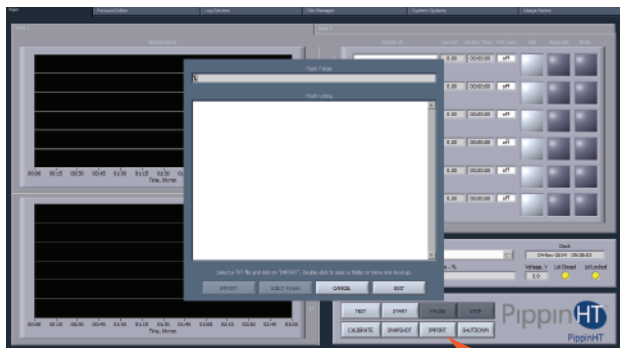


F. Enter Sample Information (Optional)

Sample information may be manually keyed, read with an external barcode reader, or imported as a text file from a USB drive. A log file name prefix may be entered in the System Options Tab.

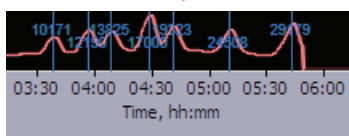


import .txt file

G. Run

1. Close the lid, go to the Main Tab, and make sure the proper protocol is loaded in the "Protocol Name" field.
2. Press "START". The run will automatically stop when every collection is complete.

The external marker should appear as shown



High Pass Threshold (bp)	Time to Collect (hr)
30000	7
35000	8.5
40000	9

H. Collect Fractions

1. **Remove samples using a standard 100-200µl pipette.** Samples will be in a Tris-TAPS buffer, 30µl volume.
2. **Remove cassette and dispose of properly.** Do not keep used cassettes in the PippinHT with the cover closed. Humidity from the cassette may cause damage to electrodes.

Help: support@sagescience.com or call 978.922.1832

PippinHT™ Quick Guide

Product: HPF-7510
Software: v.1.0

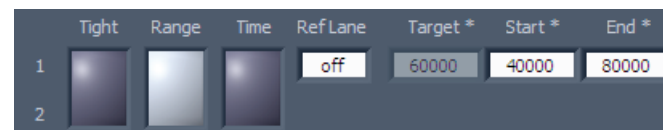
Note: For best results, DNA samples should be de-proteinized.

A. Prepare DNA samples and External Marker

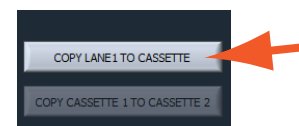
1. High Pass protocols require a dedicated lane-pair to run an external marker. Prepare 10 samples per cassette to be run.
2. Bring the external marker (**75F**) to room temperature.
3. Bring the loading solution to room temperature.
4. Bring DNA samples up to 20µl with TE.
5. Add 5µl of the loading solution each of the 20µl DNA samples .
6. Mix samples thoroughly (vortex mixer). Briefly centrifuge to collect.

B. Program a Protocol

1. In the Protocol Editor Tab, make sure the Cassette 1 tab is selected.
2. Click the "Cassette" folder, and select the cassette definition:
0.75% Agarose, 30-40kb High Pass, 75F
3. In lane-pair 1/2, select "Range" mode, and enter a threshold value between 30000 and 40000 bp in the "Start" field. Enter **80000** into the "End" field.



4. In the lower left the protocol screen press "COPY LANE 1 TO CASSETTE". This will copy the size selection parameters in lane-pair 1/2 to the remaining lane-pairs.



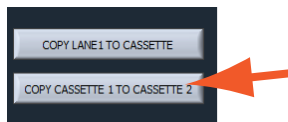
5. In the lower left-hand corner of the protocol screen, select a lane into which the external marker will be loaded using the drop-down menu. It must be an odd-numbered lane. Select "APPLY TO ALL LANES".



- Go to the lane-pair which has been selected for the external marker and press "Range". This will clear the size selection parameters, and prepare the lane-pair for loading the external marker.



- Select the cassette 2 tab. To copy the cassette 1 size selection parameters to cassette 2, press "Copy Cassette 1 to Cassette 2" (if necessary).



- Press "Save As" and name and save the protocol.

