

TrayMix™ S4 Automated Microarray Hybridization Stations

Software Manual



Software

System programming is achieved via the easy to use graphical user interface shown below.

The screenshot shows a software window titled "Pre-hybridization" with a blue header bar. On the left, under "Steps", a list shows "1. Pre-hybridization", "2. Hybridization", and "3. Wash". The "Pre-hybridization" step is selected and checked. To the right, there are two input fields: "Temperature" with a slider set to 50 °C and a numeric input box containing "50", and "Length" with input boxes for "H" (empty) and "min" (containing "10"). At the bottom right, there are four buttons: "< Prev", "Next >", "Finish", and "Cancel".

Set Pre-hybridization Time and Temperature.

Steps **Hybridization**

1. Pre-hybridization
2. Hybridization Hybridization
3. Wash

Temperature

25 30 35 40 45 50 55 60 65 70 75 50 °C

Length

1 H 11 min

< Prev Next > Finish Cancel

Set Hybridization Time and Temperature.

Steps **Wash**

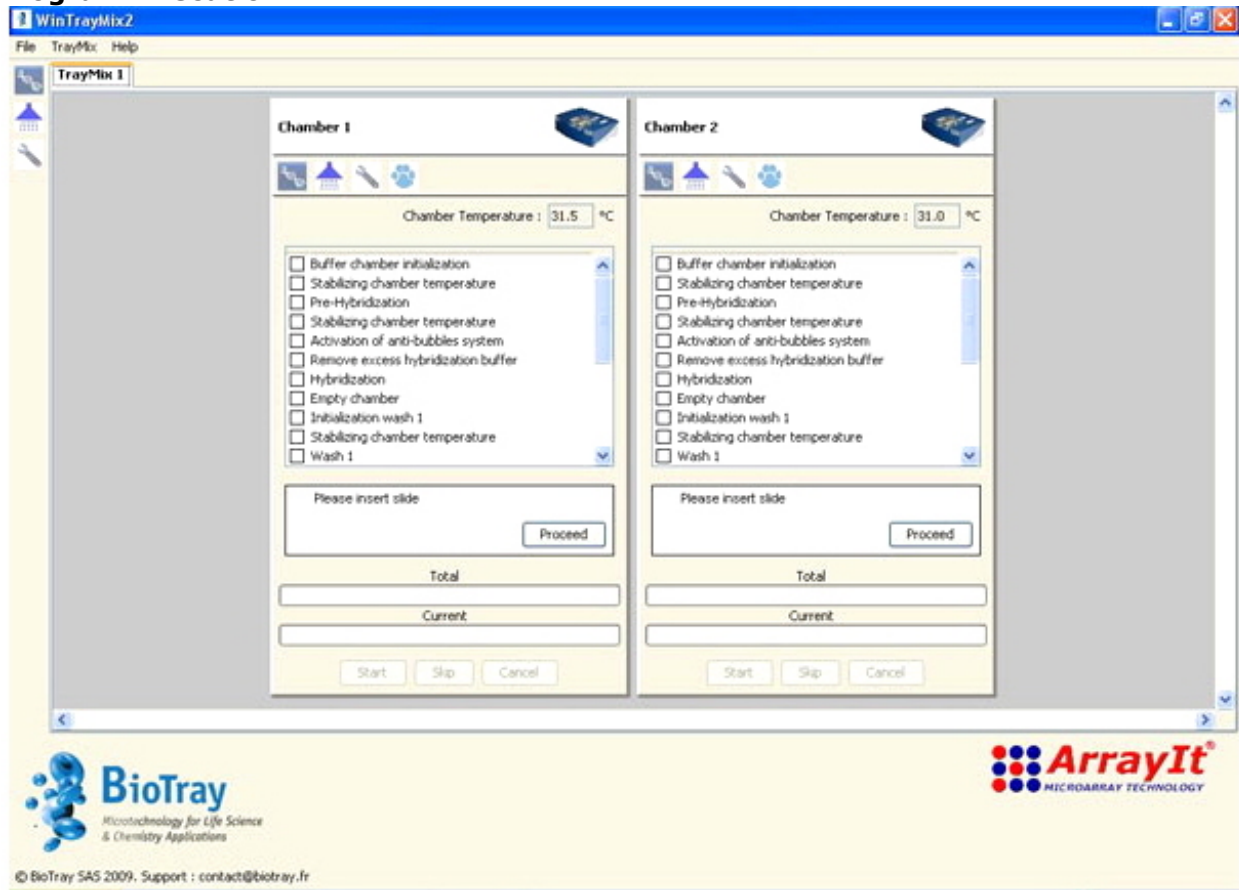
1. Pre-hybridization
 2. Hybridization
3. Wash

