



User Guide for Jess

Copyright © 2022 ProteinSimple. All rights reserved.

ProteinSimple
3001 Orchard Parkway
San Jose, CA 95134
Toll-free in the US and Canada: (888) 607-9692
Tel: (408) 510-5500
Fax: (408) 510-5599
email: support@proteinsimple.com
web: <https://www.bio-techne.com/instruments/simple-western>

User Guide for Jess

P/N PL2-0004

Revision G, December 2022

For research use only. Not for use in diagnostic procedures

Patents and Trademarks

ProteinSimple's Simple Western technology is covered by issued and pending patents in the U.S. and other countries. For more information please see <https://www.bio-technique.com/support/instrument-support/intellectual-property>.

ProteinSimple, the ProteinSimple logo and Jess are trademarks or registered trademarks of ProteinSimple. Other marks appearing in these materials are marks of their respective owners.

Table of Contents

Chapter 1:

Let's Get Started..... 1

Simple Western Assays..... 2

Imaging a Blot..... 2

Chapter 2:

Getting Your Lab Ready 3

Space Requirements..... 4

Physical Specifications..... 5

Electrical Requirements..... 5

Environmental Requirements..... 6

Software and Computer Requirements..... 6

Chapter 3:

Jess..... 8

Chapter 4:

Operating Jess..... 15

Running Immunoassays..... 16

Imaging a Blot..... 22

Self Test..... 24

Viewing and Changing System Properties 25

Viewing Error and Test Logs..... 25

Chapter 5:

Maintenance and Troubleshooting 28

Instrument Software (Embedded) Updates 29

Maintenance 29

Cleaning..... 31

Basic Troubleshooting 31

Spare Parts..... 33

Chapter 6:

General Information 34

Safety Guidelines..... 35

Chapter 1:

Let's Get Started

Chapter Overview

- Welcome
- Simple Western Assays
- Imaging a Blot

Welcome

Congratulations on bringing Jess into your lab! We welcome you as a new user and are excited to be a part of your work. This user guide will provide you with information on how Simple Western assays work as well as other useful operating and installation information.

To help you get the most from Jess, we've added some attention phrases to assist you through the user guide:

NOTE	Points out useful information.
IMPORTANT	Indicates information necessary for proper operation of Jess.
CAUTION	Cautions you about potentially hazardous situations that could result in injury to you or damage to Jess.
!WARNING!	Warns you that serious physical injury can result if the listed precautions aren't followed.

Simple Western Assays

A Simple Western size assay is an automated Western - no gels, no transfer devices, no blots, no film and no manual analysis.

Simple Westerns take place in a capillary. Jess automates all steps of the process for you including sample loading, protein separation, immunoprobng or labeling, washing, detection and data analysis. Up to 25 samples can be processed in a single run.

Jess performs Simple Western size-based assays: chemiluminescence or fluorescence immunoassays, and intra-assay protein normalization. All you have to do is pipette your samples and immunoreagents into Jess's pre-filled plate, load the capillary cartridge and press **Start**.

Imaging a Blot

Jess also images PVDF or nitrocellulose blotting membranes with proteins transferred from SDS-PAGE gels using traditional Western blotting procedures. All you have to do is expose your membrane to an enhanced chemiluminescent (ECL) substrate, load it into the blot cartridge and press **Start**.

Chapter 2:

Getting Your Lab Ready

Chapter Overview

- Introduction
- Space Requirements
- Physical Specifications
- Electrical Requirements
- Environmental Requirements
- Software and Computer Requirements
- General Guidelines and Information

Introduction

This chapter will help you prepare the lab for Jess. Please have the space, electrical and environmental requirements ready prior to installation.

NOTE: Find a buddy to help you unpack Jess. Don't try to lift the instrument alone, you could cause injury to yourself or damage to Jess.

Space Requirements

You need a lab bench or table that can support 60 lbs (27 kg) and has enough space for both Jess and her computer. There should be sufficient clearance for both heat ventilation and to provide access if the instrument needs service.

IMPORTANT

Jess needs a stable surface and must remain level to work properly. The lab bench or table can't shift or wobble under heavy weight.

Dimension	Meters	Feet
Width	0.9	3.0
Depth	0.9	3.0
Height	0.4	1.3

Table 2-1: Recommended space requirements for Jess.

Physical Specifications

Description	Specification
Jess's Dimensions (Door Closed)	0.33 m H x 0.36 m W x 0.52 m D (1.07' H x 1.15' W x 1.71' D)
Jess's Dimensions (Door Open)	0.33 m H x 0.54 m W x 0.52 m D (1.07' H x 1.78' W x 1.71' D)
Jess's Weight	23 kg (50 lbs)
Computer Workstation Dimensions	Monitor/CPU: 0.43 m H x 0.57 m W x 0.21 m D (17" H x 22.4" W x 8.3" D) Keyboard: 0.03 m H x 0.43 m W x 0.13 m D (1" H x 17" W x 5" D) Mouse: 0.04 m H x 0.06 m W x 0.11 m D (1.4" H x 2.4" W x 4.5" D)

For indoor use only. Use up to altitudes of 1524 meters (5000 feet).

Table 2-2: Physical Specifications

Electrical Requirements

Jess requires a dedicated, grounded circuit capable of delivering the appropriate current and voltage for your country. The power requirements for select regions are listed below:

Region	Volts (AC)	Frequency (Hz)	Amps
US and Canada	120	60	4.2
Europe	240	50	2.1
Japan	100	50/60	5.0

Table 2-3: Power requirements.

In addition to the requirements listed above, we recommend the grounded circuits terminate at the receptacles, and receptacles must be located within 10 ft (3 m) of the instrument.

Environmental Requirements

Jess likes a consistent temperature in the lab. She works best when conditions stay within these ranges:

Requirement	Specification
Operating temperature range	18–24 °C (64–75 °F)
Operating humidity range	20–60% relative, non-condensing

Table 2-4: Environmental requirements.

Software and Computer Requirements

Jess brings her own computer to the lab with Compass for Simple Western software pre-installed. Compass software is used to run assays and analyze resulting data. Just in case you need it, a CD containing Compass for Simple Western also comes in the box. If you don't want to analyze your data at Jess's workstation in the lab, Compass software can also be installed on a separate workstation, such as your desktop computer. Your computer must meet the minimum requirements listed in the table below to run the software and process data.

Component	Minimum Recommended
Operating system	Windows 10 64-bit
Processor	Core i3
Memory	8 GB
Free disk space	100 GB

Table 2-5: Computer requirements.

General Guidelines and Information

Intended Use

NOTE: Jess is for research use only. Not for use in diagnostic procedures.

Lifting and Moving the System: Lift Jess Correctly

IMPORTANT

Take all the standard precautions when lifting or moving Jess. Since Jess weighs 23 kg (50 lbs), you should not lift the instrument by yourself. Two people should lift the instrument onto the lab bench. Do not lift the instrument by holding the door or door hinge.

