The kit for $^{99m}$Tc-DMSA (Dimercaptosuccinic Acid) is a two-component kit. On reconstituting the kit, as per specified recipe, $^{99m}$Tc(V)-DMSA solution formed is sterile, pyrogen-free and suitable for i.v. administration.

When $^{99m}$Tc is complexed with DMSA at pH ~ 8, $^{99m}$Tc(V)-DMSA is formed.

- $^{99m}$Tc(V)-DMSA is used
  - As a tumor imaging agent, primarily in cases of medullary carcinoma of thyroid.
  - In patients having solitary nodule in thyroid with high serum calcium and calcitonin levels – $^{99m}$Tc(V)-DMSA shows avid concentration in the nodule. In contrast, the conventional pertechnetate scan shows the nodule to be non-functional.
  - Post surgery, to delineate metastases in lymph nodes in medullary carcinoma of thyroid.

**DESCRIPTION OF THE KIT**

Each Kit consists of two components (vials),

**Component - A**: 1 mg of dimercaptosuccinic acid and 0.3 mg of stannous chloride dihydrate in freeze-dried form.

**Component - B**: 35 mg of NaHCO₃ in freeze-dried form.
**99mTc(V) - DMSA Formulation**

1. Allow the Component-A vial to attain ambient temperature (Reaction vial).
2. Withdraw the required activity of sodium pertechnetate (Na$^{99m}$TcO$_4$) injection in 1-2ml volume into a sterile syringe and keep ready for transfer.
3. Add 1ml of Water For Injection to Component-B vial and mix well. Aseptically transfer 0.2ml of the contents to Component-A vial (Reaction vial).
4. Immediately thereafter, add sodium pertechnetate (Na$^{99m}$TcO$_4$) injection kept ready earlier in the step 2 to Component-A vial and mix well.
5. Allow it to stand for 10 min.
6. The preparation is now ready for use.

(*For actual formulation, follow Product Recipe)

**DOSAGE AND ADMINISTRATION**

The suggested dose range per patient for $^{99m}$Tc(V)-DMSA is 15-20mCi (555MBq to 740MBq).