Wash Number

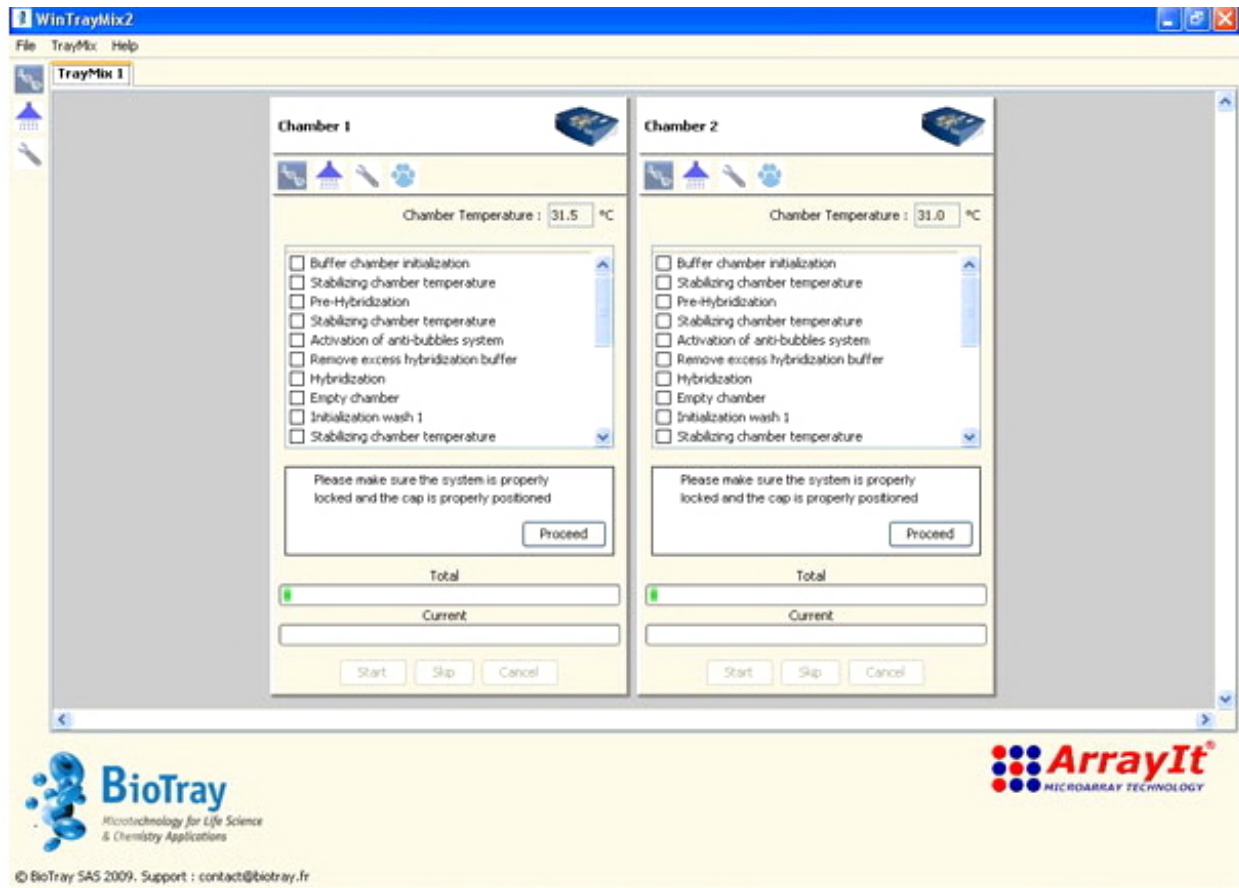
Wash 1	Wash 2	Wash 3
Temperature	Temperature	Temperature
-75 -70 -65 -60 -55 -50 -45 -40 -35 -30 -25	-75 -70 -65 -60 -55 -50 -45 -40 -35 -30 -25	-75 -70 -65 -60 -55 -50 -45 -40 -35 -30 -25
<input type="text" value="42"/> °C	<input type="text" value="30"/> °C	<input type="text" value="25"/> °C
Length <input type="text" value="2"/> min	Length <input type="text" value="1"/> min	Length <input type="text" value="1"/> min
Repeat <input type="text" value="1"/> times	Repeat <input type="text" value="1"/> times	Repeat <input type="text" value="1"/> times

Set Wash Parameters and the Program is ready to run!

