Instruction Manual

Title *(Of equipment, plant, experiment, activity, etc.)*	**Operating procedure POLOS SPS Spin 150**		**Date**	**3/12/2024**
			Version	**1**
Activity Details *(of equipment, plant, experiment, activity, etc.)*	**Description**	Step wise procedure to operate the Spinner SPS Spin150		
	Location	W 2.06		
	After-Hours Work	☐ YES	☒	NO
Photo/s *(of equipment, plant, experiment, activity, etc. used as part of this procedure)*	 SPIN 150			
Operational requirements	Equipment / Process / Plant / etc.		Instruction Manual (IM)	
	Cleanroom Laboratory Dress Code		IM_W2.06_Gowning_Cleanroom_V1	
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Describe, in detail and in sequence, the steps involved in this activity

PRE-OPERATIONAL CHECK

All operators involved in system must wear protective clothes adequate to chemicals used including but not limited to:

- Safety glasses/goggles and/or face shields
- Chemical gloves
- Protective suit with long sleeves
- Chemical aprons
- Closed-toe shoes
- Long pants

PRE-OPERATIONAL CHECK

When handling aggressive chemicals, insure proper ventilation and exhaustion of vapours.
Always ensure that exhaust is present and working correctly before opening the system.
Make sure that mains supply, motor purge, CDA, vacuum and all required input are connected and switched on.

- Clean Substrate
- Resist, Dropper, Clean wipe
- Spin recipe

OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH

1. Spin processor lid
2. Lid latch
3. Spin processor chamber
4. Sealing O-ring
5. Chuck holder
6. Drain hole
7. Lid sensor

A spinning process is typically composed by following steps:

1. Creating a recipe or use an already prepared one.
2. Open the lid.
3. Placing a substrate on the spin chuck, alignment, switching on VAC if required.
4. Close the lid.
5. Starting the recipe and waiting until it is terminated.
6. Open the lid.
7. Optionally switch off VAC, remove the processed substrate.

If any error indicator is active interrupt starting procedure and contact maintenance service.

CAUTION Always handle the lid latch gently otherwise plastic components could be damaged.
WARNING In case of power failure it will not be possible to open the lid. Do not try to force it in any way.

OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH

❖ Start screen

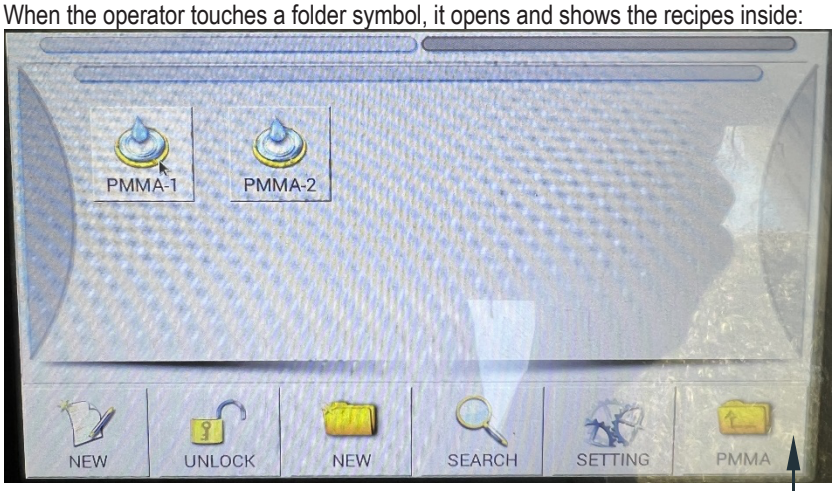
- When unit is powering up, following screen will appear. Wait until loading bar on page bottom will be completed until performing any other operation

❖ Home screen

- On the home screen the operator sees all recipes and folder on the system

❖ Open a Recipe

- When the operator touches a folder symbol, it opens and shows the recipes inside:



- The user can return to the home screen by touching:

OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH

❖ Creating a recipe

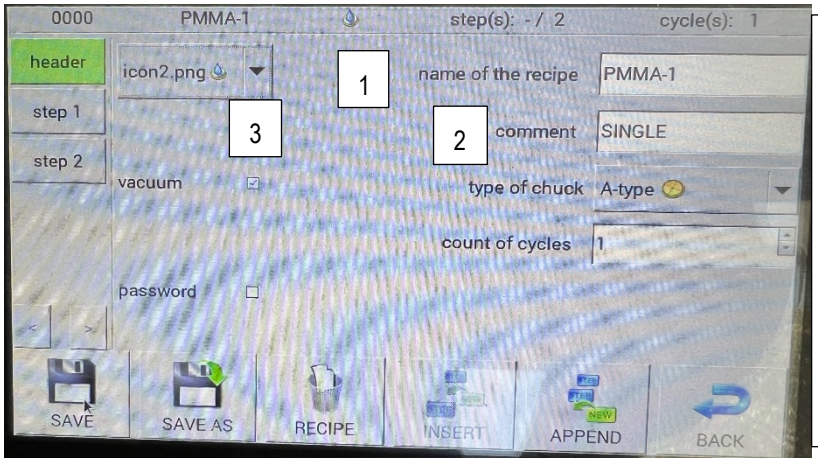
- For creating a new recipe you can touch on 