Chapter 3:

Jess

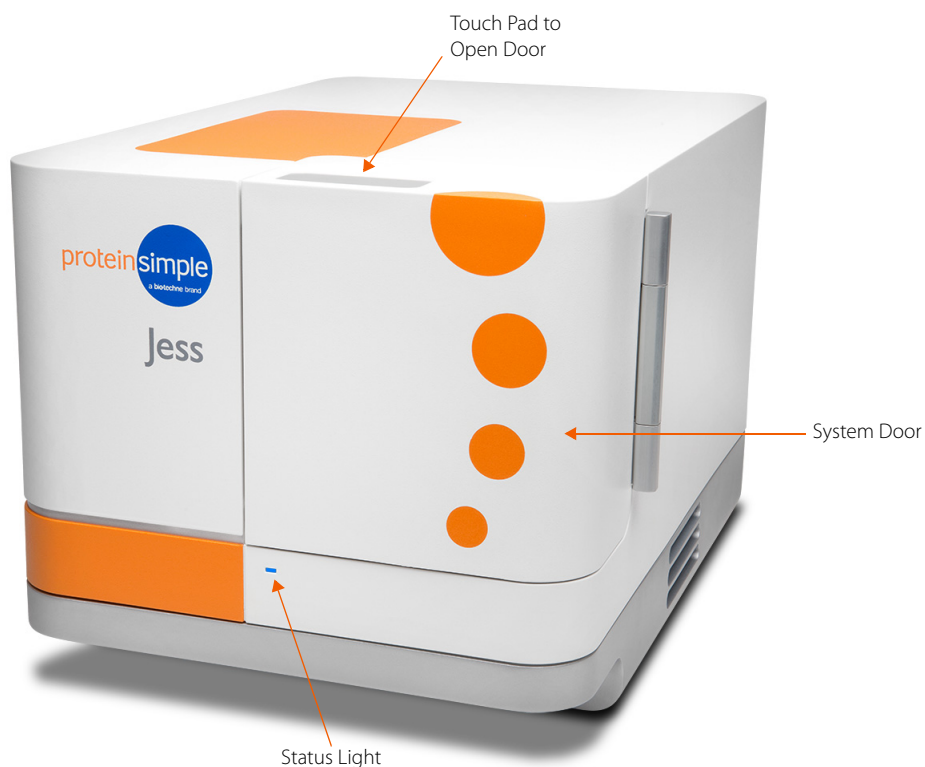
Chapter Overview

- Instrument Overview

Instrument Overview

Jess's individual hardware components are described in this section.

External Components



System Door

Jess's door gives you access to the inside of the instrument to load the blot cartridge or capillary cartridge and pre-filled plate. To open the door, make sure that you see a steady blue LED on the front, then touch the small silver touch pad on the top of Jess's door. To close, push the door until you feel Jess pull it closed.

NOTE: Jess's door must be closed before starting a run.

Status Lights

The LED on Jess's front panel provides you with status updates:

- **Start-up (magenta):** You've turned on the power and the instrument is warming up.
- **Ready (steady blue):** Jess is powered on and ready for use.
- **Opening Door (long blue flash followed by blue pulses):** Jess's door is opening.
- **Running (pulsing blue):** Jess is running an assay.
- **Trying to Open Door While Running (red flash):** Jess can't open the door when she's running.
- **Error (steady red):** Jess has detected an error. To get more information, check the Status window of the Run Summary Screen in Compass for Simple Western.



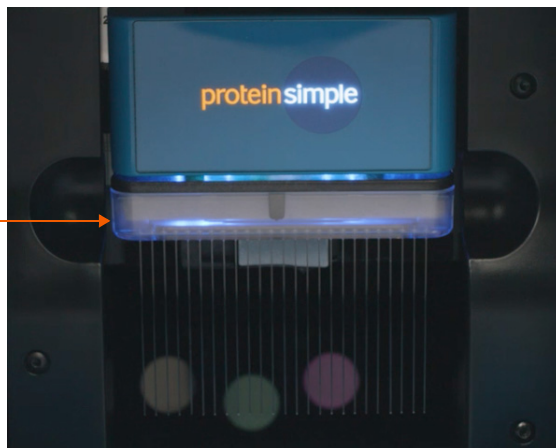
Internal Components

Cartridge Holder

The cartridge holder will hold:

- The 25-Capillary Cartridge (P/N PS-CC01)
- The 13-Capillary Cartridge (P/N PS-CC02)
- The Fluorescent Capillary Cartridge, 13x (P/N 009-400)
- The Fluorescent Capillary Cartridge, 25x (P/N 009-401)
- The Blot Cartridge (PN 004-651) containing a loaded membrane

Cartridge Holder
(Capillary)

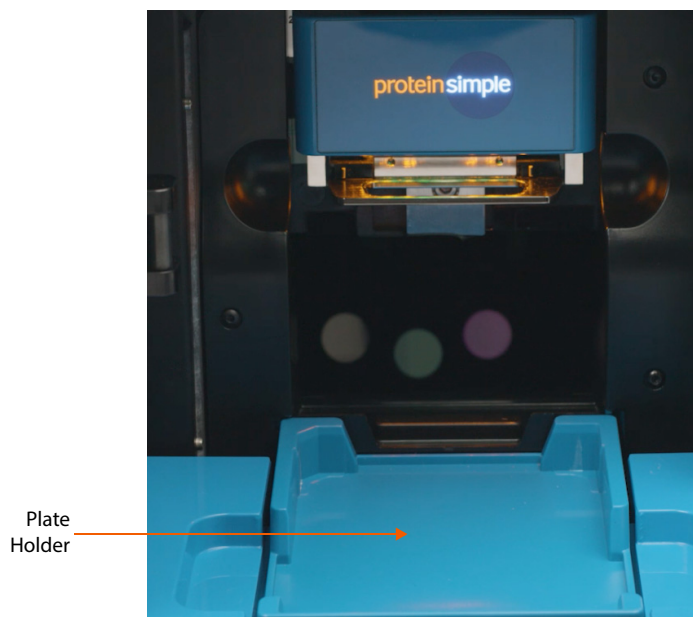


Cartridge Holder
(Blot)



Plate Holder

The plate holder holds the pre-filled plate which contains samples and assay reagents.



Sample plates should be inserted into the plate holder so that the A1 well position is aligned with the upper left corner of the tray.



NOTES:

Remove the lid and seal from the plate immediately before inserting into the instrument.

When inserting the sample plate, make sure the plate is firmly seated and level in the tray. Plates that aren't level can interfere with the movement of the plate holder.

Rear Panel

Located on Jess's rear panel is the power entry, power switch and the network connection port.



- **System Power** - The main system power components consist of the power switch and power input.

!WARNING!

Only use the power supply cord provided with Jess. If the cord is damaged, please contact ProteinSimple Technical Support toll-free in the US and Canada at 1-888-607-9692 (option 3).

!WARNING!

You can't replace any parts except the power entry fuse.

!WARNING! SHOCK HAZARD

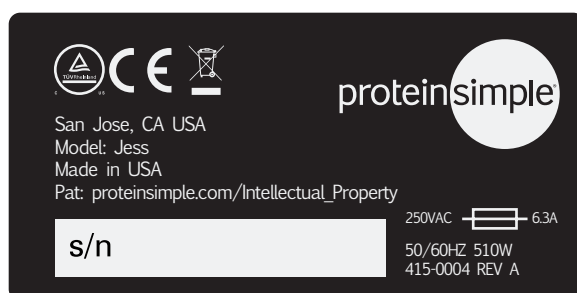
Disconnect the power cord from the power input to disconnect power to the instrument.

- **Connect to PC** - A 10/100/BASE-T Ethernet (RJ-45 connector) is used to connect Jess to a computer.

NOTE: Serial numbers are used to identify individual instruments on the network.

System Label

A system label is also located on Jess's rear panel. It includes the ProteinSimple location, system model, power requirements, serial number and certification markings.



Chapter 4:

Operating Jess

Chapter Overview

- Before You Throw the Switch
- Power Up
- Running Immunoassays
- Imaging a Blot
- Self Test
- Viewing and Changing System Properties
- Viewing Error and Test Logs
- Status Modes
- Shutdown

Before You Throw the Switch

Ensure that everyone using Jess has:

- Received instruction in general safety practices for laboratories.
- Received instruction in specific safety practices for Jess.
- Received instruction on handling of biohazards (if biohazardous materials are to be used on Jess).
- Read and understood all related SDS documentation.
- Completed in-person or virtual training provided by ProteinSimple
- Review door opening/closing instructions.
- Visited the Bio-Techne Training Academy (<https://academy.bio-techne.com/learn/signin>) and completed Jess and RePlex courses.

Power Up

1. Turn on the computer connected to Jess.
2. Turn on the main power switch located on the rear panel.
3. Wait for Jess to initialize.
4. Double-click the Compass for Simple Western software icon to open the application.
5. Connect to the Jess instrument.
6. Run the Self Test.