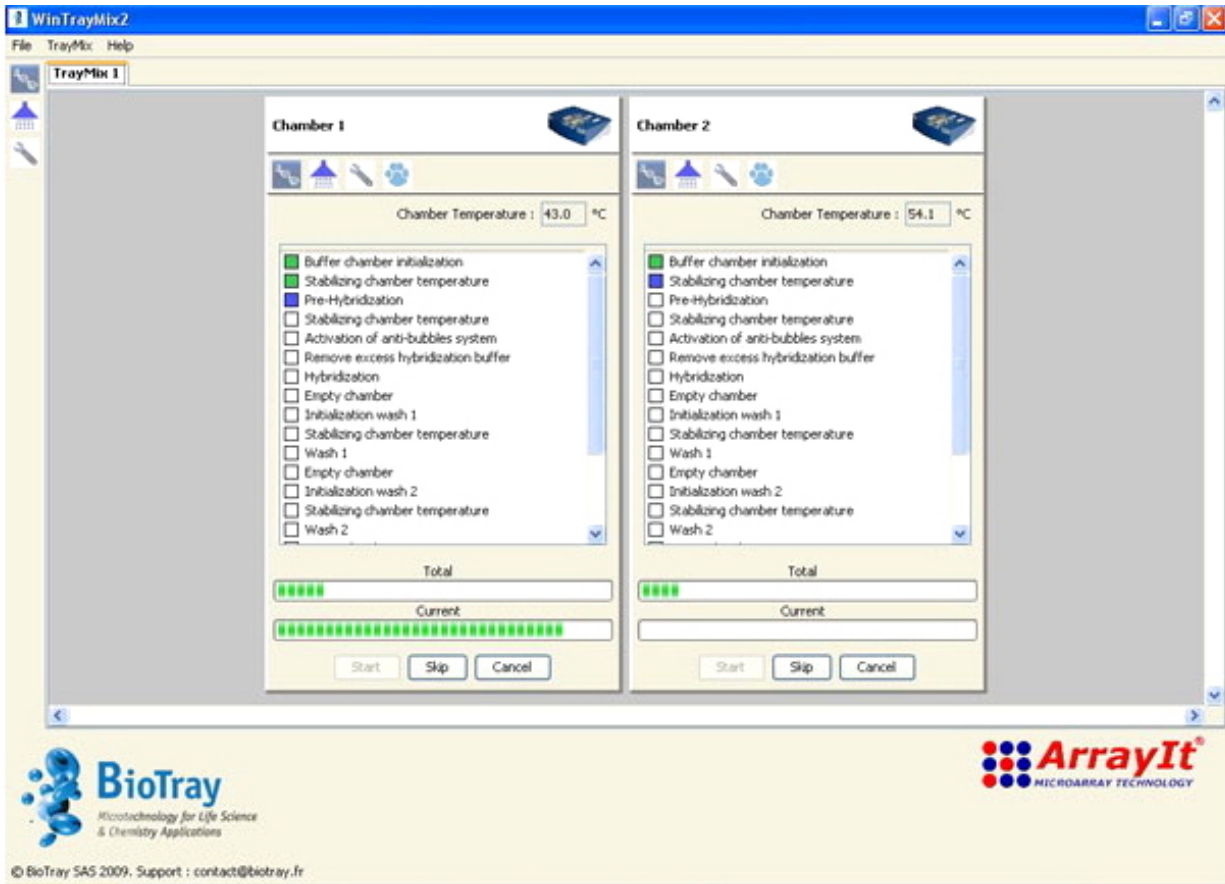
Program Execution



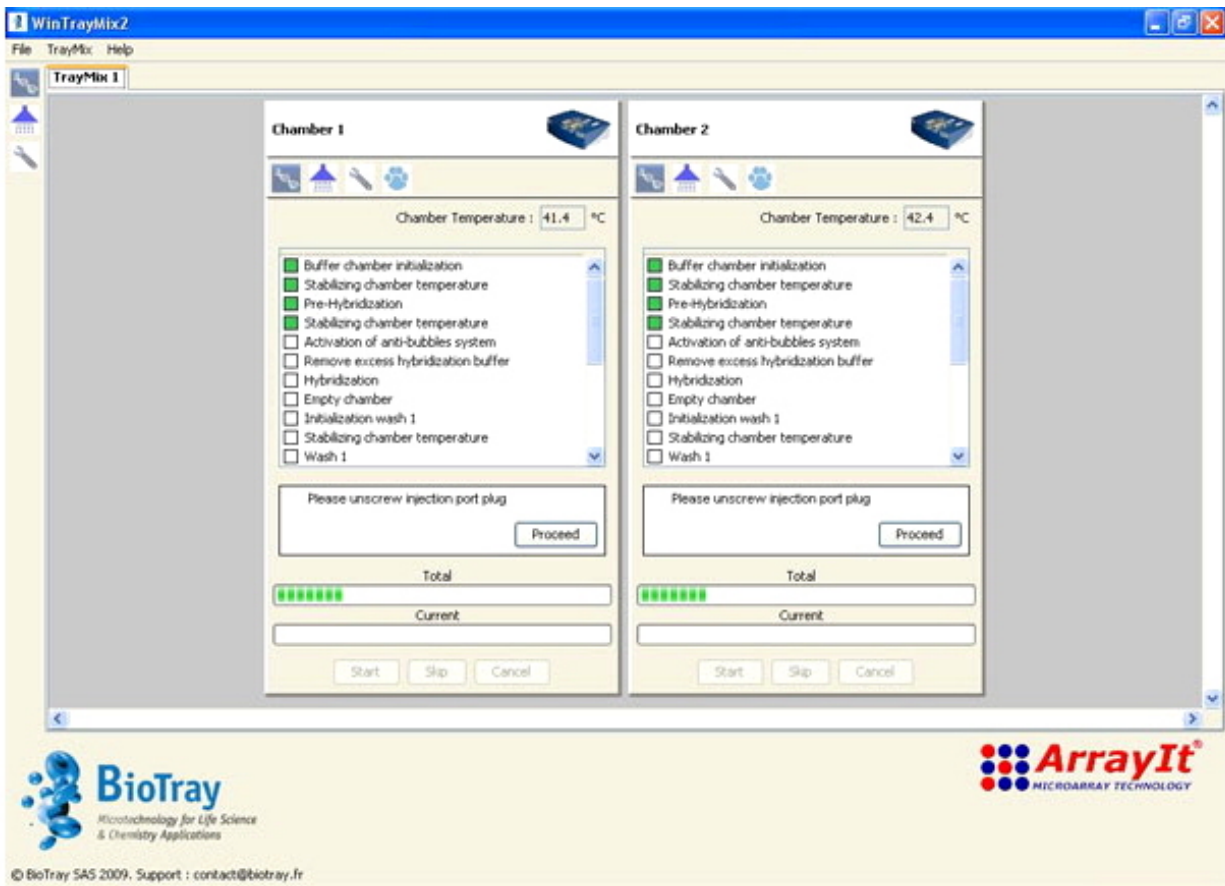
Insert microarray slide, click proceed.



