Tissue-Tek VIP® 6 AI

Vacuum Infiltration Processor

Quick Reference Guide **Version : 2019-1**

The Tissue-Tek VIP® 6 AI Vacuum Infiltration Processor is designed for the purpose of processing human and animal tissue specimens. The instrument, as part of the histopathology process, is intended to facilitate the in vitro examination of human and animal tissue for morphology changes by a pathologist.

This Quick Reference Guide contains information about day-to-day use, maintenance and cleaning. For more detailed information we refer to the most recent Operating Manual of this instrument.

All users should be trained for the use of the Sakura instruments. The Sakura User Training is a training to ensure that new and existing users of a Sakura instrument have the knowledge and skills to operate and maintain the instrument in a proper way.

Daily operations – Operation Flow

Ensure that all solutions and paraffin have been placed within the instrument correctly.

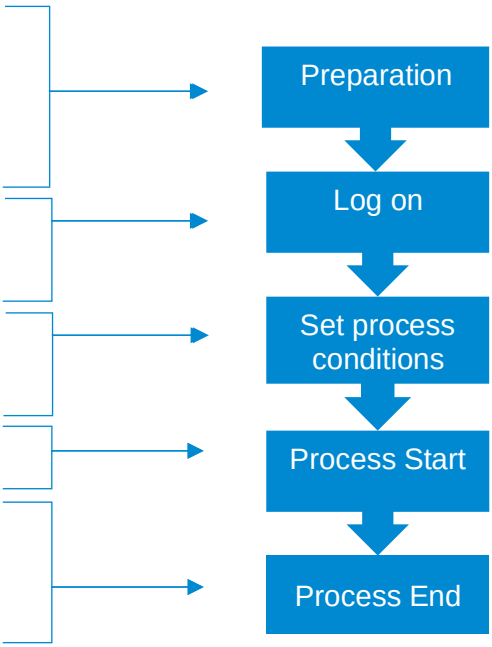
Assemble the basket(s)/magazine(s) with tissue and place them in the retort.

After entering the login password on the touch screen display, the system becomes operational.

Select the program and set the start mode, retort capacity and bottle check among other options.

Pressing **Start** will lock the retort and initiate the tissue processing.

When the system has completed the run, drain the paraffin and remove the baskets. Start a retort clean cycle and perform a self-test.



Operation Flow – Preparation

- Preparing solution bottles and paraffin containers.

Fill the solution bottle and paraffin container by the required quantities, or up to the applicable scale marks.

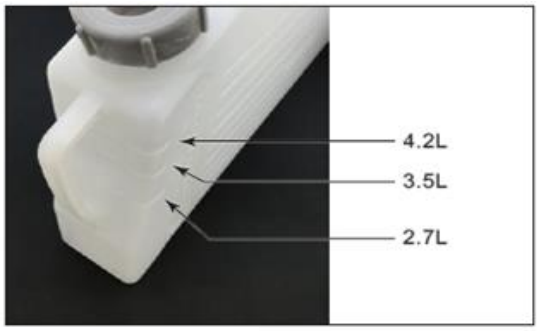
The required quantities of solution and paraffin vary depending on the retort capacity set.

Volume (in Litres) amount for reagent containers:

2.7 L for 150 cassettes

3.5 L for 300 cassettes

4.2 L for retort cleaning



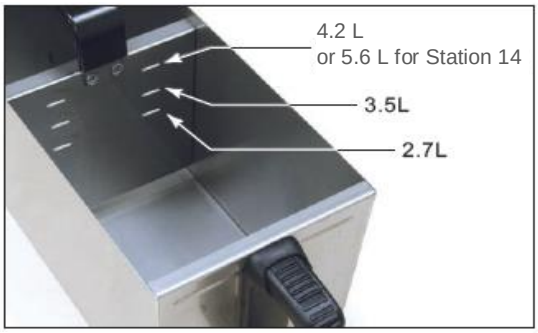
Solution Bottle

Volume (in Litres) amount for the Paraffin containers:

2.7 L for 150 cassettes

3.5 L for 300 cassettes

5.6 L for bulk Paraffin reservoir (station 14)



Paraffin Container

Note: Do not overfill any of the bottles above their required level.