Running Immunoassays

Step 1 - Get Ready

1. Create or open your assay file in Compass for Simple Western.
2. Prepare the assay plate following the procedure in the product insert.

NOTE: The first capillary in the cartridge has been optimized for running the ready-to-use biotinylated ladder. Using it for a sample may increase your assay variability.

3. Open a capillary cartridge package and insert the cartridge into the cartridge holder. The light in the cartridge holder will change from orange to blue when inserted correctly.

4. Remove the plate lid and seal and place the assay plate into the plate holder.
5. Click **Start**.

IMPORTANT

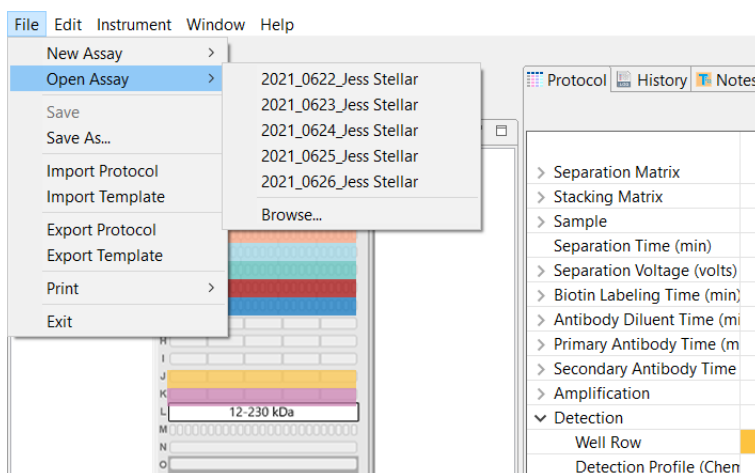
Capillaries are light sensitive. Keep the cartridge in the sealed package until you are ready to insert the capillary cartridge into the instrument.

To prevent well evaporation and to get the best results, keep a lid on the assay plate until you are ready to use it. Once you've pipetted your sample and reagents into the plate, it can't be stored for later use.

Step 2 - Start the Run

You can start an immunoassay two ways depending on whether you want to run an assay using existing parameters or set up a new assay.

1. To start a new run with an existing assay:
 - a. Select **File** in the main menu and click **Open Assay**.



- b. A list of the last five assays opened will display. Select one of these assays or click **Browse** to open the Assay folder and select a different one.
2. To start a run with a new assay, select **File** in the main menu and then click **New Assay**.
 - a. **Standard Immunoassays** - From the pop-up window, select the **Assay Type** (Chemiluminescence, Fluorescence and/or Protein Normalization).

New Jess Assay

☐ RePlex ☐ Stellar

Immunoassay

☒ Chemiluminescence

☐ Fluorescence

☐ Protein Normalization

Size Range

☐ 2-40 kDa

☒ 12-230 kDa

☐ 66-440 kDa

Cartridge

☒ 25

☐ 13

OK Cancel

b. RePlex Assays:

To run two immunoassays - Select any combination of chemiluminescence or fluorescence for Probes 1 and 2. For example:

New Jess Assay

☒ RePlex ☐ Stellar

Immunoassay

	Probe 1	Probe 2
Chemiluminescence	☒	☐
Fluorescence	☐	☒

☐ Total Protein

Size Range

☐ 2-40 kDa

☒ 12-230 kDa

☐ 66-440 kDa

Cartridge

☒ 25

☐ 13

OK Cancel

New Jess Assay

☒ RePlex ☐ Stellar

Immunoassay

	Probe 1	Probe 2
Chemiluminescence	☐	☐
Fluorescence	☒	☒

☐ Total Protein

Size Range

☐ 2-40 kDa

☒ 12-230 kDa

☐ 66-440 kDa

Cartridge

☒ 25

☐ 13

OK Cancel

To run one immunoassay and one Total Protein assay - Select **Total Protein**, then select any combination of chemiluminescence or fluorescence for Probe 1. Probe 2 will be used for the Total Protein assay. For example:

New Jess Assay

☒ RePlex ☐ Stellar

Immunoassay

	Probe 1	Probe 2
Chemiluminescence	☒	☐
Fluorescence	☐	☐

☒ Total Protein

Size Range

☐ 2-40 kDa

☒ 12-230 kDa

☐ 66-440 kDa

Cartridge

☒ 25

☐ 13

OK Cancel

New Jess Assay

☒ RePlex ☐ Stellar

Immunoassay

	Probe 1	Probe 2
Chemiluminescence	☒	☐
Fluorescence	☒	☐

☒ Total Protein

Size Range

☐ 2-40 kDa

☒ 12-230 kDa

☐ 66-440 kDa

Cartridge

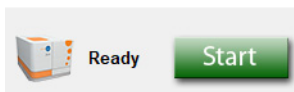
☒ 25

☐ 13

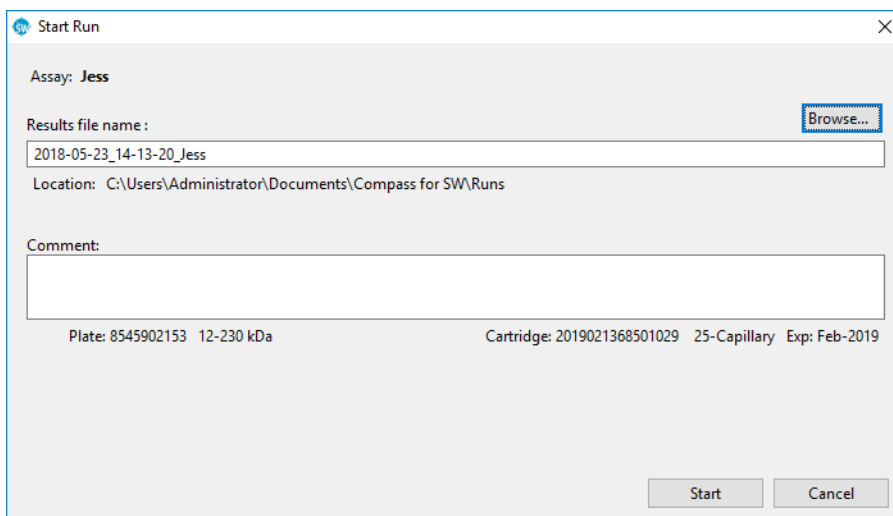
OK Cancel

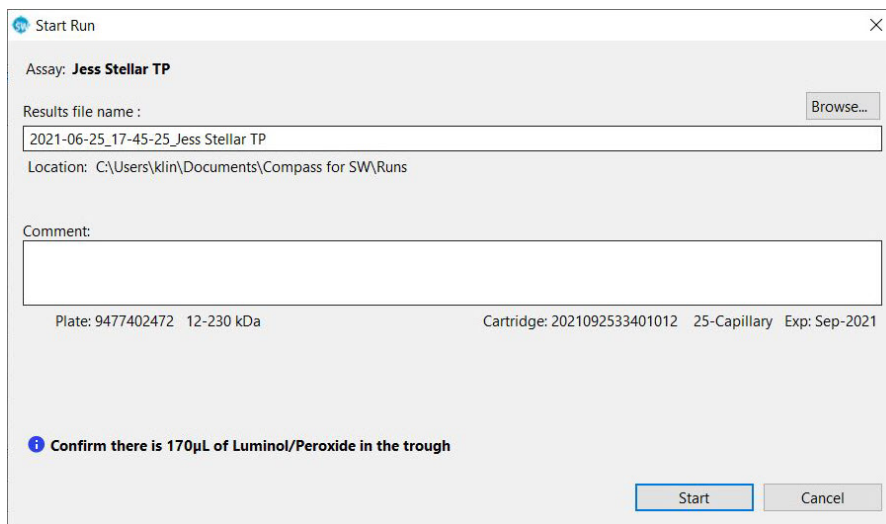
NOTE: The following RePlex Assay combinations are currently validated on Jess: Chemiluminescence + chemiluminescence, chemiluminescence + Total Protein, chemiluminescence/NIR fluorescence + Total Protein, NIR fluorescence + NIR fluorescence, and NIR fluorescence + chemiluminescence.

