

# Loading of DC Bead<sup>®</sup> using Doxorubicin Powder 10mg in syringe to deliver a dose of 150mg doxorubicin



After loading, the solution in the syringe will retain some red colouration as shown. This is to be expected and is not an indication that the DC Bead<sup>®</sup> has failed to load.



Loading and preparation of DC Bead must be carried out using strict aseptic technique under controlled conditions.

**Step 1**

Take flip cap off DC Bead vial(s) but do not remove metal around the bung. Transfer each vial of DC Bead via an 18-gauge needle or equivalent into a 20-30ml syringe. Use a separate syringe for different bead sizes.

**POWDER**

**Step 2**

Expel excess packing solution from the syringe. A 5-micron filter needle or equivalent can help with this process.

**POWDER**

**Step 3**

Group the 15 vials of 10mg doxorubicin powder into three sets of five vials. In the first set, reconstitute ONE vial of 10mg doxorubicin powder using 2ml of sterile water for injection (NOT sodium chloride). Mix well.

**POWDER**

Vials 1-5	2	3	4	5	
Vials 6-10	6	7	8	9	10
Vials 11-15	11	12	13	14	15

**Step 4**

Transfer the contents of the 1st vial to the 2nd vial of 10mg doxorubicin powder. Mix well. Transfer the contents of the 2nd vial into the 3rd vial of 10mg doxorubicin powder. Mix well. Repeat for the 4th and 5th vials of doxorubicin powder.

**POWDER**

**Step 5**

Repeat Step 3 and 4 with the other two sets of five vials. This will result in three vials each containing 2ml of 50mg doxorubicin (25mg/ml).

**POWDER**

**Step 6**

Draw up 3ml (75mg) of doxorubicin for each vial (approx 2ml) of DC Bead in the syringe. Gently agitate each syringe to encourage mixing before standing for required loading time.

**POWDER**

Gently agitate the mixture occasionally during the loading time.

**Step 7**

When loading time is complete, expel the excess liquid from the syringe. A 5-micron filter needle or equivalent can help with this process.

**POWDER**

**Step 8**

To prepare the loaded DC Bead for injection, add 5-10ml of non-ionic contrast medium per ml of DC Bead and mix gently to give a good suspension. Inject solution at a rate of 1ml per minute.

**POWDER**

To deliver a dose of 150mg doxorubicin:

Number of vials doxorubicin powder (10mg)	Number of vials of DC Bead (2ml)
<b>15</b>	<b>2</b>

Loading time for 37.5mg of doxorubicin per ml of DC Bead (75mg per vial)

<b>100-300µm</b>	60 minutes
<b>300-500µm</b>	90 minutes
<b>500-700µm</b>	120 minutes

98% doxorubicin uptake. Tolerance of +/- 3%. Microbiological stability is the responsibility of the user.

Physical and chemical stability  
DC Bead 100-700µm

Doxorubicin-loaded DC Bead (75mg/2ml)	14 days (at 2-8°C)
Doxorubicin-loaded DC Bead with non-ionic contrast	7 days (at 2-8°C)

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