TCK 7
KIT FOR THE PREPARATION OF 99mTc-DTPA
(DIAGNOSTIC- FOR INTRAVENOUS USE)

The kit for the preparation of 99mTc-DTPA (Diethylene Triamine Penta Acetic acid) is a single component kit. On reconstituting the kit, as per specified recipe, 99mTc-DTPA solution formed is sterile, pyrogen free and suitable for i.v. administration.

99mTc-DTPA is excreted by glomerular filtration and the whole body retention is <5% at 24 h p.i.

- 99mTc-DTPA is used as renal imaging agent for
  - Quantitative evaluation of renal functions (vascular, secretion, excretion) of individual kidneys.
  - Estimation of glomerular filtration rate (GFR).
  - Detection and quantification of urinary tract obstruction in obstructive uropathy.
  - Combined with diuretic (DTPA + Lasix) to distinguish dilated collecting system from functional obstruction.
  - Along with ACE inhibitor (Captopril) for early detection of renal artery stenosis.
  - Quantitative functional assessment in immediate post renal transplant and its follow up.

- In neurology, 99mTc-DTPA is used for
  - Delineation of intracranial lesions with excessive vascularity or altered blood brain barrier.

DESCRIPTION OF THE KIT

Each kit consists of a single vial.

Each vial contains 35mg of DTPA and 2mg of stannous chloride dihydrate (SnCl₂·2H₂O) in freeze-dried form.

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99mTc-DTPA Formulation*

1. Allow the kit vial to attain ambient temperature.
2. Add 2-3ml of sterile sodium pertechnetate (Na$^{99m}$TcO$_4$) in 0.9% sodium chloride solution containing the required activity of $^{99m}$Tc and mix well.
3. Keep the vial in boiling water bath for 5 min (alternately at room temperature for about 15 min).
4. Remove the vial from water bath and allow it to cool for 10 min.
5. The preparation is now ready for use.

(*For actual formulation, follow Product Recipe)

DOSAGE AND ADMINISTRATION

The suggested dose range per patient for i.v. administration of $^{99m}$Tc-DTPA is 10-15 mCi (370-555 MBq) for renal imaging and 10-20 mCi (370-740 MBq) for brain imaging.