- c. Select a **Size Range** (2-40 kDa, 12-230 kDa or 66-440 kDa) and a **Cartridge** (either the 25 or 13 Capillary Cartridge).
- d. The **Start** button will display, which means an assay is already loaded.



- e. Go to the Assay screen and make sure it's the assay you want to use. If not, select **File** in the main menu, click **Open Assay**, and select the correct one.
3. Click **Start**. The Start Run window for immunoassays displays with the default run file name and location. In the example below, Start Run windows for a standard Immunoassay and a RePlex Assay are shown. Click **Browse** if you want to save it in a different location. Compass for Simple Western will remember the last save location by default. At this time, there is no option to set the default save location in the software.

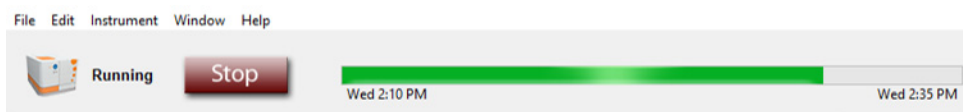
The screenshot shows a 'Start Run' dialog box. At the top, it says 'Assay: Jess'. Below that, 'Results file name:' is followed by a text box containing '2018-05-23_14-13-20_Jess' and a 'Browse...' button. The 'Location:' is 'C:\Users\Administrator\Documents\Compass for SW\Runs'. There is a 'Comment:' text box below that. At the bottom, it displays 'Plate: 8545902153 12-230 kDa' and 'Cartridge: 2019021368501029 25-Capillary Exp: Feb-2019'. At the very bottom are 'Start' and 'Cancel' buttons.



The 'Start Run' dialog box contains the following fields and information:

- Assay:** Jess Stellar TP
- Results file name:** 2021-06-25_17-45-25_Jess Stellar TP (with a 'Browse...' button)
- Location:** C:\Users\klin\Documents\Compass for SW\Runs
- Comment:** (empty text box)
- Plate:** 9477402472 12-230 kDa
- Cartridge:** 2021092533401012 25-Capillary Exp: Sep-2021
- Confirmation:** Confirm there is 170µL of Luminol/Peroxide in the trough
- Buttons:** Start and Cancel

Click **Start** to begin the run. Jess's status will change to Running, the Start button will change to Stop and the Run Progress Bar will appear:



Once she's started, Jess will run all your samples to completion in about 3 hours depending on the assay. To check on the time remaining, click the Run Summary tab in the upper right corner of the screen.

NOTE: Jess will continue to run even if Compass for Simple Western is closed. Always check the status light to confirm whether Jess is performing a run.

Step 3 - Post-Run Procedures

When the run is done, you'll need to:

1. Remove the capillary cartridge.
2. Remove the sample plate.

Capillary and sample plate disposal depends on the samples that were assayed. If you aren't sure what your sample origins are, we recommend used cartridges and plates be disposed of as biohazard waste.

!WARNING! SHARPS HAZARD

Capillaries may present a potential sharps hazard. Dispose of used capillaries according to your institution's sharps disposal policy.

**!WARNING! BIOHAZARD**

Capillary cartridges and sample plates should be handled by procedures recommended in the CDC/NIH manual: Biosafety in Microbiological and Biomedical Laboratories (BMBL). The manual is available from the U.S. Government Printing Office or online at <http://www.cdc.gov/biosafety/publications/bmbl5/>.

Depending on the samples used, the capillary cartridge and plate may constitute a biohazard. Dispose of the cartridge and plate in accordance with good laboratory practices and local, state/provincial and national environmental and health regulations. Read and understand the Safety Data Sheets (SDSs) provided by the manufacturers of the chemicals before you store, handle or dispose of chemical waste.

Stopping a Run

1. To stop an immunoassay, click **Stop**. When the run stops, the Start button will reappear and you'll start a process that plugs the capillaries in the cartridge. The stopped status, date and time will display in the Run Summary screen.

NOTE: You should only stop a run in the event of an emergency. Because the capillaries are plugged when a run is stopped, the capillary cartridge and plate may not be reused.

2. Once that's done, you can remove the capillary cartridge and plate and discard them. Do not reuse plates or capillary cartridges once a run has been started regardless of run status.

Imaging a Blot

Step 1 - Get Ready

1. Open Compass for Simple Western software on your desktop.
2. Make sure that the software is connected to the instrument.

3. Prepare the membrane and assemble the blot cartridge following the product insert.
4. Insert the blot cartridge containing the membrane into the cartridge holder. The light in the cartridge holder will change from orange to blue when inserted correctly.
5. Close the instrument door by gently pushing it until you feel Jess pull it closed. Jess automatically detects the blot cartridge and displays a preview image in the Start Run window for imaging.

NOTE: Jess's door must be closed before starting image acquisition.

Step 2 - Start the Run

1. Edit the settings in the Exposure table:
 - **To add an exposure:** Click **Add** then select the exposure time to change it.
 - **To remove an exposure:** Select the exposure and click **Remove**.
 - **To edit exposure time:** Click on an exposure and enter a new time.
2. Check the **Markers** box if the blot contains a molecular weight ladder.



3. Change the file name and location if desired, and click **Start** to begin imaging.

Step 3 - Post-Run Procedures

When imaging is done, you'll need to:

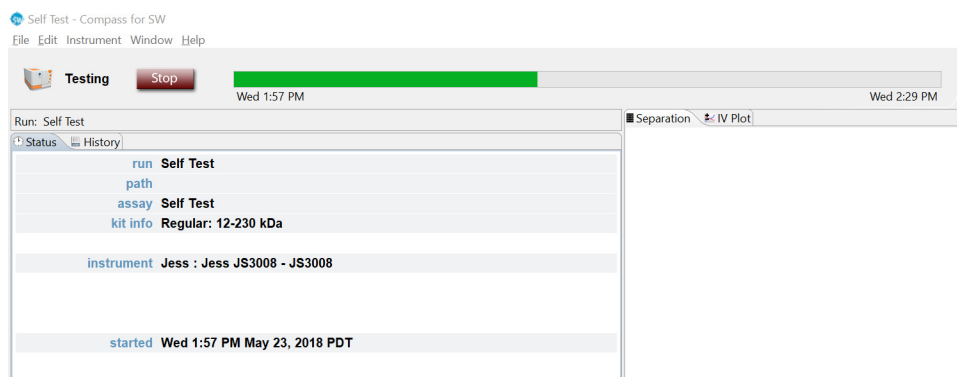
1. Remove the blot cartridge.
2. Remove your membrane and clean the blot cartridge by rinsing it thoroughly with water. Dry with a lint-free wipe.
3. Wipe down the area under the blot holder inside the instrument using a dry lint-free wipe.
4. Keep the blot cartridge in a clean, dry area and protected from dust.

Stopping a Run

To stop an imaging run, click **Stop** and confirm your choice. When the run stops, the Start button will reappear so you can start another run when you're ready.

Self Test

Jess can perform a set of self tests to make sure she's operating properly. To start the testing, select **Instrument** in the main menu and click **Self Test**. Testing will take about 30 minutes.



NOTE: We recommend running the self test before you begin preparing your samples, reagents and the assay plate.

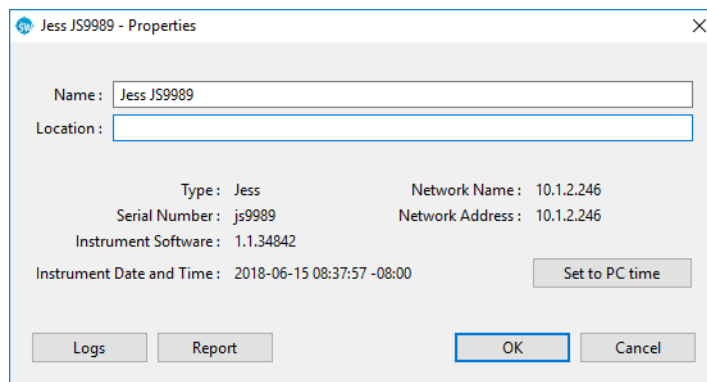
To view the log when the test is done, select **Instrument**, click **Properties** and click **Logs**. Select the test log you would like to view and click **View**.

