

Loading of DC Bead® using Doxorubicin Powder 10mg in vial to deliver a dose of 150mg doxorubicin



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



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

Step 1

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 2

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 3

Repeat steps 1 and 2 with the other two sets of five vials. This will result in three vials each containing 2ml of 50mg doxorubicin (25mg/ml).

POWDER

Step 4

Take flip cap off 2 DC Bead vials but do not remove metal around the bung. Pierce the bung with an air-vent needle or equivalent to eliminate vacuum. Remove as much saline as possible using a syringe and needle, with the flattened tip of the needle against the side of the vial to prevent beads being drawn up.

POWDER

Step 5

Draw up 3ml (75mg) doxorubicin using a syringe and needle and add to the first vial of DC Bead. Repeat with the second vial of DC Bead. Gently agitate each vial before standing for the required loading time.

POWDER

Gently agitate occasionally during the loading time.

Step 6

When loading time is complete, transfer the loaded beads into a 20-30ml syringe using an 18-gauge needle or equivalent.

POWDER

Step 7

Expel excess liquid.

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)
15	2

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

100-300µm	60 minutes
300-500µm	90 minutes
500-700µm	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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