 4	0.5 to 1	1 to 1.5
Expected current (mA)	180 (1 gel) 220 (2 gels)	250	Start: 250 – 300 End: 60 - 100	Start: 250 – 300 End: 60 - 100
Power (W)	36 (1 gel) 44 (2 gels)	125	Start: 6.3 – 7.5 End: 1.5 – 2.5	Start: 8..8 – 10.5 End: 2.1 – 3.5

5. Transfer times will vary according to several parameters. Optimization of electro-blotting transfers must be determined empirically. Keep in mind the following principles that govern the movement of proteins of gel electrophoresis:
 - Thicker or higher percentage gels will take longer to transfer than thinner or lower percentage gels.
 - Actual transfer times for defined conditions can be approximated by running pre-stained molecular weight standards.

4.4 Removing the Blotting Cassettes

- 
1. Turn the power supply off and disconnect the leads from the power supply.
 2. Remove the Safety Cover from the unit, by placing thumbs on white posts next to red and black connectors, then pushing down while pulling up with fingers under lid. **DO NOT pull on power cables.**
 4. Gently lift the cassette from the unit. **Always wear gloves, eye protection and protective clothing.**
 5. Mark the orientation of the membrane with a pencil or by cutting off a corner and take apart the blotting cassette carefully.
 6. Process membrane.
 7. Rinse all cell components **thoroughly** with de-ionized water. Immerse the buffer core in water.

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RunBlue Dual Run & Blot Unit Instructions

SECTION 5

BUFFER RECIPES

Please ensure to use low conductance ingredients in order to obtain the best results.

RunBlue LDS Sample Buffer 4x (NXB31002)

- 40% Glycerol
- 4% LDS, 0.8 M Triethanolamine-Cl pH 7.6
- 4% Ficoll-400
- 0.025% Phenol Red
- 0.025% Coomassie Brilliant Blue G250
- 2 mM EDTA-2Na)

Glycerol	4.0 g
Triethanolamine	1.2 g
6N HCl.....	0.93 g
Lithium Dodecyl Sulfate	0.40 g
Ficoll 400	0.40 g
EDTA Di-Sodium	0.007 g
Brilliant Blue G250	0.0025 g
Phenol red	0.0025 g
Ultra pure water to	10 ml (~4.5 g)

The pH should be between 7.7 and 7.8 @ 25°C. Do NOT use acid or base to adjust.

RunBlue SDS Running Buffer, 20x (NXB50500)

- 0.8 M Tricine
- 1.2 M Tris
- 2% SDS
- 1 mM Sodium Bisulfite

Tricine (free base)	71.70 g
Tris (free base)	72.60 g
SDS.....	10.00 g
Sodium Bisulfite	0.05 g
Ultra pure water to	500 ml (~ 385 g)

The pH should be between 8.2 and 8.3 @ 25°C. Do NOT use acid or base to adjust.

RunBlue Dual Run & Blot Unit Instructions

SECTION 6

MAINTENANCE OF EQUIPMENT

6.1 Care and Handling



The plastic components of the RunBlue Dual Cell & Blot Unit are fabricated from polycarbonate. Electrodes and connectors are made from pure platinum, stainless steel, and chrome-plated brass. As with any laboratory instrument, adequate care ensures consistent and reliable performance.

After each use, rinse buffer chamber, Core Module and Blotting cassettes **thoroughly** with de-ionized water. **The buffer core is best immersed in water to rinse buffer contaminants of the cavities.** Failure to properly rinse the buffers out of the cell components can lead to chemical attack and will void your warranty. Wipe dry with a soft cloth or paper towel, or allow to air dry. Whenever necessary, all components may be washed gently with water and a non-abrasive detergent, and rinsed and dried as above. *Never* use abrasive cleaners, glass cleaning sprays or scouring pads to clean the components, as these will damage the unit and components.

Additional precautions:

- Do not autoclave or dry-heat sterilize the apparatus or components.
- Do not expose the apparatus or components to phenol, acetone, benzene, halogenated hydrocarbon solvents, other non-water-soluble solvents, or undiluted alcohol.
- Avoid prolonged exposure of the apparatus or components to UV light, including sunlight.
- Do NOT treat with diethylpyrocarbonate (DEPC)-treated water for extended periods at 37°C. A brief rinse with DEPC-water is sufficient after a thorough wash, followed by a quick rinse in 70% ethanol.

6.2 Maintenance



The following inspection and maintenance procedures will help maintain the safety and reliable performance of the RunBlue Dual Cell & Blot Unit. Replacement parts can be ordered by calling Expedeon in the UK on +44 1223 496500, or by contacting your local distributor.

- Banana plugs and power cords should be inspected regularly. If the banana plugs become loose or do not feel friction tight replace the plugs or power cords.
- Should power cord assemblies (connectors, wire or shrouds) show any signs of wear or damage (e.g. cracks, nicks, abrasions, or melted insulation), replace them immediately.
- The platinum wire is secured to the banana jack by compression between a stainless washer and the jack nut. The nut/washer interface should be tight and free of corrosion.