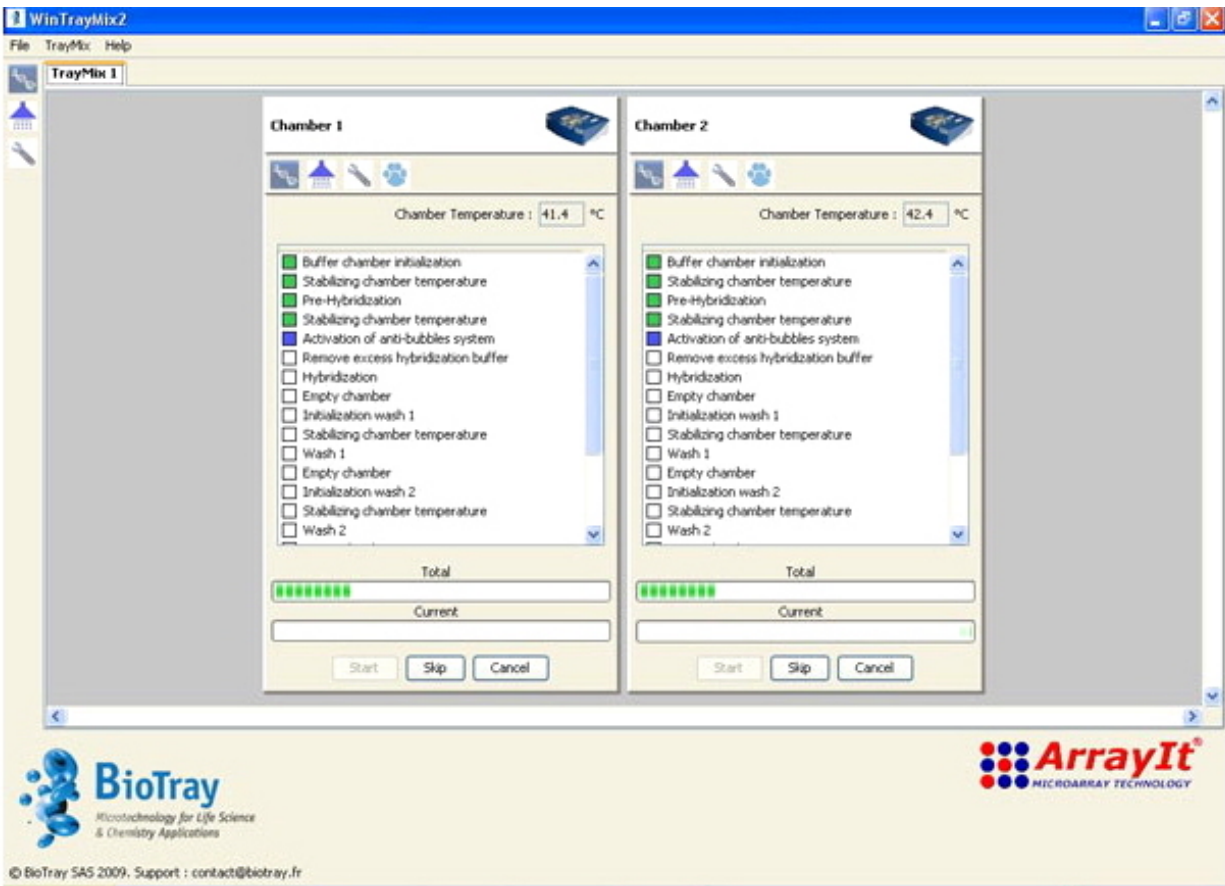
Check the system is locked properly and port cap is properly closed.



