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ICP-MS 7900

Brief instructions of use



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Before turning the device on, it is necessary to check whether the instrument is in "stand-by" mode. (the vacuum pump (TMP) is running, the main starting button flashes orange). If not, press this button to turn on the instrument, open the "ICP-MS MassHunter Workstation" program on the PC, connect to the instrument (online mode) then click in the folder "Hardware" the option "Vacuum ON" in order to start the pump. Ideally, the TMP pump should run for at least 24 hours after start-up to allow the vacuum to stabilize sufficiently. In the case of higher temperatures, air-conditioning should be maintained.

After the vacuum stabilization, the flow of argon should be enabled, as well as following preparation steps: securing tubes on the pump (sample, internal standard, waste), preparing 2 % HNO₃ as a cleaning solution, preparing the additional auto sampling unit.

After opening the software "ICP-MS MassHunter Workstation" and selecting "Instrument Control" the tuning parameters should be set for plasma: Torch Axis, Plasma Adjustment, Standard Lens Tuning a Performance Report. Click on the "Plasma ON" tab to start the process of igniting the plasma. Now the device is being tuned (approx. 20-30 minutes depending on the number of selected items).

To create a batch for your analysis, perform the following steps: Select New Batch Folder from the drop-down menu of the Batch tab. The New Batch Folder dialog box appears. Select Preset Method, Existing batch, Blank Template, or Method Wizard from the Create from menu. The batch needs to contain the necessary parameters for the analysis: target elements and isotopes, method acquisition, calibration points and adjustment, data collection method, data analysis method, and the list of your samples, prepared in auto sampling unit. After creating a batch, start performing your analysis by clicking the "Add to Queue" tab. Subsequently, a pane of the series table will open, where you can see the results of your measurement. Before processing the final data, dilution factor for your samples should be set. After the end of the analysis, the data should be exported by right-clicking in the results window and set the "Export" option.

After the measurement is finished, click on the "Plasma OFF" tab, release the tubes, turn off the autosampler, close the argon supply and turn off the cooler. Do not switch off the vacuum pump (TMP) (only in the case, there will be no measurements performed for a relatively long time).