To view the self test results click **Report**.

Viewing and Changing System Properties

From the Compass for Simple Western main menu, select **Instrument** and click **Properties** to see Jess's system properties:

- Name
- Location
- Type
- Serial number
- Instrument software version (firmware)
- Network name and address
- Date and time of the instrument clock



- **To change system name or location:** Click in the name or location boxes and enter the new information.
- **To sync the instrument clock with the computer:** Click **Set to PC time**.

Viewing Error and Test Logs

From the Compass for Simple Western main menu, select **Instrument** and click **Properties**. To view a log, click **Logs**.

Jess JS9989 - Properties

Name : Jess JS9989

Location :

Type : Jess

Serial Number : js9989

Instrument Software : 1.1.34842

Network Name : 10.1.2.246

Network Address : 10.1.2.246

Instrument Date and Time : 2018-06-15 08:37:57 -08:00

Set to PC time

Logs

Report

OK

Cancel

The table that displays shows the list of Self Test logs. You can also select **Command Log** or **Instrument Log** to view and save logs related to the instrument and software.

Instrument Logs

Self Tests	Status
2018-06-25 11:24	PASSED
2018-06-18 09:20	PASSED
2018-06-11 10:02	PASSED
2018-06-04 09:34	PASSED
2018-05-29 10:39	PASSED
2018-05-24 15:32	PASSED
2018-05-21 09:37	PASSED
2018-05-14 08:19	PASSED
2018-05-07 09:31	PASSED
2018-04-30 09:37	PASSED
2018-04-23 11:26	PASSED
2018-04-16 08:29	PASSED
2018-04-12 09:58	PASSED
2018-04-02 11:44	PASSED
2018-04-02 09:07	PASSED
2018-03-30 18:59	PASSED
2018-03-27 10:35	PASSED
2018-03-19 10:24	PASSED
2018-03-13 11:12	PASSED
2018-03-06 14:37	PASSED
2018-02-26 12:06	PASSED

Command Log

Instrument Log

View

OK

Status Modes

The status bar displays status, buttons and progress bars.

- **Ready/Start button** - Jess is ready and an assay is loaded. Click **Start** to begin a run.
- **Running/Stop button** - Jess is running an assay. The run name, time it started and when it will be done are shown in the run progress bar. Click **Stop** to stop the run.
- **Error/Reset button** - Jess has detected an error. You can go to the **Status** window in the **Run Summary** screen to get more details. Once you've been able to correct the error, click **Reset**.

Shutdown

1. Make sure to remove any plates, cartridges and blots before shutting down the system.
2. Close Compass for Simple Western and shut down Jess's computer.
3. Jess should remain on unless you think she won't be used for more than a week. In that case, you can just turn the power off.

Chapter 5:

Maintenance and Troubleshooting

Chapter Overview

- Software Updates
- Instrument Software (Embedded) Updates
- Maintenance
- Cleaning
- Basic Troubleshooting
- Spare Parts

Software Updates

To check for software updates, go to Compass for Simple Western, select **Help** in the main menu and click **Check for Updates**.

Instrument Software (Embedded) Updates

To view the version installed, open Compass for Simple Western, select **Instrument** in the main menu, then click **Properties**. The current version of system software will be displayed.

To check for embedded updates, go to Compass for Simple Western, select **Instrument** in the main menu, then **Update** and select **Network**. If you are not on the public internet, contact ProteinSimple Technical Support for assistance on how to obtain the latest update.

Maintenance

Daily

The following cleaning procedures should be performed on a daily basis.

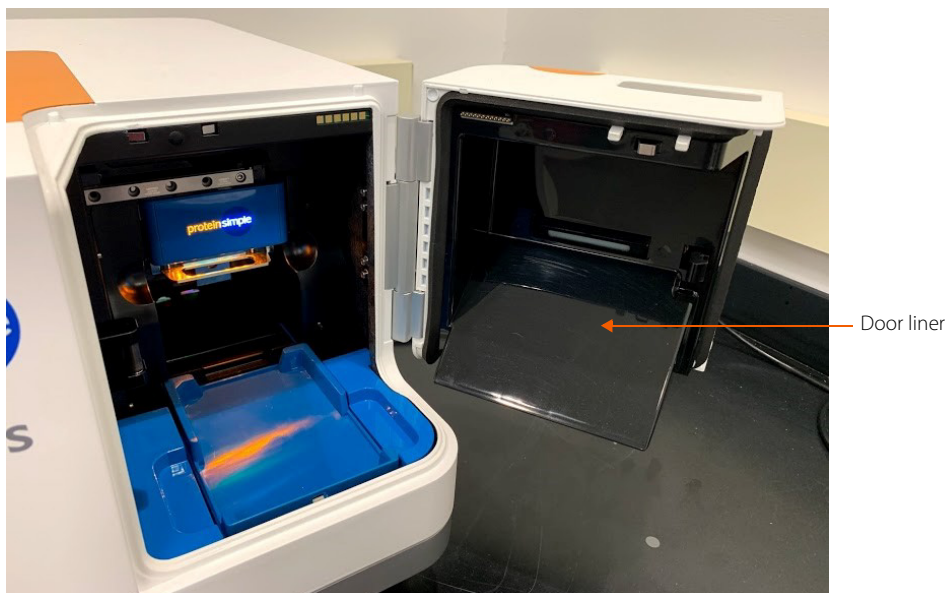
Clean the Cartridge

- **For Capillary Cartridge:** Dispose of the used capillary cartridge and sample plate after each run.
- **For Blot Cartridge:** Use a lint-free cloth and wipe down the glossy surface to prevent image artifacts. Also be sure to wipe down the black door liner prior to use to prevent image artifacts and high background.

Clean the Door Liner

The door liner must be cleaned before every run with Jess to avoid fluorescence of contaminants during image capture.

1. Open Jess' door to reveal the door liner (glossy black finish area behind the door).



2. Spray 70% isopropyl alcohol onto one of the provided Polyester Cleanroom lint-free wipes (PN 104-0031) or equivalent.
3. Carefully wipe down the door liner with the moist wipe. Avoid touching the door liner with your hands.
4. Wait 30 seconds for the solvent to evaporate before using Jess.

NOTE: If your instrument is failing the Self Test due to background or filter checks, clean the door liner as instructed above. Also ensure your instrument is running software embedded version 2.0 or above. If the error persists, carefully clean the black tray located behind the blue plate holder. Be careful not to touch the lenses located at the very back of the unit. For further assistance, contact tech support at support@proteinsimple.com.

Yearly

We recommend Jess has annual preventive maintenance performed by an authorized ProteinSimple representative. Please contact your Simple Western Sales Specialist or Technical Support to schedule a visit toll-free in the US and Canada at 1-888-607-9692 (option 3).

Cleaning

- **Touch pad** - Clean as needed with a soft cloth lightly moistened with dilute detergent.

