



IVIS[®] Syringe Injection System

The IVIS[®] Syringe Injection system is designed for use with the IVIS[®] Kinetic Imaging System. You can control the infusion pump in the Living Image[®] software or manually.

For more details on the setup and manual control of the infusion pump, see the *IVIS Syringe Injection System* instructions from Caliper or the *PHD 22/2000 Syringe Pump Series User's manual* from Harvard Apparatus. Both are included on the Living Image installation CDROM.

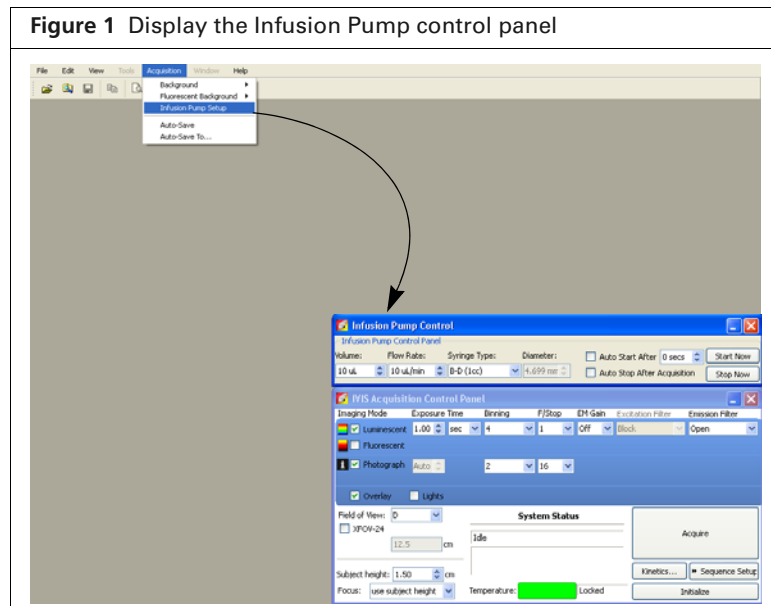
The IVIS Syringe Injection system can be used during kinetic or still image acquisition; however, subjects must remain immobile.

Controlling the Infusion Pump

After the IVIS[®] Kinetic Imaging System is initialized and locked, you can access the infusion pump controls.

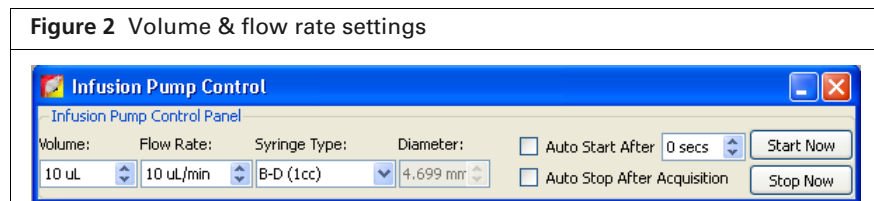
1. Select **Acquisition** → **Infusion Pump Setup** on the menu bar.

The Infusion Pump control panel appears above the IVIS acquisition control panel.



NOTE: If you are going to acquire kinetic data, open the infusion pump control panel before you open the kinetic acquisition control panel. When the kinetic control panel is open, the Acquisition menu is unavailable.

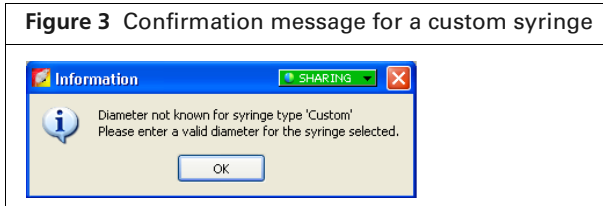
2. Set the volume and flow rate.



3. Make a selection from the Syringe Type drop-down list (the associated syringe diameter is automatically entered).

To enter a custom syringe:

- a. Select **Custom** from the drop-down list.
- b. Click **OK** in the dialog box that appears.



- c. Enter the syringe diameter in the infusion pump control panel.



NOTE: Custom syringe information that is entered in the infusion pump control panel is not saved to the system.

4. To automatically start the infusion pump after data acquisition begins, choose **Auto Start After** and enter the amount of seconds. For example, enter 10 to start infusion 10 seconds after acquisition begins.

To manually start infusion, click **Start Now**.

5. To automatically stop infusion, choose **Auto Stop After Acquisition**. To manually stop infusion at any time, click **Stop Now**.

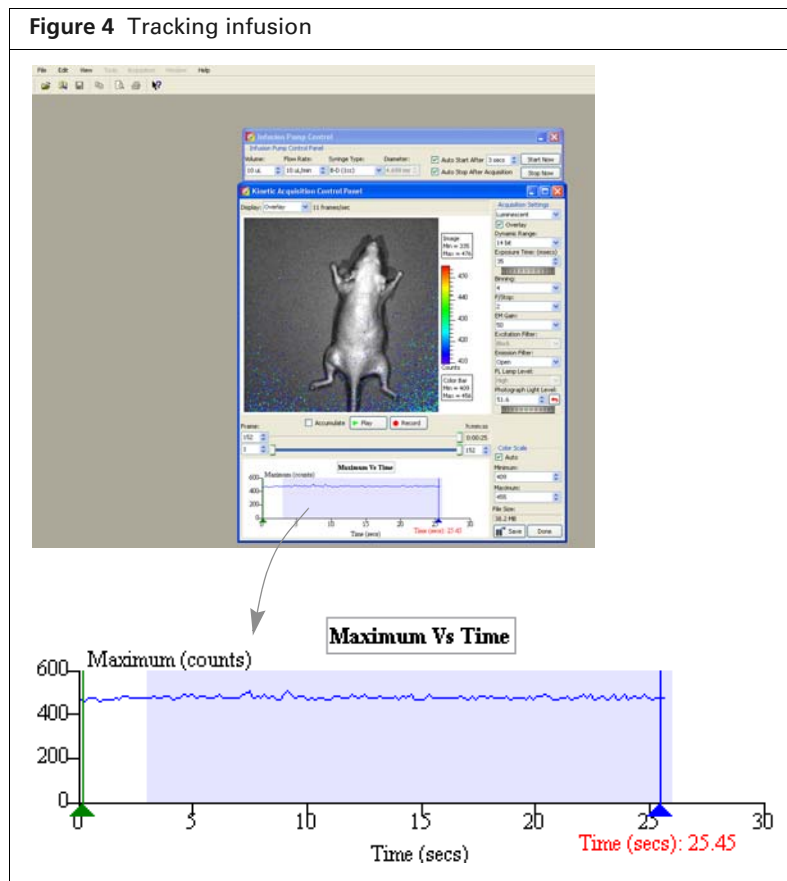
If the auto stop option is not chosen and you do not manually stop the pump, the pump continues to run after acquisition ends until the specified infusion volume is reached.



NOTE: The information in the infusion pump control panel is saved in the click info file. During acquisition, if you start infusion, then manually stop and restart the infusion, only the last actual start and stop is saved to the click info file, not the start/stop settings in the panel.

Tracking Infusion in the Maximum vs. Time Graph

During kinetic acquisition, the blue shaded region in the Max vs. Time graph indicates the infusion period. During acquisition, if you start infusion, then manually stop and restart infusion, only the last actual start and stop is recorded in the Maximum vs. Time graph. The graph stops recording infusion when acquisition stops (even though the pump may not be stopped).



Closing the Infusion Pump Control Panel

1. Close the kinetic control panel.
2. Click **Acquisition** → **Infusion Pump Setup** on the menu bar.
The check mark is removed and the panel closes.