Note: When using paraffin pellets, fill the container up to the brim before melting.

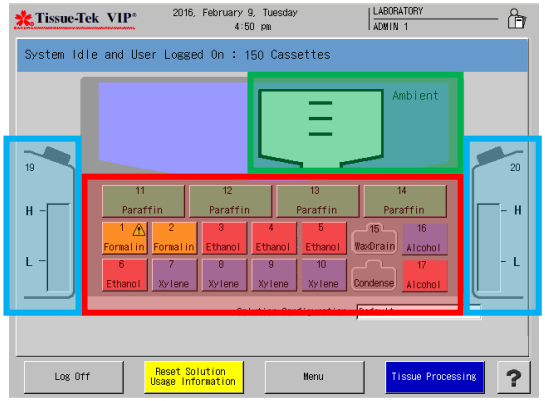
Volume amount for bulk reservoirs:

The reservoirs on either side of the instrument contain up to 10 Litres of reagent.

Operation Flow – Log on

After entering the login password on the touch screen display, the system becomes operational.

The main screen shows information that includes the current configuration, the volume within the bulk reservoirs and the state of the retort.



Main Display

Operation Flow – Set process conditions

- Set processing conditions and start a run.

Touch **Tissue Processing** [1] in the bottom right corner of the system main display to open the screen where all process conditions can be set.

From the next menu select a tissue processing program in the **Program List** [2].

Choose for **Delayed Start** or **Immediate Start** [3].

Set the **Retort Capacity** [4] to process either 150 or 300 cassettes.

If necessary the following items can be altered:

Bottle check [5] on or off.

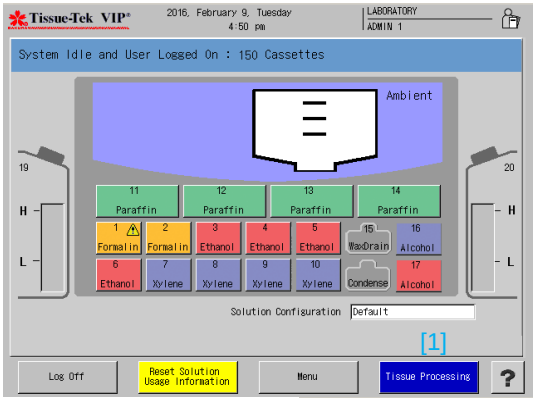
Cassette Count [6] when activated through system settings.

Experiment number [7] when activated through system settings.

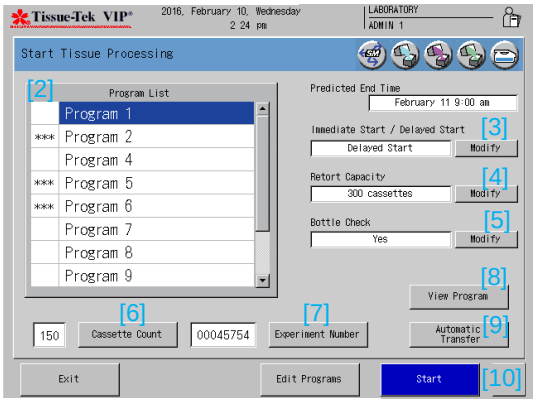
To make temporary changes in a program, touch the **View Program** [8] button.

Press **Automatic Transfer** [9] to start a run in which reagents are relocated. This option is described in more detail later in this chapter.

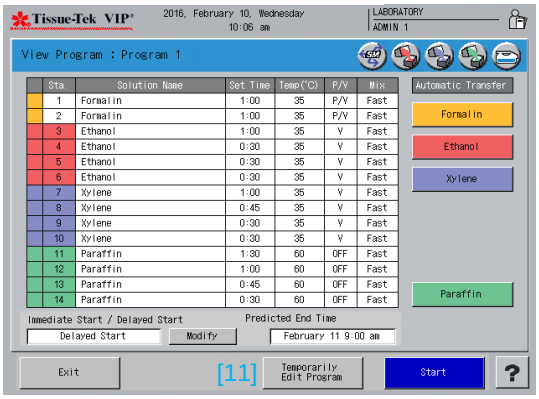
Touching **Start** [10] will lock the lid of the retort and start the selected program. Based on the setting a start confirmation will pop up asking to confirm the start once more.