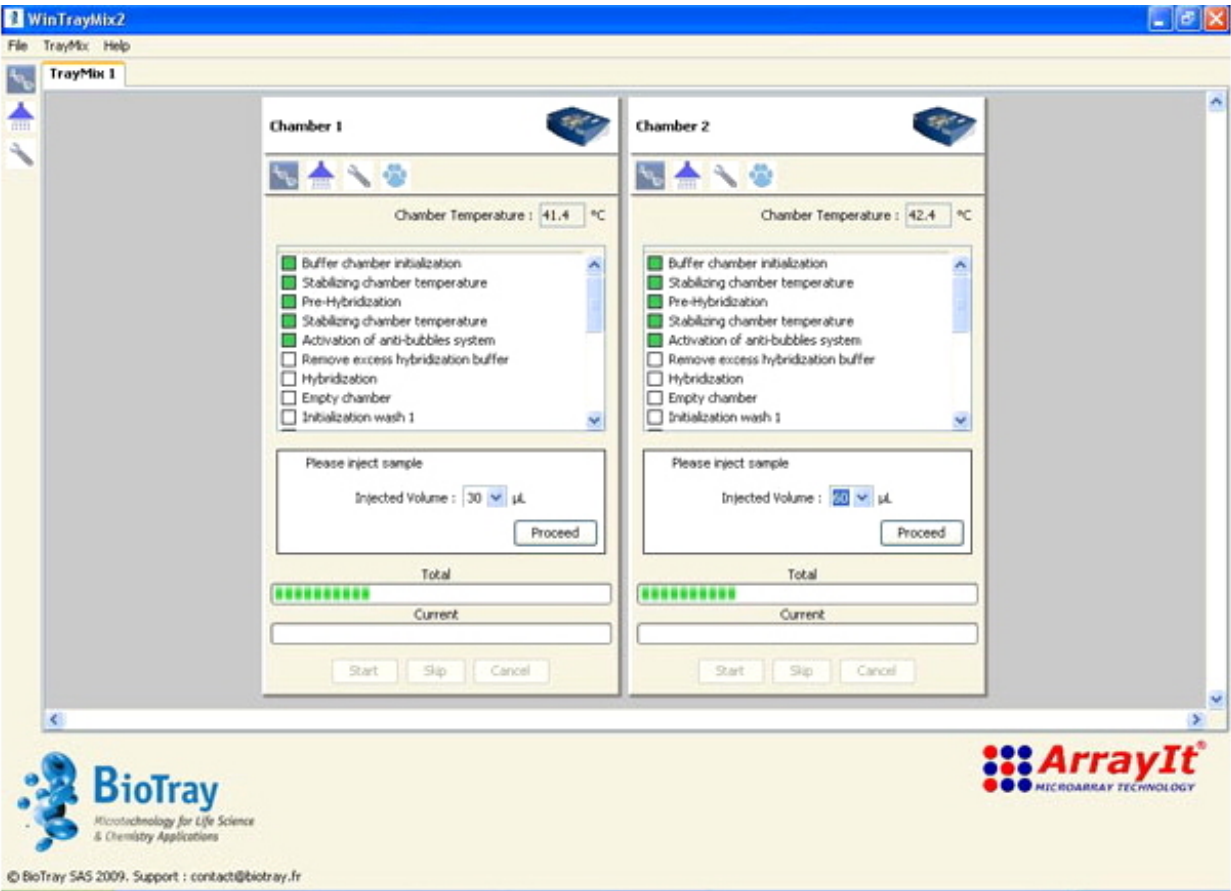
Programmed Pre-hybridization Program Starts, is useful to pre-hybridization to get the microarray at proper temperature and to wet the microarray prior to adding the labeled sample.



