

# Thermo Scientific Pierce Electrophoretic Staining Quick Start Guide

Thermo Scientific™ Pierce™ Power Stainer (# 22833), Thermo Scientific™ Pierce™ Power System (# 22830), or Thermo Scientific™ Pierce™ G2 Fast Blotter (# 62291 upgraded with # 62287), and Thermo Scientific™ Pierce™ Power Stain Cassette (# 22836)

**IMPORTANT** Review and implement guidelines for proper set-up before installation. For detailed instructions refer to the manual at [www.thermoscientific.com/pierce-power-system](http://www.thermoscientific.com/pierce-power-system).

**1** Using the supplied power cord, connect the Pierce Power Station to an electrical outlet.

**2** Press the Power Button (located at the rear) to turn ON the Pierce Power Station.

**IMPORTANT:** For first use, refer to “Using the Pierce Power Station for First Time” section. If you currently use a Pierce Power Station for blotting and are adding staining functionality, refer to “Using the Pierce Power Stain Cassette for First Time” section. Upgraded Pierce G2 Fast Blotter/Stainer Control Units do not require any special activation in order to recognize the Power Stain Cassette or the Power Blot Cassette.

**3** For each gel, use two multi-layered gel pads. Each multi-layered gel pad contains eight sheets of white material separated by one blue interleaf. Discard blue interleaf and prepare destaining and staining pads.

**IMPORTANT:** Mini gels stained simultaneously must have the same gel formulation. Mini-sized gel is 7.5cm x 8.5cm. Midi-sized gel is 8.5cm x 13.5cm. Staining half-gels will require optimization.

**4** Prepare destaining (bottom) pad: place one multi-layered gel pad into a tray and add Destain Solution evenly to pad. Use 15mL of Destain Solution for mini-sized pads and 30mL for midi-sized pads. Prepare pads 5-15 minutes before use.

**5** Prepare staining (top) pad: place one multi-layered gel pad into a tray and add Power Stain Solution evenly to pad. Use 15mL of Power Stain Solution for mini-sized pads and 30mL for midi-sized pads.

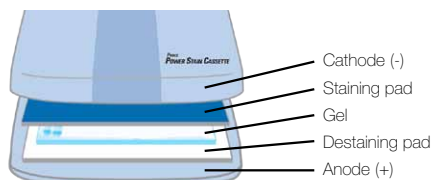
**6** After electrophoresis, remove gel(s) from cassette(s) and wash mini-sized gel(s) once for 5 minutes in deionized water prior to staining. When staining two mini-sized gels simultaneously or one midi-sized gel, wash each gel(s) twice for 5 minutes prior to staining.

**IMPORTANT:** Mini gels that are 1.5mm thick require two 5 minute washes prior to staining. 1.5mm thick gels require longer staining time (time optimization may be required).

**7** Center the destaining pad on the surface of the anode (see figure below) and roll gently to remove air bubbles. Use a clean Western Blot Roller (# 84747) or appropriate substitute (e.g., a pipet).

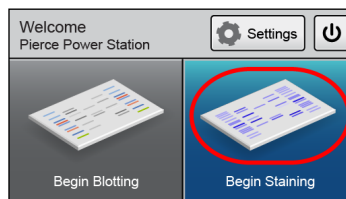
**8** Place the pre-washed gel on top of the destaining pad and roll gently to remove any air bubbles.

**9** Place the staining pad on top of the gel and roll gently to remove any air bubbles.

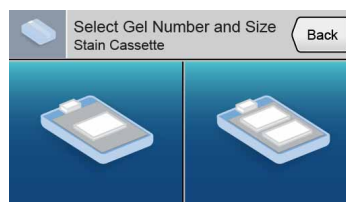


**10** Lock cassette top (cathode) into place and slide the assembled cassette into the Pierce Power Station.

**11** Select **Begin Staining**.



**12** Select the appropriate icon to stain either 1 mini-gel (individually), or 2 mini-gels (simultaneously) or 1 midi gel (individually).



**13** Choose the appropriate staining method (see table) and press **Start**.

Choose Method 1 mini-gel	Back	Choose Program 2 mini-gel or 1 midi-gel	Back
6:00 Gel Type 1		11:00 Midi	
6:30 Gel Type 2		11:00 2 mini - Gel Type 2	
6:00 Custom		6:30 2 mini - Gel Type 1	

**14** Stained gel can be stored in plastic protective sheet or in water for 4 hours.

**IMPORTANT:** If background of the stained gel is too high, reassemble the sandwich using the same pads and destain for an additional 1:00-1:30 minutes.

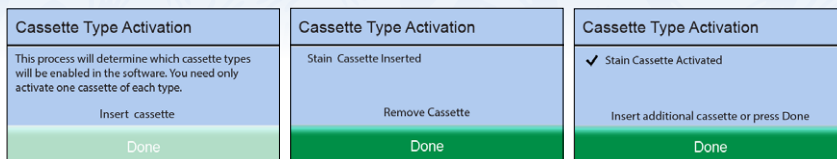
**15** After staining is complete, rinse cassette under running water and allow to dry.