Screen: Main Display



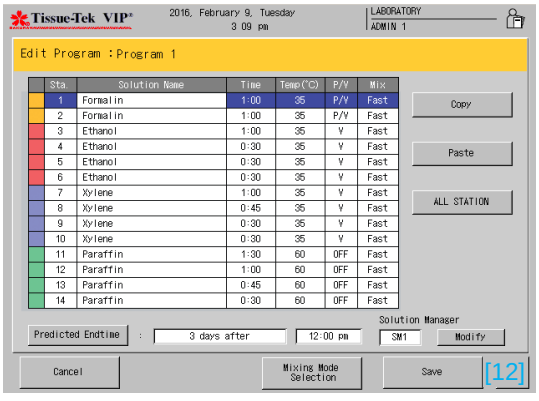
Screen: Start Tissue Processing



Screen: View Program

- Temporarily editing a program.

After selecting the **View Program** [8] button the user has the option to change that specific program for only one run by pressing **Temporarily Edit Program** [11] and alter processing times and start dates for example. Pressing **Save** [12] will set the program to start with the alterations applicable for that specific run only.



Screen: Edit Program

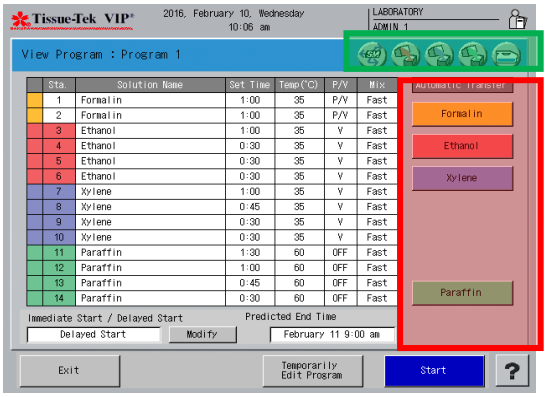
- Automatic transfer.

After selecting the **Automatic Transfer** [9] button the user has the option to select the solution groups (Ethanol, Xylene or Paraffin) to exchange. When selected, the exchange icon is displayed at the top of the screen.

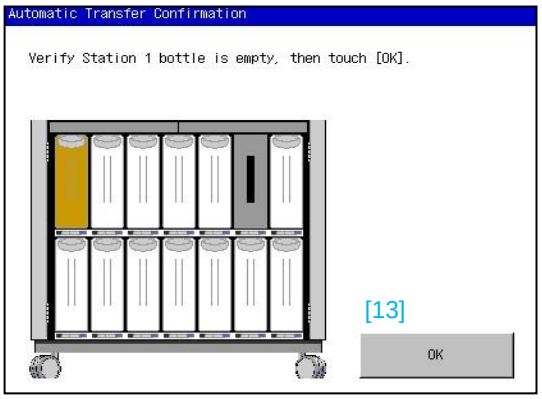
When **Start** is selected the system asks for conformation to ensure the first bottle of each chosen group is empty. When the paraffin group has been selected the system requires the user to check if the wax drain container is empty.

Answering these questions with **OK** [13] results in the start of the processing run.

Note: Ensure that the bulk reservoirs contain enough reagents to replenish the empty bottles.



Screen: View Program – Automatic Transfer



Screen: Conformation Empty Reagent container

Operation Flow – Process Start

- Pausing during tissue processing

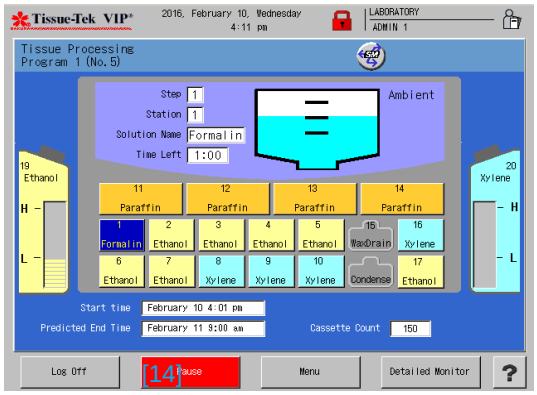
Pressing the **Pause** [14] button when the retort is filled with a solution, the process will directly be stopped.