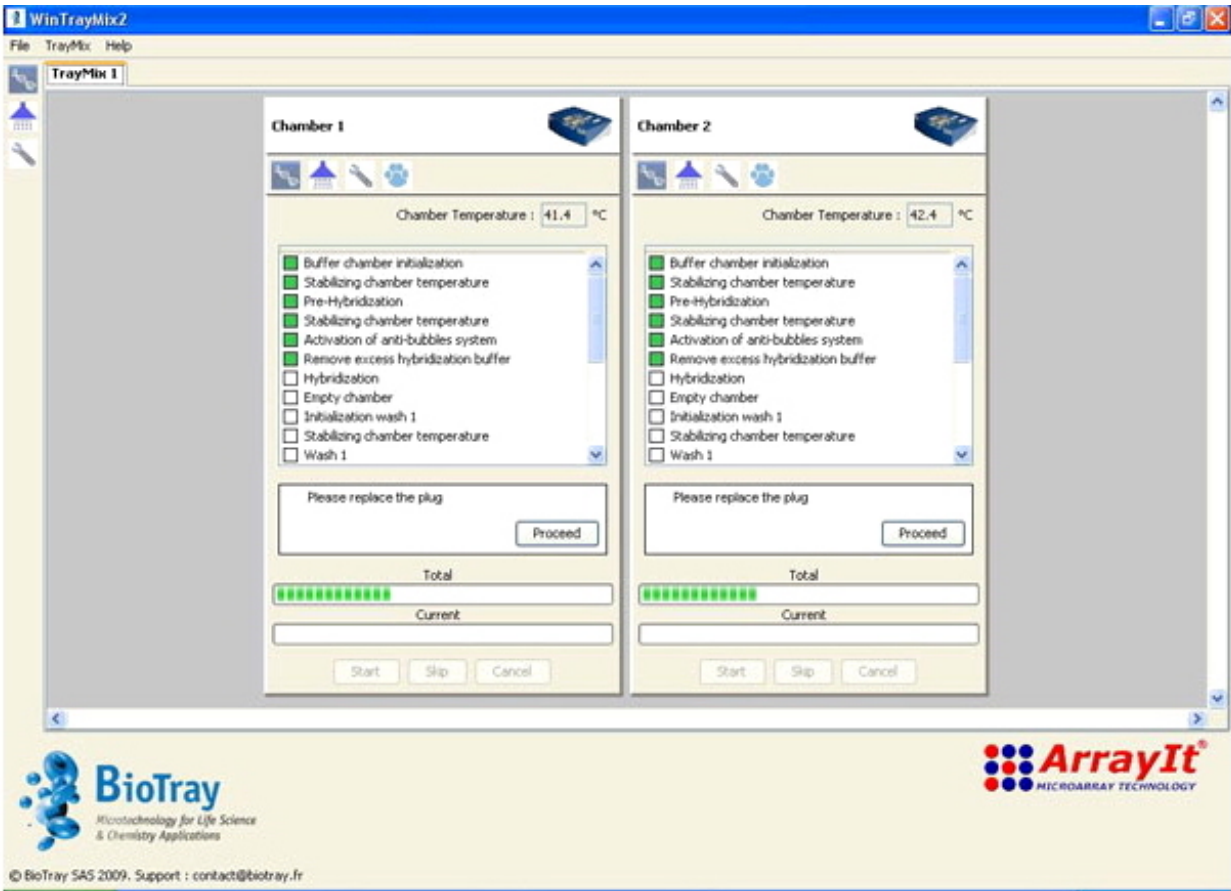
After Pre-hybridization is completed, temperature is stabilized, the next step is to remove air bubbles for the chaotic advection mixing loop.



