

## QUALITY CONTROL for the TECHNETIUM GENERATOR

Purpose: To define the quality control program for the Tc99m generator.

Procedure:

Eluents from 99Mo./99mTc generator will be checked for molybdenum and aluminum breakthrough each time the generator is eluted.

1. Elute the generator per the manufactures instructions in the product Monograph.
2. Set the does calibrator to assay Tc99m. Place the eluate into the dose Calibrator chamber using forceps. Record activity and record in the log book.
3. Transfer the TC99m eluent to the 99Mo assay container and assay with Dose calibrator set to assay Mo99. Record 99Mo activity in the log book.
4. Calculations:

$$\frac{99\text{Mo (uci.)}}{99\text{mTc (mCi.)}} = \text{uc. } 99\text{Mo/mCi. } 99\text{mTc}$$

\*\*Mo99 should not exceed .15 uCi. of 99 Mo per M Ci. of 99Tc or more than 2.5 uCi. Of 99Mo per dose shall not be administered to patients.

5. Aluminum breakthrough is determined by a colorimeter method using Aurin tricarboxylic acid and comparison with a standard aluminum solution. An Al +3 ion indicator paper is spotted with the generator eluent. A white spot indicates no aluminum present and a red spot, depending on the degree of redness, indicates aluminum breakthrough.

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