

# eStain® 2.0 Protein Staining System

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Instructions for using the eStain® 2.0 Protein Staining System to perform fast Coomassie blue staining of proteins in mini polyacrylamide gels are described below. For detailed instructions, refer to the manual supplied with the product or download the manual from [www.genscript.com](http://www.genscript.com).

## Installing the eStain 2.0 Protein Staining Device

1. Open the closed lid of the eStain® 2.0 Protein Staining Device by pressing the **Open** button. Place one piece of Sponge Cushion for 1.5 mm gel or two pieces for 0.75 and 1.0 mm gel in the anode tank.



2. Insert the eStain® 2.0 Graphite Electrode into the anode tank as described in Section "Replacing the eStain® 2.0 Graphite Electrode", then close the lid of the device.

3. Pull out the waste tray from the right side of the device. Place a new Absorbent Filter Paper inside the tray, then, push the tray back in.



## Assembling the staining stack with eStain® Protein Staining Pads and the pre-run gel

1. Open the closed lid by pressing the **Open** button.



2. Remove the 1xeStain® Anode Pad out of the package and place it on the anode plate.



3. Remove the pre-run gel containing your protein samples from gel cassette and briefly rinse the gel with distilled water.
4. Place the gel on the eStain® Anode Pad, remove air bubbles between gel and pad using the small shovel supplied with the device.



5. Remove the 1xeStain® Cathode Pad (R-250 or G-250) from the package and place it on top of the gel.



6. Press the **Open** button, then, push back and close the lid of the device.



## Perform electric staining

1. Press the **Min.** and **Sec.** buttons to set appropriate running time based on gel thickness.

Gel Thickness	Running Time
0.75 mm	6 - 7 minutes
1.0 mm	7 - 8 minutes
1.5 mm	7 - 8 minutes

**Note:** For best staining results, it is recommended to use eStain® 2.0 Protein Staining System at room temperature (22 - 28 °C). If the ambient temperature is below 22 °C, you may need to extend the running time to obtain satisfied staining results based on gel thickness.

## Perform electric staining, continued

2. Press the **Start/Stop** button to activate the electric staining program. The running time begins to count down and right status light keeps flashing during the whole staining program.



3. Electric current automatically shuts off at the end of each run. The eStain® 2.0 Protein Staining Device signals the end of staining with repeated beeping sounds. Right status light stops flashing and the lower four digits show text (00:00). Press any button on the control panel to stop the beeping.

## Disassembling and cleaning the eStain® 2.0 Protein Staining Device

1. Open the closed lid by pressing the **Open** button.
2. Carefully separate the stained gel from the staining stack and proceed to be photographed.
3. Discard the used eStain® Protein Staining Pad. Clean the titanium cathode, graphite anode and anode tank with a dry cloth or paper towel.

**Caution:** Do **Not** clean the graphite electrode immediately after ending the staining program since the graphite electrode is still hot after a run. Wait for 3 to 5 minutes before proceeding to cleaning.

4. Replace the used Sponge Cushions with new ones after 20 times of electric staining.
5. Replace the used Absorbent Filter Paper in the waste tray with a new one after 20 times of electric staining.

## Replacing the eStain® 2.0 Graphite Electrode

1. Press and hold **Min.** button for 2 seconds to toggle to numbering mode. Check the number of usage of eStain® 2.0 Graphite Electrode.



2. Switch **Off** the eStain® 2.0 Protein Staining Device. Open the lid and take the worn eStain® 2.0 Graphite Electrode out of the device.



**Caution:** Do **Not** replace the graphite electrode immediately after ending the staining program since the graphite electrode is still hot after a run. Wait for 3 to 5 minutes before proceeding to the replacement protocol.

3. Remove a new eStain® 2.0 Graphite Electrode from the packing box. Insert the contact rods of the new electrode into the holes in the anode tank. Make sure that the triangle symbols at the edge of the graphite electrode face the **Open** button.



4. Push the eStain® 2.0 Graphite Electrode down gently until you hear a click.



5. Switch **On** the eStain® 2.0 Protein Staining Device. Press and hold **Min.** button for 2 seconds to shift to numbering mode. When the upper three digits are flashing, press **Reset** button to zero.