When this is not the case, the user can choose between **Specimen Protection pause** [15] or **Immediate Stop** [16] resulting in either a stop when the retort is filled or a direct stop.

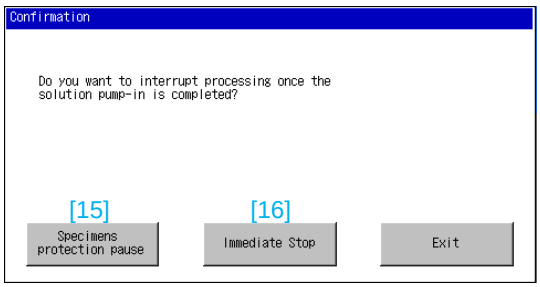
If the **Resume** button is pressed after pausing a run, the system continues with the process.

Note: Pausing the processing delays the predicted end time by the time the processing was paused, and consequently the processing may no longer end by the original predicted end time.

A run started with a delayed start can be paused and afterwards started immediately by pressing the **Immediate Start** button.



Screen: Display Ongoing Process

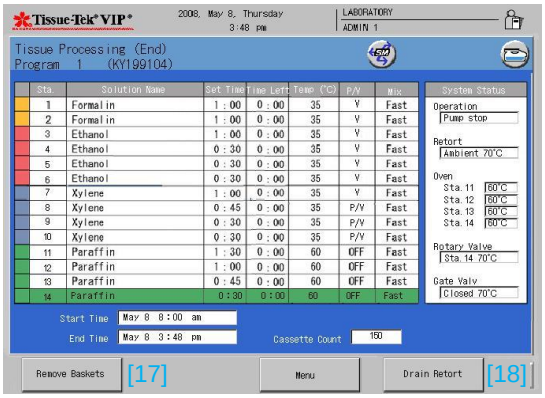


Screen: Options when pausing the system

- Aborting during tissue processing

Touch **Abort** while the processing is paused. Touching **Yes** in the Abort Confirmation window opens the Tissue Processing Abort Notice window. Touch **OK**, and the Tissue Processing (End) screen will appear.

From this menu the user has two options: either remove the baskets from the retort by pressing the **Remove Baskets** [17] button and drain afterwards or alternatively you can choose to drain the retort before removing the baskets by selecting **Drain Retort** [18].

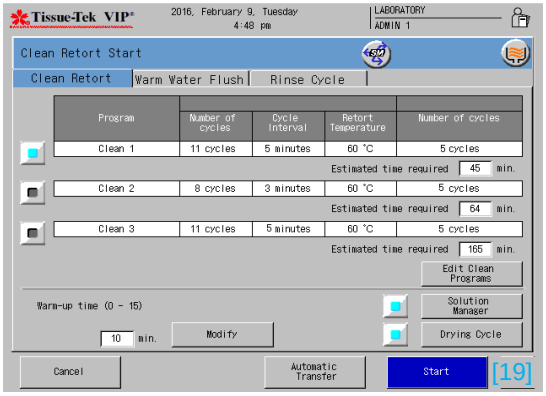


Screen: Display Tissue Processing (End)

Operation Flow – Process End

When the tissue processing ends, an audible alarm and a notification window appears. When confirmed the user will see the Tissue Processing (End) screen with identical options as an aborted run.

Both options ultimately end up in the Clean Retort Start screen. Selecting a desired cleaning program and touching **Start** [19] will initiate a process to clean the retort.