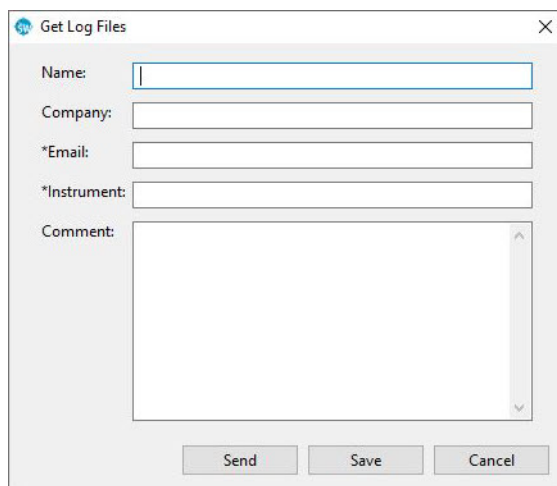
Basic Troubleshooting

Problem	Solution
Jess doesn't power on	• Make sure the power cord is still securely plugged into the outlet and on the back of the instrument. • Check and replace the fuse if needed.
Jess's door won't open	• Remove the cap from the lower left side under Jess's base. Use your finger to push upward to manually release and open the door. Replace the cap.
Red error light	• Power Jess down and back on. If the error persists, contact Technical Support at support@proteinsimple.com
Purple/magenta error light	• This means Jess can't initialize or the hard drive has failed. Contact Technical Support at support@proteinsimple.com

Problem	Solution
Jess won't connect to the computer	• Confirm the static IP address for the ethernet port is set to 172.30.1.2. • Use a direct ethernet to ethernet connection. USB to ethernet adapters can be unreliable. • Refer to the installation guide for more detailed instructions or contact Technical Support at support@proteinsimple.com
I can't access my data	• By default, the first run file will save to C:\Users\Documents\Compass for Simple Western\Runs. For subsequent runs, the software will use the last location saved. If the last location can't be accessed, the save path will default to C:\Users\Documents\Compass for Simple Western\Runs. • If you don't see your file in the default folder, connect to Jess's embedded drive. From the Compass for Simple Western main menu, select Instrument > Runs... <i>NOTE: Run files are organized chronologically.</i>

For Jess and Simple Western assay troubleshooting information, please contact ProteinSimple Technical Support toll-free in the US and Canada at (888) 607-9692 (option 3), support@proteinsimple.com or visit <https://www.bio-technique.com/resources/literature>. You can also contact your local Field Application Scientist for help.

If the instrument is connected to the internet, send log files directly to Technical Support through the **Help** menu using the **Export Logs** feature.

A screenshot of a 'Get Log Files' dialog box. The dialog has a title bar with a blue icon and a close button. It contains five input fields: 'Name:' (a single-line text box), 'Company:' (a single-line text box), '*Email:' (a single-line text box), '*Instrument:' (a single-line text box), and 'Comment:' (a multi-line text area with a vertical scrollbar). At the bottom, there are three buttons: 'Send', 'Save', and 'Cancel'.

Spare Parts

Jess doesn't have any user replaceable parts except for the power fuse:

- **Jess 250 V, 6.3 A fuse** - P/N 011-766

A full list of Jess consumables can be found at <https://www.bio-techne.com/instruments/simple-western>.

Chapter 6:

General Information

Chapter Overview

- Compliance
- Safety Guidelines
- Customer Service and Technical Support
- Legal Notices

Compliance

Jess complies with:

- **UL 61010-1:2001:** Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements (US)
- **EN 61010-1:2001:** Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements (EU)
- **CAN/CSA 22.2 No. 61010-1-04:** Safety requirements for electrical equipment for measurement, control and laboratory use - Part 1: General requirements (CA)
- **EN 61326-1:2013:** Electrical equipment for measurement, control and laboratory use. EMC Requirements. General requirements (EU)



Safety Guidelines

!WARNING!

If Jess is not used as specified by ProteinSimple, overall safety will be impaired.

!WARNING!

If Jess is damaged and doesn't function properly, stop the instrument safely and contact ProteinSimple Technical Support right away toll-free in the US and Canada at 1-888-607-9692 (option 3).

!WARNING!

You cannot replace or service any parts.

CAUTION

Avoid using Jess in ways not specified by ProteinSimple. Although the instrument has been designed to protect you, this protection may not be effective if the instrument isn't used properly.

Chemical Hazards

!WARNING! CHEMICAL HAZARD

Some chemicals used can be potentially hazardous, and can cause injury or illness.

- Read and understand the Safety Data Sheets (SDSs) provided by the chemical manufacturer before you store, handle or work with any chemicals or hazardous materials.
- Minimize contact with and inhalation of chemicals. Wear appropriate personal protective equipment when handling chemicals (e.g., safety glasses, gloves, clothing). For additional safety guidelines, consult the SDS.
- Do not leave chemical containers open.
- Check regularly for chemical leaks or spills. If a leak or spill occurs, follow the manufacturer's cleanup procedures as recommended by the SDS.
- Comply with all local, state/provincial and national laws and regulations related to chemical storage, handling and disposal.

Chemical Waste Hazards



!WARNING! BIOHAZARD

Capillary cartridges and sample plates should be handled by procedures recommended in the CDC/NIH manual: Biosafety in Microbiological and Biomedical Laboratories (BMBL). The manual is available from the U.S. Government Printing Office or online at <http://www.cdc.gov/biosafety/publications/bmbl5/>.

Depending on the samples used, the capillary cartridge and plate may constitute a bio-hazard. Dispose of the cartridge and plate in accordance with good laboratory practices and local, state/provincial and national environmental and health regulations.

- Read and understand the Safety Data Sheets (SDSs) provided by the manufacturers of the chemicals in a waste container before you store, handle or dispose of chemical waste.
- Minimize contact with chemical waste. Wear appropriate personal protective equipment when handling chemicals (e.g., safety glasses, gloves, clothing).

Safety Data Sheets

Some chemicals used with Jess may be listed as hazardous. Warnings are displayed on the labels of all chemicals when hazards exist.

Safety Data Sheets (SDSs) provide users with safety information needed to store, handle, transport and dispose of the chemicals safely. We recommend updating laboratory SDS records periodically.

SDSs for ProteinSimple reagents are available online at <https://www.bio-techne.com/instruments/simple-western> or by calling toll-free in the US and Canada 1-888-607-9692. Otherwise, call the chemical manufacturer directly or visit their web site.

Instrument Safety Labels

The following safety labels are located on Jess. Each label will display a safety alert symbol indicating a potential safety hazard.

Symbol	Description
	Risk of Electric Shock.
	Refer to Jess User Guide before proceeding.
	Danger of hazardous waste. Use caution in these areas. This warning only applies if using hazardous material. Jess reagents are not considered hazardous waste. If you are using hazardous materials, please contact your field service representative to place labels in the appropriate locations.

Customer Service and Technical Support

Telephone

(408) 510-5500

(888) 607-9692 (toll-free in the US and Canada)

Fax

(408) 510-5599

E-mail

support@proteinsimple.com

Web

<https://www.bio-technique.com/instruments/simple-western>

Address

ProteinSimple
3001 Orchard Parkway
San Jose, CA 95134
USA

Legal Notices

NOTE: Read the Legal Notices carefully before using Jess.

Jess Disclaimer of Warranty

EXCEPT AS EXPRESSLY PROVIDED IN ANY ProteinSimple SOFTWARE LICENSE AGREEMENT OR QUOTATION, THE PRODUCTS SOLD AND SERVICES PROVIDED BY ProteinSimple ARE PROVIDED ON AN "AS IS" AND "AS AVAILABLE" BASIS WITHOUT WARRANTY OF ANY KIND. ProteinSimple AND ITS SUPPLIERS DO NOT WARRANT THE SECURITY, PRIVACY OR ACCURACY OF ANY DATA PROVIDED VIA THE PRODUCTS OR SERVICES, AND YOU AGREE THAT THE USE OF ANY SUCH DATA BY YOU IS AT YOUR SOLE RISK. TO THE MAXIMUM EXTENT ALLOWED UNDER APPLICABLE LAW, ProteinSimple AND ITS SUPPLIERS DISCLAIM ANY AND ALL WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING, WITHOUT LIMITATION, ANY WARRANTY OF MERCHANTABILITY, TITLE, NON-INFRINGEMENT OR FITNESS FOR A PARTICULAR PURPOSE.