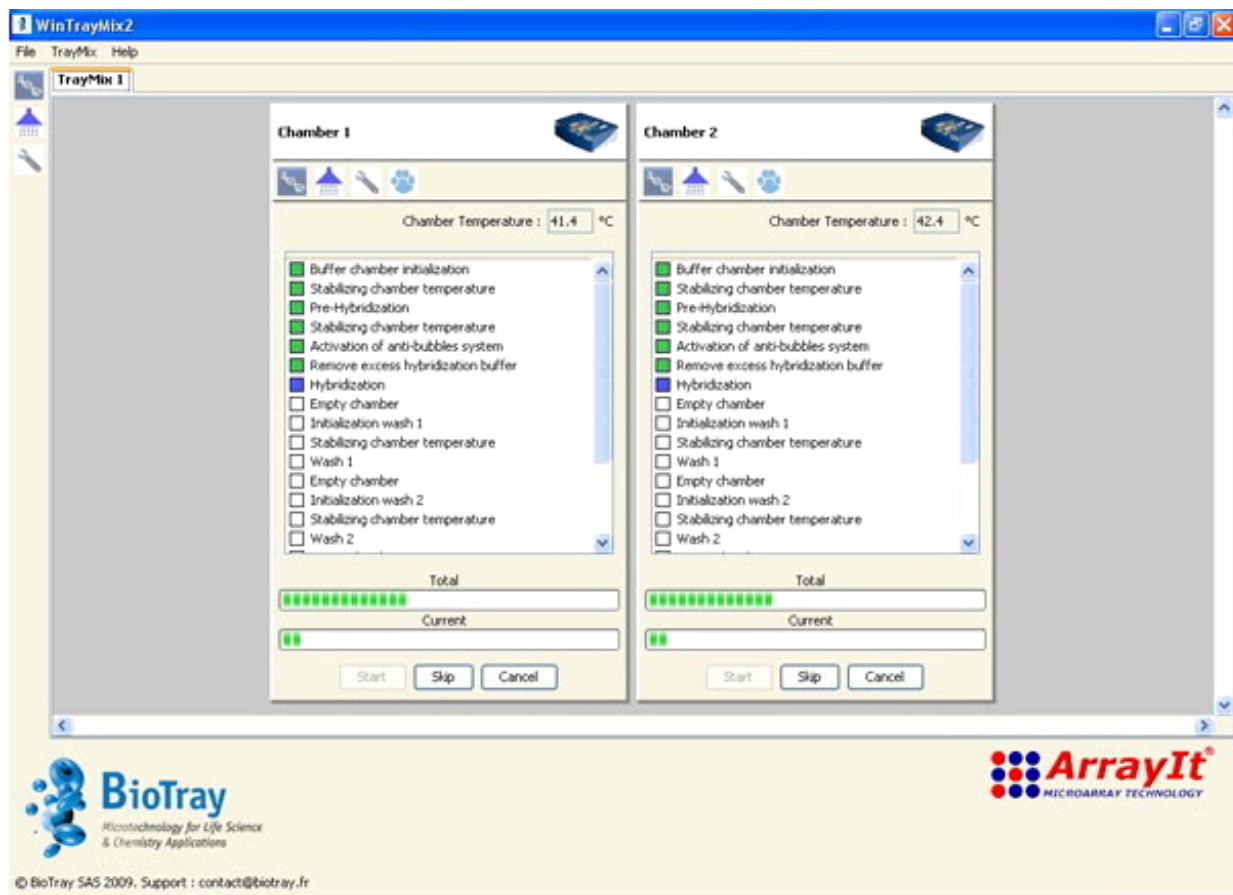
Air bubbles are automatically removed.



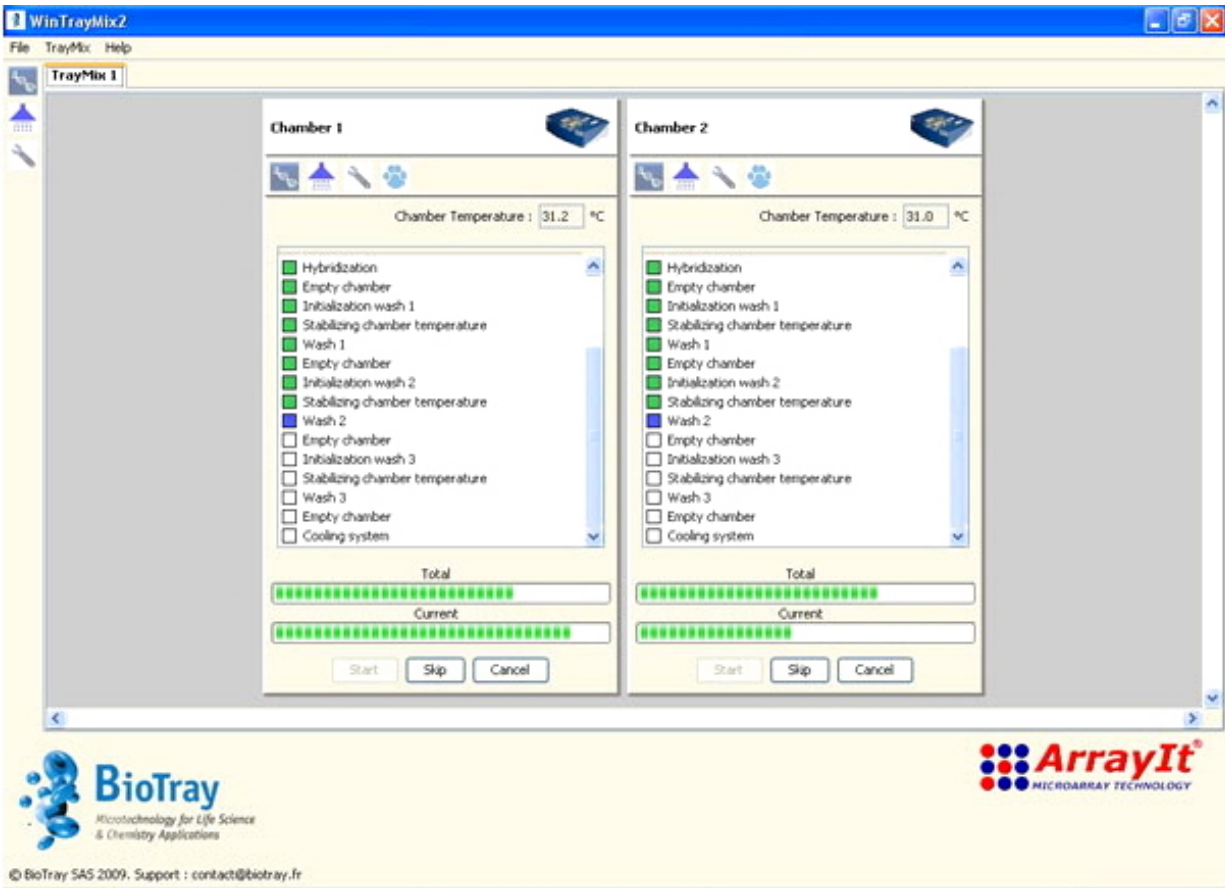
Injecting the sample is done with a volume of 30 µl or 60 µl, set volume, inject sample and click Proceed.



