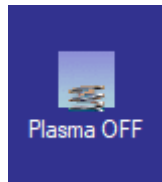
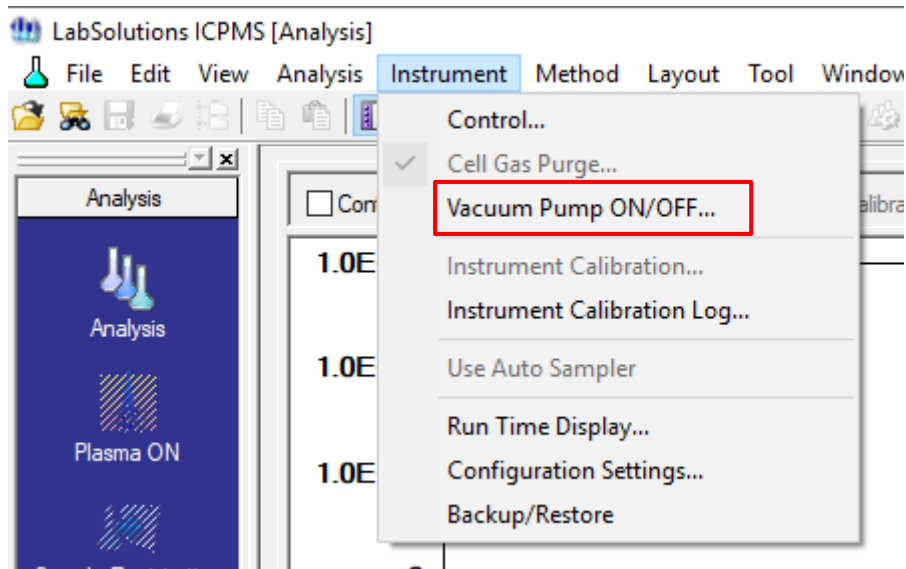


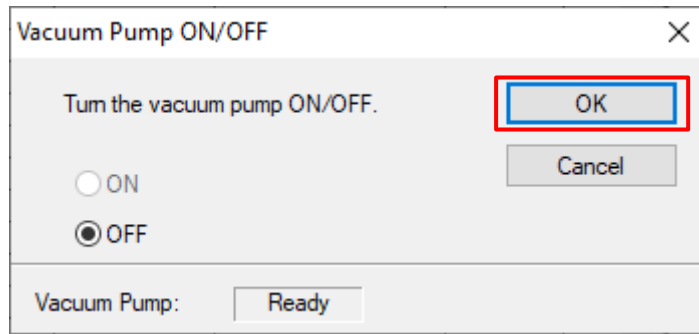
## ICPMS – Preparing your instrument for shutdown

1. To flush out the system, aspirate with rinse solution for five minutes then DI water for an additional three minutes.
2. Shut down the plasma by clicking the Plasma Off button in LabSolutions ICPMS software at the bottom-left of the screen. Wait for the shutdown sequence to complete.



3. Switch off the Vacuum pump under Instrument - Vacuum Pump ON/OFF... and confirm the dialog with OK





4. Release tension on the peristaltic pump tubing by releasing the guide arms and detaching tubing from the tube hangers.



5. Switch off the exhaust ventilation system and switch off the argon gas supply.
6. Switch off helium gas supply.
7. Ensure that the chiller water has antimicrobial additives as recommended in the user manual. Three tablets of baby aspirin dissolved and circulated can act as a substitute for commercially available products. Switch off Chiller.
8. Close the LabSolutions ICPMS software and the control computer.
9. Turn off the power switch on the left side of the main ICPMS-2030 body.
10. Shut off power to the autosampler, and other external accessories.

11. Dispose of the rinse solution in the drain trap and drain line and close the waste collection container.



12. In case of the ICPMS-2030 equipped with the relocation detection unit and a Shutdown periods longer than two months, please follow also the instructions in the user manual (PN 305-34411, "ICPMS-2030 Instruction Manual"):

## 3.2 Stop of the Equipment

**NOTE** Check the remaining backup battery level before stopping the instrument.

▶▶ **Reference** "4.16.2 Backup Battery Level Check" P.102

**NOTE** When the power of the instrument is turned off for 2 months or longer, replace the backup battery while the power of the instrument is turned on and then turn off the power, and turn on the instrument and replace the battery every year.

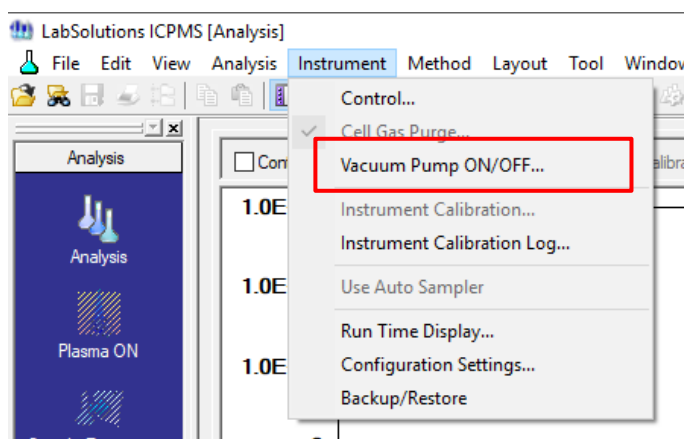
▶▶ **Reference** "4.16.3 Backup Battery Replacement" P.104

**NOTE** For the start-up and the stop of the equipment, the operation of the software is needed. Refer to the following contents of the "LabSolutions ICPMS Instruction Manual".

▶▶ **Reference** • "LabSolutions ICPMS Instruction Manual" "2.12 Daily stop of the equipment"  
• "LabSolutions ICPMS Instruction Manual" "8.2 Stop of the equipment"

## ICPMS – Startup procedure

1. Refer to the instruction manual, (PN 305-34411, “ICPMS-2030 Instruction Manual”) for specific startup procedures.
2. Start up the duct exhaust system.
3. Supply cooling water after checking levels and the absence of contamination in the external chiller water.
4. Check the oil in the external roughing pump, perform maintenance if necessary, and power on.
5. Turn on argon and helium at the source—ensure proper pressure is not exceeded during this process: argon at 450 kPa  $\pm$ 10kPa, helium at 150 kPa  $\pm$ 20 kPa.
6. Turn on the power switch on the left side of the main ICPMS-2030 body.
7. Turn on the PC and other peripherals. Open software to establish communications.
8. Switch on the Vacuum pump under Instrument - Vacuum Pump ON/OFF... and confirm the dialog with OK



**Reestablish the Vacuum for at least 24 – 48 h before igniting the plasma.**

9. Fill the drain trap with water to create a pressure seal to the torch.
10. Check the glassware and cones, as well as peristaltic pump, nebulizer and other sample introduction accessories before turning on the plasma.
11. Refer to manual for additional details.



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