Compass for Simple Western Software and Authorization Server License Agreement

IMPORTANT - PLEASE READ CAREFULLY THE TERMS OF THIS COMPASS SOFTWARE AND AUTHORIZATION SERVER LICENSE AGREEMENT ("AGREEMENT"). BY CLICKING ON THE "I AGREE" BUTTON, (1) YOU ACKNOWLEDGE THAT YOU HAVE READ, UNDERSTAND AND AGREE TO BE BOUND BY THIS AGREEMENT AND (2) YOU REPRESENT THAT YOU HAVE THE AUTHORITY TO ENTER INTO THIS AGREEMENT, PERSONALLY OR IF YOU HAVE NAMED A COMPANY AS CUSTOMER, ON BEHALF OF THAT COMPANY (YOU OR ANY SUCH COMPANY, THE "CUSTOMER"), AND TO BIND THE CUSTOMER TO THE TERMS OF THIS AGREEMENT. IF YOU DO NOT AGREE TO ALL TERMS AND CONDITIONS OF THIS AGREEMENT, OR IF YOU DO NOT HAVE SUCH AUTHORITY, YOU SHOULD CLICK ON THE "CANCEL" BUTTON TO DISCONTINUE THE DOWNLOAD OF THE LICENSED SOFTWARE.

1. Definitions

- 1.1 **"Authorized Use Parameters"** means the following usage restrictions, which restrict the operation of the Licensed Software to a particular set of conditions: Customer shall (a) limit simultaneous use of the Licensed Software to a maximum of ten (10) Authorized Users; and (b) use the Licensed Software only in connection with the accompanying System purchased by Customer pursuant to the System Quotation and located at the Site.
- 1.2 **"Authorized User"** means one (1) User who initiates the execution of the Licensed Software and/or interacts with or directs the Licensed Software in the performance of its functions. Multiple Authorized Users may work simultaneously with one installation of the Licensed Software, as on a server, or they may each have their own installation on single-user machines, or a mix of these, provided that in all cases the total number of simultaneous Users does not exceed the applicable Authorized Use Parameters.
- 1.3 **"Company"** means ProteinSimple.
- 1.4 **"Documentation"** means Company's then-current manuals, guides and online help pages, if any, applicable to the Licensed Software and made generally available by Company to its customers.
- 1.5 **"Enterprise"** means those organizations that have Internet addresses located at top level and second-level domain names set forth in the System Quotation.
- 1.6 **"Error"** means a reproducible error in the Licensed Software that prevents such Licensed Software from operating substantially in accordance with its Documentation.
- 1.7 **"Executable Code"** means the fully compiled binary version of Licensed Software that can be executed by a computer and used by an end user without further compilation.
- 1.8 **"Intellectual Property Rights"** means all copyrights, trade secrets, patents, patent applications, moral rights, contract rights and other proprietary rights, but specifically excluding any trademarks or service marks.

- 1.9 **"Licensed Software"** means the Compass for Simple Western software program in Executable Code form, and any Updates that Company makes available to Customer in accordance with this Agreement.
- 1.10 **"Site"** means the facility or campus set forth in the System Quotation.
- 1.11 **"System"** means the proprietary NP1000, NP100, Simon, Sally, Peggy, Wes, Jess, Sally Sue and Peggy Sue protein analysis system or any future model or successor thereto that is provided to Customer by Company pursuant to a separate agreement between the parties (the "System Quotation").
- 1.12 **"Update"** means those releases of the Licensed Software that Company provides to customers to correct Errors, fix bugs, or create minor improvements, incremental features or enhancements of existing features which Company designates by a change in the number to the right of the first or second decimal point. Updates do not include those releases of the Licensed Software that provide substantial new features or additional functionality which Company designates by a change in the number to the left of the first decimal point.
- 1.13 **"User"** means any individual that has an e-mail address within the Enterprise.

2. License and Restrictions

- 2.1 **License Grant.** Subject to the terms and conditions of this Agreement and the payment of the required fees set forth in the System Quotation, Company grants to Customer a nontransferable, nonexclusive, royalty-free, revocable, worldwide license (without the right to sublicense) to (a) install the Licensed Software on any computer located at any Site; (b) use, execute and display the Licensed Software, in Executable Code form only; and (c) copy the Licensed Software and Documentation, solely as necessary to support Authorized Users; in each of the foregoing, solely in accordance with the Documentation and the Authorized Use Parameters. Customer agrees that it will comply with the Authorized Use Parameters.
- 2.2 **License Restrictions.** Customer acknowledges that the Licensed Software and its structure and organization constitute valuable trade secrets of Company. Accordingly, the license granted in this Agreement is subject to the following restrictions: Customer and its Authorized Users (a) may not reverse engineer, disassemble, decompile or otherwise attempt to derive the source code of Licensed Software; (b) may not modify, adapt, alter, translate or create derivative works from the Licensed Software; (c) may not merge the Licensed Software with other software; (d) may not use the Licensed Software in any service bureau or time-sharing arrangement, license, sell, rent, lease, transfer, assign, distribute, host, outsource, disclose or otherwise commercially exploit or make the Licensed Software or Documentation available to any third party; (e) shall only make that number of exact copies of the Licensed Software and Documentation as delivered by Company that are necessary to support Customer's use of the Licensed Software in accordance with this Agreement; (f) shall include any titles, trademarks and copyright and restricted rights notices that are included on or in the Licensed Software as delivered by Company on and in any copies of the Licensed Software that it makes; and (g) shall ensure that Customer's use of the Licensed Software does not exceed the scope of the license that Customer has purchased pursuant to this Agreement.
- 2.3 **Open Source Software.** Certain items of independent, third-party code may be included in the Licensed Software that are subject to open source licenses ("Open Source Software"). Such Open Source Software is licensed under the terms of the license that accompanies such Open Source Software. Nothing in this Agreement limits Customer's rights under, or grants Customer rights that supersede, the terms and conditions of any applicable end user license for such Open Source Software. In particular, nothing in this Agreement restricts Customer's right to copy, modify and distribute such Open Source Software that is subject to the terms of such open source licenses.
- 2.4 **Ownership.** Company reserves all rights not expressly granted to Customer in this Agreement. Without limiting the generality of the foregoing, Customer acknowledges and agrees that, except as expressly set forth in this Agreement, Company and its suppliers retain all Intellectual Property Rights, title and interest in and to the Licensed Software and Documentation.

3. Support and Maintenance Services

- 3.1 **Services.** Subject to Customer's payment of the Services fees, as set forth in the System Quotation, and to the terms and conditions herein, Company will use commercially reasonable efforts to provide to Customer the following support and maintenance services (the "Services") for the Licensed Software: (a) Company will answer technical questions concerning functions and features of the Licensed Software; (b) Company will provide Error verification, analysis and corrective efforts for the Licensed Software; and (c) Company will provide, without charge, Updates of the software released during the term of this Agreement. Customer will be responsible for providing, in a manner consistent with good industry practice, all Services to Users. Customer acknowledges that Company may not be able to correct all reported Errors. Any Update of the Licensed Software will be deemed part of the Licensed Software and Customer will use such Updates in accordance with the requirements and obligations in this Agreement.

