

Quick guide for the Technegas Generator

1. Connect the argon gas outlet hose to the gas inlet on the rear panel of the TG. Turn on the gas bottle and the regulator.
2. Connect the mains power and turn on the power switch. If the purge has not been carried out since the last Technegas administration, the TG will give a 3 minute purge.
Display: WAIT PURGING CHAMBER 3:00.
3. Put on gloves!
4. **Display:** OPEN DRAWER TO CHANGE BOAT.
Press "OPEN" to open the chamber.
5. If necessary, pick up the stainless steel tray by using the forceps and remove the used crucible and debris.
6. Place a new crucible on a watch glass and wet it with 95% ethyl alcohol by using a syringe. Draw back any excess ethanol with the same syringe.
7. Open the contacts by pushing the lever under the platform towards the back of the machine to fit the crucible between the contacts. Rotate the crucible gently backwards and forwards on its axis a few times to ensure good contacts (for high yield). Finally rotate the well cavity to the upright position.
8. Load the crucible with Pertechnetat (Tc-99m). Ensure that the meniscus is concave or flat, not convex. Activity: 300-500MBq (recommend value).
9. Close chamber by pressing the interlock lever first, then the "CLOSE" button and keeping both depressed until the drawer is fully closed.
Display: PRESS "START" TO INITIATE SIMMER.
10. Press "START" button.
Display: CHECKING FOR ARGONGAS then CHECKING FOR GAS LEAKS (25sec.).
Simmering (evaporation) starts. Time: 6 minutes.
Display: WAIT SIMMERING PURGING 6:00.

If multiple loading is necessary due to low specific activity, you can interrupt the simmering cycle after approximately 4 minutes (or later) by pressing the "CANCEL" button **twice** within 2 seconds. Now you can open the chamber again for re-filling. Then repeat the steps 8-10.

While simmering: Position the patient ready for inhalation and open a fresh PAS. Fit the desired mouthpiece to the PAS and allow the patient to familiarise with it. Explain the breathing technique to the patient and ask them to breathe like that.

11. **Display:** PRESS START TO INITIATE BURN.
When the patient is ready: Press “START” button.
Display: WAIT GENERATING GAS.
After 15 seconds:
Display: BURN VERIFIED then: DISCONNECT THE MAINS PLEASE.
From now **maximal 10 minutes** time for administration. Technegas must be administered to the patient as **soon as possible**.
12. Switch off the unit and disconnect the mains power. Turn the gas bottle and the regulator off. Disconnect the gas hose.
Display: ”START” RELEASES GAS VALVE or “START” ENABLES GAS VALVE.
Wheel the generator to the patient.
Hint: If it is not necessary to wheel the generator to the patient (the patient comes to the generator), the mains power and the gas hose can be left connected. But you have to switch off the unit.
13. Connect the PAS to the generator. Fit a nose clamp to the patient and let them breathe through the mouthpiece. Press “START” to release the gas valve.
Display: GAS READY TO USE WITHIN 00:00 indicates the time limit within which you must use the Technegas.

To administrate the Technegas depress the big black knob on the top of the Technegas Generator right in that moment as the patient begins to inhale and keep it depressed while the patient is breathing through the mouthpiece until the desired countrate is present in the patient’s lungs (normally after 3-5 breathing cycles). Then release the knob and allow the patient to breathe for 5 to 6 more breathing cycles through the PAS to remove remained Technegas from the airways and the tubing. This is to avoid room air contamination. Disconnect the PAS from the generator and dispose it (contaminated!).

14. Press “CANCEL” **twice** within 2 seconds to switch off the machine. Wheel the generator back to the application room and reconnect the mains power and the Argon gas. Turn on the gas bottle and the regulator and switch on the machine. The generator will carry out the 3 minute purge cycle (see step 2). Don’t forget to turn off the gas after purging is finished.

Possible error messages:

If there is an error message like CHAMBER OPEN OR NO ARGON or CHAMBER FAILED LEAK TEST it is possible, that something is jammed in the drawer front panel witch is causing a leak. Press “CANCEL” twice and open the chamber. Remove any carbon piece from the chamber seal and the drawer (wear gloves!). Close the drawer and restart the simmering cycle.

Refer the user manual for more information.