



1 Remove the Gentech[®] and its accessories from its transport packaging and install it in a Gentech[®] garage.

2 Lift the handle. Rotate the central top plate until the saline spike cover, and elution outlet filter are exposed. Lock the lid in the operating position by pushing the handle down.



3 Remove the flip-off seal from a saline vial. The minimum elution volume is 5 mL. For elution volumes between 5 and 10 mL, aseptically withdraw the excess solution from the saline vial with a sterile syringe and needle.

4 Place a saline vial into the provided saline vial holder. Swab the exposed saline vial septum with a sterile swab. **Allow the septum to dry completely.**



5 In the saline port of the Gentech[®], remove the yellow protective cap from the saline spike.



6 Align the lugs of the saline vial holder with the slots in the saline port and push down firmly. When the saline vial is fully depressed, turn clockwise in the direction of the arrows to engage the vial on the saline spike and lock the saline vial holder in position.

7 Remove the flip-off cap from one of the evacuated elution vials and place the evacuated vial into the vial shield. Sanitise the evacuated vial septum and the top of the elution vial shield with a sterile swab. **Allow drying.**



8 Turn the red protective cap in the elution port anti-clockwise and remove it from the outlet filter. Attach a sterile needle (provided) to the exposed outlet filter in the elution port by securely rotating in a clockwise direction. **Ensure you do not overtighten.** Remove the needle cover.

9 Invert the prepared elution vial shield onto the sterile needle. Lower the evacuated elution vial shield until the evacuated elution vial septum is fully penetrated by the sterile needle. **Allow at least 3 minutes for the elution to take place.**



10 Observe the emptying of the saline vial and the filling of the evacuated elution vial, indicated by the sight and sound of air bubbles in the evacuated elution vial.

11 Visually confirm the saline vial is empty. Visually confirm through the shield window that the elution has occurred. If the elution did not occur, repeat steps 3 and 4, and 6 to 10 with fresh saline and evacuated elution vials.

12 Remove the elution vial shield from the sterile needle and cover the septum of the elution vial shield.



13 Place the needle cover back onto the sterile needle and leave it in place until the next elution. **Replace with a fresh sterile needle before each elution.**



14 Leave the saline vial assembly in position until the next elution.



15 Record the appropriate information on the elution vial in accordance with your business procedures. Information may include the date, time and radioactive contents.

16 Assay the contents of the vial for its Tc-99m content using a previously calibrated Tc-99m dose calibrator (or another suitable measuring instrument). Record the results.

17 Perform a gamma spectroscopy test to determine the extent of Mo-99 breakthrough. The method described by *Richards and O'Brien may be used.



Watch our step-by-step video online



SUBSEQUENT ELUTIONS

1. Remove the used saline vial by turning in an anti-clockwise direction. Repeat steps 3, 4 and 6, 7.
2. Remove the used elution needle by turning in an anti-clockwise direction. Replace with a fresh sterile needle.
3. Repeat steps 9 through to 17.

TROUBLESHOOTING TIPS

If your Gentech[®] Generator is not eluting, follow these troubleshooting steps.

1. Check the elution needle is not loose.
2. Elute the Gentech[®] again using a new evacuated elution vial.
3. If the elution was interrupted, the column may be wet. Fix this by attaching a new evacuated elution vial with an empty saline vial. This can be repeated multiple times until there is no saline eluted off the column.
4. To prevent damage to the saline spike, ensure:
 - You use the vial holders provided for the saline and evacuated vials.
 - The protective flip-off seal is removed from the vials.
 - The lid of the Gentech[®] garage is fully open, to allow clear access.
 - The yellow protective cap is removed from the saline spike.
 - The saline vial is placed vertically on the saline spike and not at an angle.
 - The saline vial septum can dry completely after sanitising with a sterile swab.
5. Call ANSTO Customer Service on 1800 251 572 or 02 9717 9992 or email health@ansto.gov.au