- 3.2 **Service Conditions.** Company's obligation to provide the Services is conditioned on Customer: (a) notifying Company of any Error within a reasonable period of time; (b) providing Company all information relating to the Error; (c) providing access to the Licensed Software and Customer's facility where the Licensed Software is located and informing Company of any potential hazards which may be encountered while servicing the Licensed Software. Customer may contact Company via telephone toll-free in the US and Canada 1-888-607-9692 or e-mail at support@proteinsimple.com during the hours of 8:00 AM (Pacific Time) and 5:00 PM (Pacific Time) Monday through Friday, excluding holidays, to report any Error. A list of standard holidays will be provided to Customer upon request. Company shall have the right to determine in its sole discretion what corrective action Company will perform to support the Licensed Software. Company may subcontract the Services to a third party contractor provided that Company will be responsible for the third party contractor's compliance with this Agreement.
- 3.3 **Service Exclusions.** Company will not be obligated to provide the Services if (a) Company determines that an Error is caused by malfunction of any hardware (other than malfunction of the System) or third party software used with the Licensed Software; or (b) Customer has failed to incorporate the latest Update previously released to Customer.
4. **Warranty**
- 4.1 **Licensed Software Warranty.** Company warrants that the Licensed Software, as properly installed, and under normal use, will perform substantially in accordance with its Documentation during the Warranty Period. The "Warranty Period" for the Licensed Software begins on date Customer downloads the Licensed Software and ends twelve (12) months thereafter.
- 4.2 **Remedy.** If Customer notifies Company in writing during the Warranty Period of an Error, Company will, at its expense and as its sole obligation for any breach of the foregoing warranty, use commercially reasonable efforts to correct the Error or replace the Licensed Software. Any Error correction or replacement of the Licensed Software will not extend the original Warranty Period. The warranty and the remedies provided above will not apply to the Licensed Software if (a) Company determines that an Error is caused by accident, abuse, misuse, negligence, fire, earthquake, flood, other force majeure event, failure of electrical power, the use of unauthorized products or unauthorized repairs or modifications; (b) Company determines that an Error is caused during or as a result of delivery; (c) a problem arises from or is based on Company's compliance with Customer's specifications; or (d) Company determines that an Error is caused by malfunction of any hardware (other than malfunction of the System) or third party software used with the Licensed Software.
- 4.3 **Disclaimer.** THE WARRANTIES ABOVE ARE EXCLUSIVE AND IN LIEU OF ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED OR STATUTORY, INCLUDING WITHOUT LIMITATION THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE AND NONINFRINGEMENT.
5. **Limitation of Liability.** NEITHER COMPANY NOR ITS SUPPLIERS SHALL BE RESPONSIBLE OR LIABLE WITH RESPECT TO ANY SUBJECT MATTER OF THIS AGREEMENT OR TERMS OR CONDITIONS RELATED THERETO UNDER ANY CONTRACT, NEGLIGENCE, STRICT LIABILITY OR OTHER THEORY (A) FOR LOSS OR INACCURACY OF DATA, LOSS OF PROFITS OR COST OF PROCUREMENT OF SUBSTITUTE GOODS, SERVICES OR TECHNOLOGY, OR (B) FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES INCLUDING, BUT NOT LIMITED TO LOSS OF REVENUES AND LOSS OF PROFITS. COMPANY'S AGGREGATE CUMULATIVE LIABILITY HEREUNDER SHALL NOT EXCEED THE GREATER OF FIVE HUNDRED DOLLARS (\$500.00).
6. **Term and Termination**
- 6.1 **Term of Agreement.** The Agreement is effective on the date Customer downloads the Licensed Software and shall remain in effect until terminated by either party as provided in this section.
- 6.2 **Termination For Material Breach.** Either party may terminate this Agreement upon written notice if the other party materially breaches this Agreement and fails to cure such breach within thirty (30) calendar days following receipt of written notice from the other party specifying the breach in detail. Notwithstanding the foregoing, Company may immediately terminate this Agreement and all licenses granted hereunder if Customer breaches Section 2 (License and Restrictions) hereof or upon termination of the System Quotation. The foregoing rights of termination are in addition to any other rights and remedies provided in this Agreement or by law.
- 6.3 **Effect of Termination.** Upon termination of this Agreement (or termination or expiration of any license granted hereunder), all rights of Customer to use the Licensed Software and Documentation will cease and (a) all license rights granted under this Agreement will immediately terminate and Customer shall promptly stop all use of the Licensed Software and Documentation; (b) all Services will terminate immediately; (c) Customer shall promptly erase all copies of the Licensed Software from Customer's computers, and destroy all copies of the Licensed Software and Documentation on tangible media in Customer's possession or control or return such copies to Company; and (d) upon request by Company, Customer shall certify in writing to Company that it has returned or destroyed such Licensed Software and Documentation. The parties' rights and obligations under Sections 1 (Definitions), 2.4 (Ownership), 4.3 (Disclaimer), 5 (Limitation of Liability), 6 (Term and Termination), and 7 (General) shall survive termination of this Agreement.

7. General

- 7.1 **Assignment.** This Agreement and Customer's rights hereunder may not be assigned to any third party by Customer except with the prior written approval of Company. Any attempted assignment of this Agreement or any rights or obligations hereunder will be null and void.
- 7.2 **Governing Law.** This Agreement is made in, governed by, and shall be construed in accordance with the laws of the State of California, without regard to any conflicts of law principles that would result in application of laws of any other jurisdiction. The United Nations Convention on Contracts for the International Sale of Goods does not apply to this contract. Any legal action or other legal proceeding relating to this contract or the enforcement of any provision of this contract must be brought in any state or federal court located in Santa Clara County, California. Customer and Company expressly and irrevocably consents and submits to the jurisdiction of such courts.
- 7.3 **Injunctive Relief.** Customer acknowledges that the Licensed Software contains valuable trade secrets and proprietary information of Company, that any actual or threatened breach of this Agreement will cause harm to Company for which monetary damages would be an inadequate remedy, and that injunctive relief is an appropriate remedy for such breach.
- 7.4 **Modifications.** Company reserves the right to change the terms and conditions of this Agreement or its policies relating to the Licensed Software at any time. Company will notify Customer of any material changes to this Agreement by sending Customer an e-mail to the last e-mail address Customer provided to Company or by prominently posting notice of the changes on Company's website. Any material changes to this Agreement will be effective upon the earlier of thirty (30) calendar days following Company's dispatch of an e-mail notice to Customer or thirty (30) calendar days following Company's posting of notice of the changes on Company's website. These changes will be effective immediately for new users of our Licensed Software. Please note that at all times Customer is responsible for providing Company with its most current e-mail address. In the event that the last e-mail address that Customer has provided Company is not valid, or for any reason Company is not capable of delivering to Customer the notice described above, Company's dispatch of the e-mail containing such notice will nonetheless constitute effective notice of the changes described in the notice. If Customer does not agree with the changes to this Agreement, Customer must notify Company prior to the effective date of the changes that Customer wishes to terminate its license to the Licensed Software. Continued use of the Licensed Software, following notice of such changes, shall indicate Customer's acknowledgement of such changes and agreement to be bound by the terms and conditions of such changes.
- 7.5 **Severability.** In the event any provision of this Agreement is held to be invalid or unenforceable, the remaining provisions of this Agreement will remain in full force.
- 7.6 **Waiver.** The waiver by either party of any default or breach of this Agreement shall not constitute a waiver of any other or subsequent default or breach.
- 7.7 **Export.** Customer agrees not to export, reexport or transfer, directly or indirectly, any U.S. technical data acquired from Company, or any products utilizing such data, in violation of the United States export laws or regulations.
- 7.8 **Force Majeure.** Company shall not be liable, directly or indirectly, for any delay or failure in performance of any obligation under this Agreement, including any delivery obligation, where such delay or failure arises or results from a cause beyond Company's reasonable control, or beyond the reasonable control of Company's suppliers or contractors, including, but not limited to strike, boycott or other labor disputes, embargo, governmental regulation, inability or delay in obtaining materials, acts of God, war, earthquake, fire or flood. In the event of such force majeure, the time for delivery or other performance will be extended for a period equal to the duration of the delay caused thereby, provided that Company notifies Customer of the nature and duration of such force majeure event.
- 7.9 **Entire Agreement; Notice.** This Agreement constitutes the complete agreement between the parties and supersedes all prior or contemporaneous agreements or representations, written or oral, concerning the subject matter of this Agreement. Except as otherwise expressly provided in this Agreement, any modifications of this Agreement must be in writing and agreed to by both parties. Company may provide any notice to Customer by e-mail. Customer may provide notice to Company by sending an e-mail to info@proteinsimple.com or a letter by United States mail to ProteinSimple, 3001 Orchard Parkway, San Jose, CA 95134, or to such other address as Company may specify in writing by posting the new address on the Company website.
- 7.10 **Relationship of the Parties.** The parties are acting hereunder as independent contractors and not as partners, agents, fiduciaries or joint venturers. Neither party has the power or authority represent, act for, bind or otherwise create or assume any obligation on behalf of the other party.