## Recommended Staining Methods:

Gel Description	Gel Number and Size	
	1 mini-gel	2 mini-gels or 1 midi-gel
NuPAGE™ Bolt Bis-Tris Mini-Gel Novex™ NuPAGE Bis-Tris Mini-Gel Mini-PROTEAN™ TGX Gel	Type 1, 6:00	Type 1, 6:30
Novex™ Tris-Glycine Mini-Gel Homebrew Tris Glycine Mini-Gel	Type 2, 6:30	Type 2, 11:00
Novex™ NuPAGE Bis-Tris Midi-Gel Novex Tris Glycine Midi-Gel CRITERION™ Tris-HCl Gel	-----	Midi, 11:00

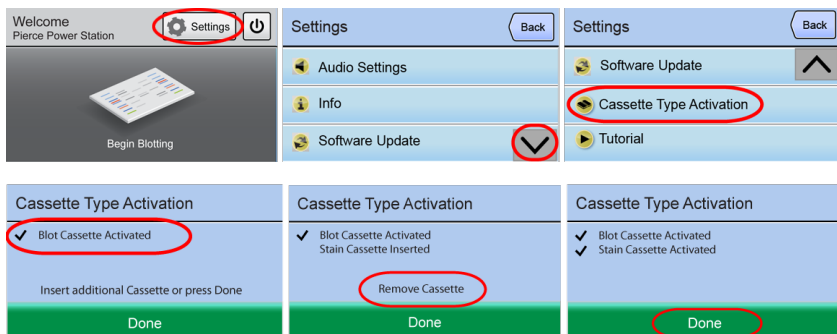
## Using the Pierce Power Station for the First Time

When turning on the Pierce Power Station for the first time, you will see the “Cassette Type Activation” screen. Follow the directions on the screen and insert the Power Stain Cassette into the Power Station to activate the Stain Cassette and staining software. Remove the Power Stain Cassette and insert another cassette type to activate other cassette and software application (e.g., blotting), or select “Done”.



## Using the Pierce Power Stain Cassette for the First Time

First you must activate the staining software. To do so, press the “Settings” button on the Welcome screen. Press the down arrow to view more menu options, and select the “Cassette Type Activation” button. Previously activated cassette types will appear on the screen with a check mark to the left. To activate the Stain Cassette and staining software, insert the Power Stain Cassette into the Power Station and remove when instructed. Press “Done” or activate an additional cassette type in the same manner. For detailed instructions refer to the manual at [www.thermoscientific.com/pierce-power-system](http://www.thermoscientific.com/pierce-power-system). The Pierce Power Station will recognize G2 Fast Blotter Cassettes as Power Blot Cassettes.



## Related Thermo Scientific™ Products

22839	Pierce™ Midi Gel Power Staining Kit (sufficient for 15 midi gels)
22840	Pierce™ Mini Gel Power Staining Kit (sufficient for 30 mini gels)
22830	Pierce™ Power System
22833	Pierce™ Power Stainer
22834	Pierce™ Power Blotter
22835	Pierce™ Power Blot Cassette
22836	Pierce™ Power Stain Cassette
22838	Pierce™ Power Station
84747	Western Blot Roller
22841	Midi Gel Incubation Trays, 10 ea
22843	Mini Gel Incubation Trays, 10 ea
62287	Pierce G2 Fast Blotter – Power Station Upgrade



**WARNING** After running at high current, the anode and cathode plates can become hot. Use caution when separating the gels and stacks from the plates. When continuously processing multiple samples allow the cassette to cool for 30 minutes or use multiple cassettes to avoid excessive cassette heating.



**WARNING** Stainer use outside of the workflows described in this manual may put the operator at risk of dangerous exposure to electrical shock. Do not use this instrument for any purposes or in any configurations not described in this manual.



**WARNING** The Pierce Power Station can contain dangerous electricity and is not designed to be opened by the user. Disconnect all power to the Pierce Power Station before maintenance by a qualified technician.



**WARNING** Do not overfill the cassette with liquid. Excess liquid can overflow into the base unit and possibly cause electric shock. Follow the appropriate instructions for reagent amounts and empty any remaining liquid in the cassette upon run completion.

**NOTE** A grounded circuit capable of delivering the appropriate current and voltage is required for installation. Electrical requirements can be located on the rear panel of the blotter base. The blotter electrical system will adjust to the proper voltage for the respective country. Connect the blotter power cord to the rear left side panel of the device and plug into a grounded power outlet.

## ENVIRONMENTALLY FRIENDLY DISPOSAL



According to EU directive 2002/96/EC on electric and electronic equipment and its implementation into national law, all electric equipments must be separately collected and environmentally friendly recycled. Alternative disposal: If the owner of the electric equipments does not return it to the manufacturer, he is responsible for proper disposal at a designated collection point that prepares the device for recycling according to national recycling laws and regulations. This does not include accessories and tools without electric or electronic components.

Blotter Electrical Parameter	Rating
Supply Voltage (VAC)	100-240
Frequency (Hz)	50/60
Maximum Power Rating (W)	168
Fuse (Power Center)	T3AL, 250V, 3A



[thermoscientific.com/pierce](http://thermoscientific.com/pierce)

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