- to edit an already existing recipe touch on the recipe name 

- touching these icons will take you to the editing Page - Insert 

or append 

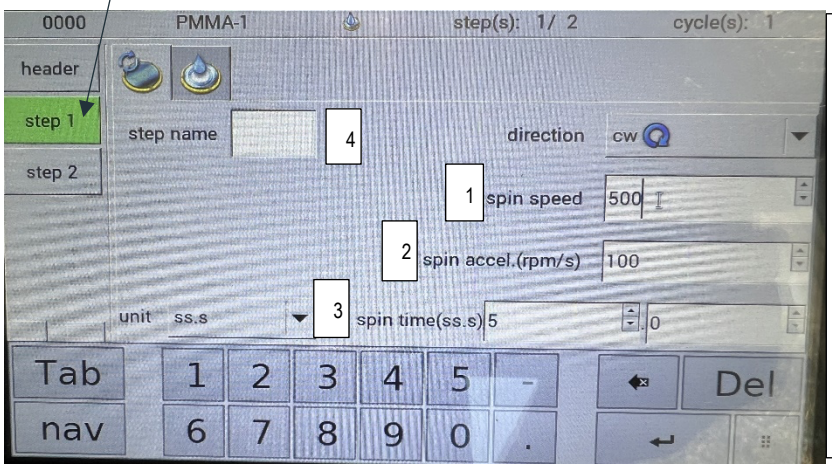
steps as needed
- Enter general details for recipe identification