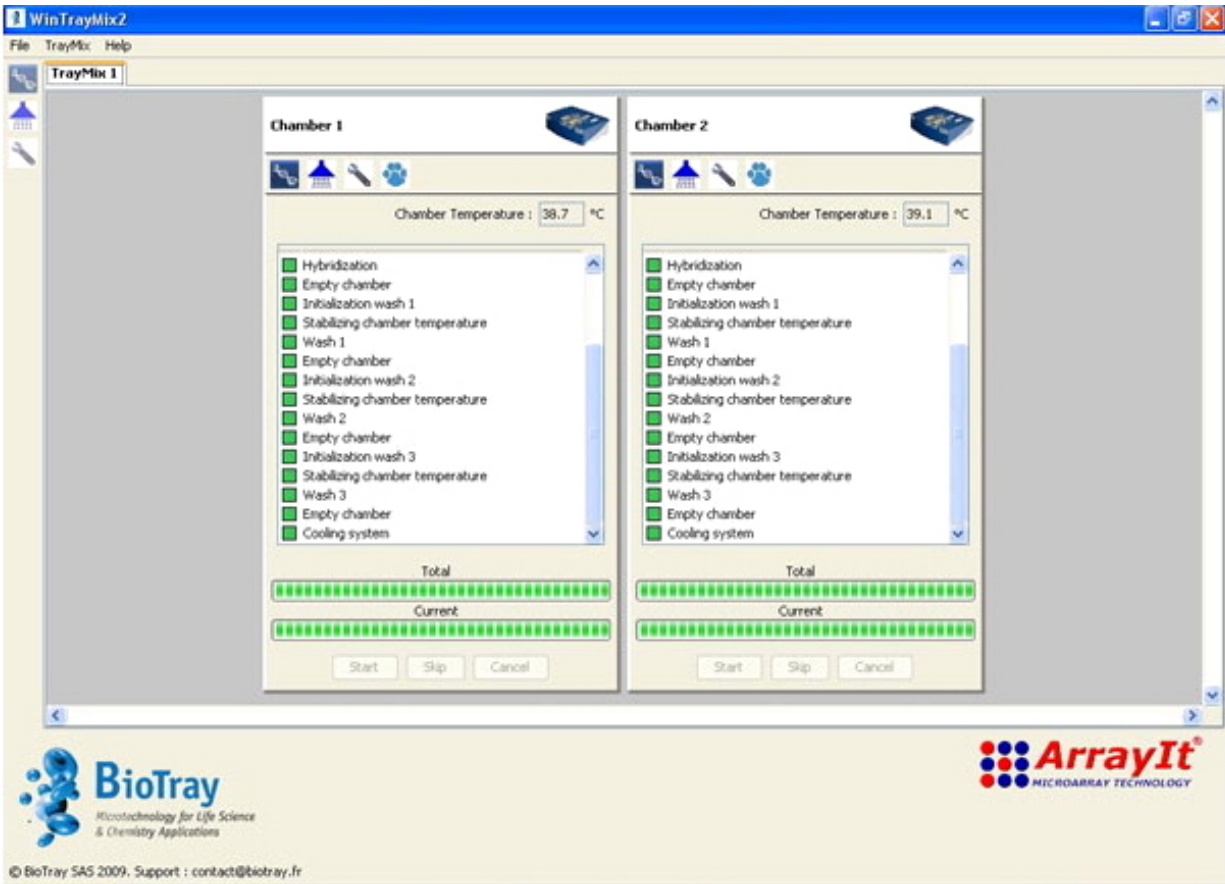
Depending on the volume of injection, the mixing loop automatically compensates for the volume injected for hybridization.



Hybridization proceeds at set time and temperature, with constant mixing.



Wash steps proceed automatically based on set program parameters.



When chamber is empty, microarray is removed from the system and dried by centrifugation in a High-Speed Microarray Centrifuge.



Arrayit TrayMix™ S4 Microarray Hybridization Station with continuous power supply, BioBlue™ personal computer, 21" LED display, keyboard, mouse and mouse.