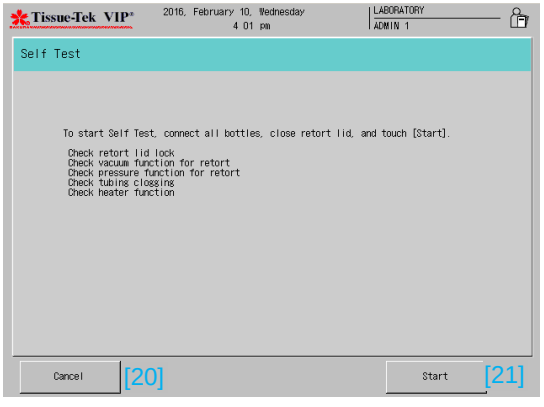
Screen: Display Clean Retort Start

- Self Test

After the retort cleaning and closing the Clean retort (End) screen, the Self Test screen appears. The use of Self Test is recommended although can be cancelled by pressing the **Cancel** [20] key.

By pressing **Start** [21] it is performed to check the operations of the system.

Note: The self-test is not performed if the retort cleaning was aborted due to an error. If the retort must be drained after cleaning, drain the retort and then touch Exit on the Drain Retort screen; the self-test screen will be displayed.



Screen: Display Self Test

Maintenance

- On condition:

Condensation bottle.

Check after every processing run and empty when the level rises above the mark **MAX**

System disinfection.

Spray or wipe 70-85% (Isopropyl) Alcohol onto the walls and base of the retort and the inside of the retort lid. Allow the Alcohol to dry before closing the retort lid. Once dry, the instrument is ready to be used again.

- Daily:

Retort.

Perform a cleaning cycle directly after processing and wipe the retort afterwards with a cloth.

By unscrewing the filter at the bottom of the retort, it can be rinsed with alcohol and placed back after drying.

Inspect the gasket on crack or other signs of deterioration. Required to be replaced by a trained engineer.

Exterior cleaning.

Get rid of debris and dust by rinsing the exterior using a water moistened cloth.

Touch screen.

Use a cloth moistened with 70-80% alcohol to clean the screen. Do not directly spray on the screen as this may cause damage.

- Weekly:

Reagent refreshment.

While this occurs according to lab validation, our recommendation would be to exchange them frequently since clean reagents provide more optimal processing.

Bottle cleaning.

Clean the solution bottles with hot water and cloth. It is possible to include the use of a mild detergent.

- Weekly:

Warm water flush.

When using buffered formalin, Sodium Phosphate crystals built up inside the tubes, the rotary & gate valves. To prevent clogging, a warm water flush is required. Perform this flush on the formalin station(s) and at least the first dehydration station after formalin.

Use at least 2,7 Litres of 50-60°C water in each of the bottles.

- Monthly:

Replacing activated carbon filters.

Replace both activated carbon filters located at front in the top left area.

The recommendation of carbon filter exchange frequency is based on operational testing in order to comply with EN61326 and EN61010. The frequency might differ per lab due to size of the workspace, condition of ventilation, reagents used and their replacement cycles, quantity of tissue samples processed and more.

Bottle connectors.

Inspect the bottle connectors for cracks and remove debris from the bottle air exhaust holes.

Level sensor cleaning and self test.

Clean the level sensors in the retort by using an Acetic acid solution of max 5%. This cleaning should always be followed by a Self Test described in Process End.

More information on how to set up this run can be found in the most recent version of the Application Bulletin “Level sensor cleaning procedure for Tissue-Tek® VIP®6 AI”

- Yearly:

Preventative maintenance.

Preventative maintenance by a Sakura representative or a qualified service engineer.

Maintenance task	Frequency
Condensation bottle	On condition
System disinfection	On condition
Cleaning cycle	After every processing run
Retort	Daily
Retort filter	Daily
Exterior	Daily
Touch screen	Daily
Reagents refreshment	Weekly (according to lab validation)
Bottle cleaning	Together with Reagents refreshment
Warm water flush	Weekly
Level sensor cleaning and self-test	Monthly
Bottle connectors	Monthly
Replace carbon filters	Monthly
Preventative maintenance	Yearly

- Never take out reagent containers when the system has a reagent in the retort.