Enter the

1. Name
2. Comment
3. Select the header icon

- Select the step you need to edit and enter the parameters

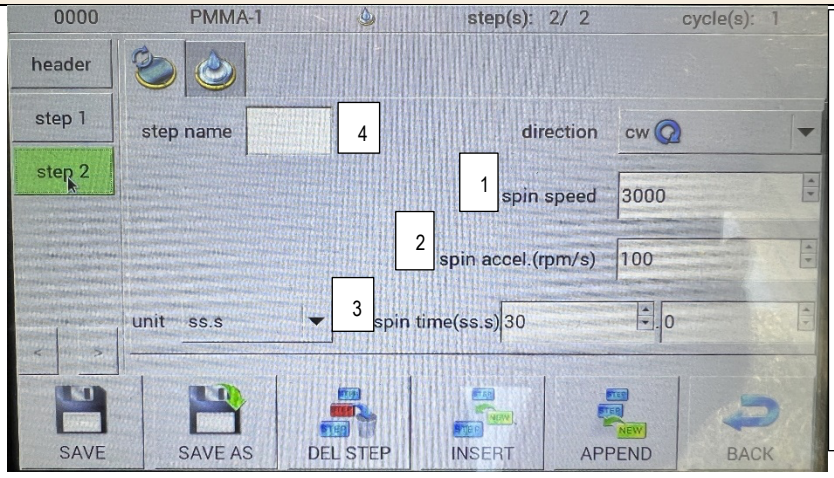


Enter the

1. Spin Speed
2. Acceleration
3. Time
4. Name of the step (optional)

- Select the next step if you have multiple steps in your recipe to edit

OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH



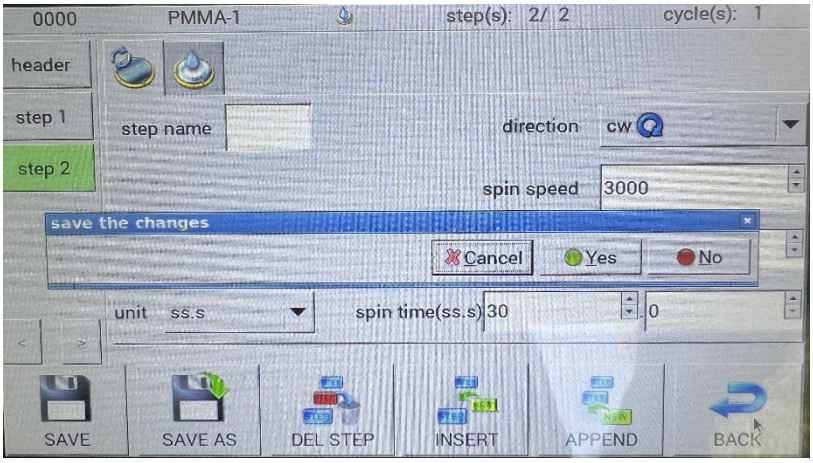
Enter the

1. Spin Speed
2. Acceleration
3. Time
4. Name of the step (optional)

- Save 

the recipe details or you can touch on the back button 

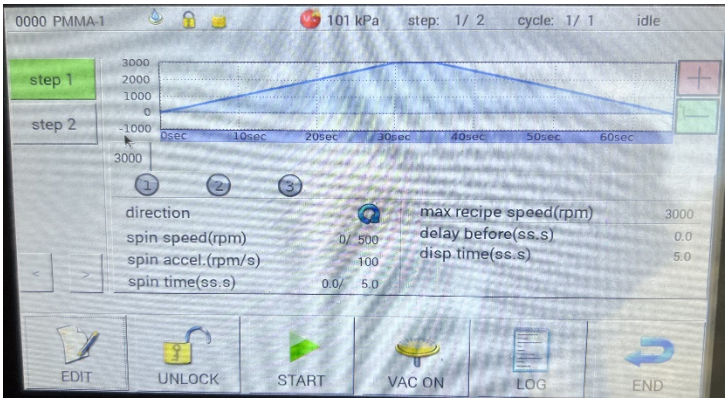
and get the below message



- Please select the option suitable for you at this point.

❖ Execute a recipe

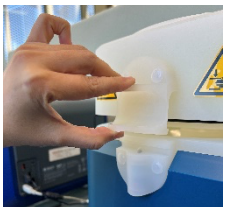
- On selecting a recipe the below display is seen on the screen



OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH

❖ Open the spinner lid

- Release the lid lock by touching the Unlock button



- Gently lift lid's latch and push the lid till hinge hold position, lid lock will be reactivated after countdown expires however lid will hold this position forever.

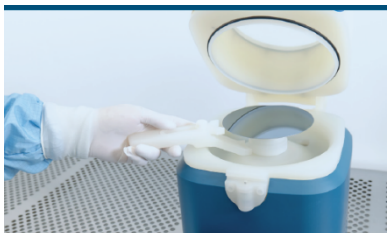
NOTE:

Release the lid lock

For safety reason the lid lock mechanism is always activated.
Touch the unlock button in order to release it and allow to open the lid.
As soon as the lid is unlocked a countdown begins, after which the lid is automatically locked again.

❖ Loading substrate

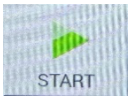
- Place the wafer on the chuck



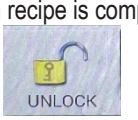
- Check the position of the wafer from different sides to verify that it touches the slider end until it lies in the centre of the chuck.
- Switch on the vacuum

- Put the resist on the sample using a dropper
- Close the lid

- Touch start



OPERATION – LIST STEPS TO COMPLETE THE ACTIVITY FROM START TO FINISH

- Once the spin recipe is complete
- Unlock the lid 

- Release the vacuum 

- Take the sample off the chuck
- Place it on the hotplate
- Once the sample baking is complete keep the sample in a box

❖ **Spinner Cleaning**

- Clean the liners
- Use clean wipes to clean the tub
- Put the rubbish in the contamination bin
- Close the lid

Notes from Vendor:

Chamber Cleaning
Always clean the chamber with suitable method after each process is complete prevent chemical to stand still inside the chamber. The process chamber should be cleaned according to the dispensed materials

Switching off
Assure that the unit is in idle mode and no process is currently running.
Close the lid and leave the house exhaust system, if available, activated to avoid condensation and ensure proper ventilation and gases extraction.

WARNING After switching off the device always assure a delay of 30 seconds before switching on the device again. Otherwise the device may malfunction or damage may occur, including blown fuses.

TRANSPORT METHOD for hazardous substances, biological, animal, or radioactive materials or plant equipment

- Samples transported around labs using closed PTFE/PVC carrier boxes

WASTE DISPOSAL

- A yellow contamination bin and a sharps bin available in the yellow room for waste disposal
- **Yellow Contamination bin** is placed near the fridge
- The **sharps bin** is placed behind the spinner
- **Plastic bags, broom and pans** placed near the DI System to collect sharps pieces
- **Waste generated** to be disposed in the **respective waste bins by the users**

COMPLETION OF WORK – List steps to make area safe (include clean up, any waste disposal & service/maintenance requirements)

Clean up after use

- Clean up the working area and work bench surface after completion of work
- NO broken pieces of substrates, glassware and tapes, used clean wipes, filter papers, droppers should be lying around the work bench or the working table
- Please use the plastic bags, broom and pan to collect and dispose the broken glassware and keep it outside the lab near the waste bin for collection.
- Clean the liner (Tub and lid) with the clean wipe
- Sharps waste (glass droppers, small broken pieces of glass and wafers goes in the **Sharps Bin** behind the spinner
- Plastic droppers, Clean wipes, Al foil, filter paper goes in the yellow contamination bin near the fridge

Workers must read and completely understand the relevant equipment risk assessment and this instruction manual before they are allowed to work on the activity without direct supervision.