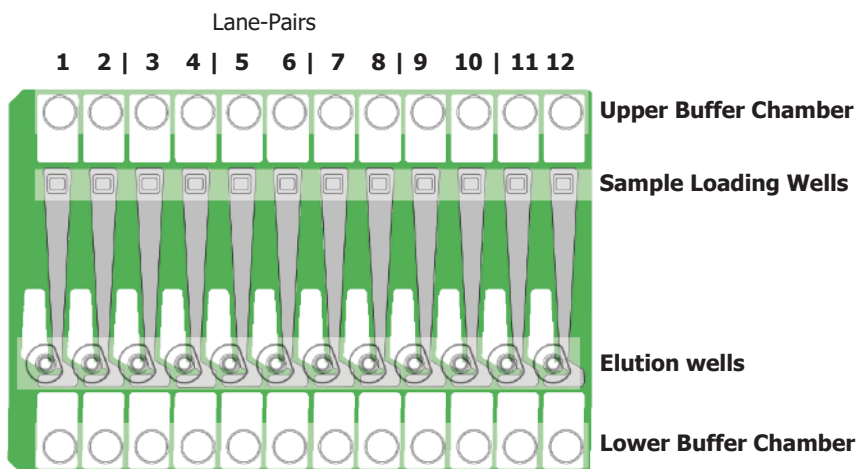
C. Calibrate the Optics with the Calibration Fixture

- Place the calibration fixtures onto both optical nests. Close the Lid.
- Press "CALIBRATE" to launch the calibration window.
- Press the "CALIBRATE" button in the window. When complete, the "Calibration Status" field will indicate "Calibration OK". Press "EXIT" to continue.

D. Inspect the Gel Cassette

- Remove the cassettes** from the foil packaging.
- Inspect the gel columns.** Look for obvious breakage of the agarose column in each channel. Inspect for bubbles due to separation of agarose from the bottom of cassette (especially in the region used for optical detection). Do not use the affected lane pair if these problems are detected, the remainder of the lanes pairs can be used.

Note: Refer to the cassette schematic below for the steps on the next page.

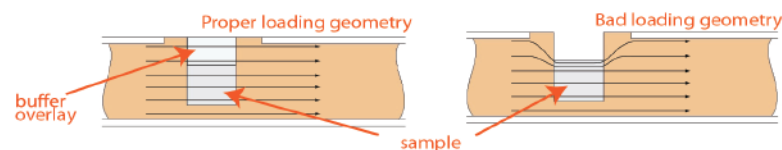


2.

E. Prepare the Cassette for Loading

- Dislodge bubbles from behind the elution modules.** Do this by gently tapping the cassette while holding sideways with the elution modules facing up.
- Remove the adhesive tapes.** Do this by placing the cassettes onto a benchtop and an firmly pulling with an even motion.
- Remove 150 μ l of buffer from each of the upper buffer chambers.** Refer to the diagram below for the location of the chambers.
- Remove all buffer from the elution modules and replace with 30 μ l of spare electrophoresis buffer.**
- Re-seal the elution modules** with the adhesive tape provided with the kit.
- Perform the Continuity Test.** Place the cassettes onto the nests, close the lid, and press "Test" in the Main Tab.

E. Load Samples



- Re-check the buffer level in the sample wells.** Make sure that sample wells are completely full to the top with electrophoresis buffer. Fill with additional buffer, if necessary.
- Find the designated external marker lane, remove 30 μ l of buffer. Load 25 μ l of Marker 75F into that lane.** The marker must be loading into an odd-numbered lane (optically detected lane). The adjacent lane in the lane-pair is not used (the next highest lane number, i.e.1/2).
- Remove 30 μ l of buffer from the first sample well, and load 25 μ l of sample into that well.** Take care not pierce the agarose with the pipette tip. There is gel on all sides and bottom of the sample well. In addition, there is an agarose "chimney" surrounding the top of the sample well that protrudes up through the cassette cover. When removing buffer, some users find it useful to immerse the pipette tip just below the surface of the buffer and follow the liquid level down with the tip as the buffer is removed. When adding sample, place tip of pipette just below the surface of the buffer, and follow the liquid level up with the tip as the well fills. Don't be concerned if the sample well slightly overfills. The density of the sample will allow it to sink before it can flow out of the well.
- Repeat step 2 for the remaining 10 wells, or use a 12-channel multipipettor to remove buffer and load the wells simultaneously.**

3.