

HepaSphere™

Microspheres



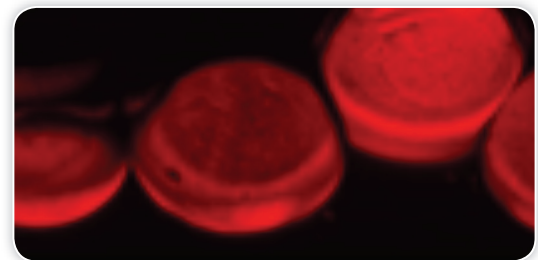
FAST LOADING

HepaSphere, also known as superabsorbent polymer (SAP) microsphere, is the only microsphere that:

- Is packaged dry and ready for reconstitution
- Works like a sponge and loads the drug throughout the microsphere
- Loads $\geq 90\%$ of doxorubicin (liquid or powder prepared with normal saline) in < 15 minutes*
- Has a 15-day storage and stability lifetime**
- Once reconstituted, swells to approximately 4x the size printed on the product label
- Can absorb fluids up to 64x its dry-state volume

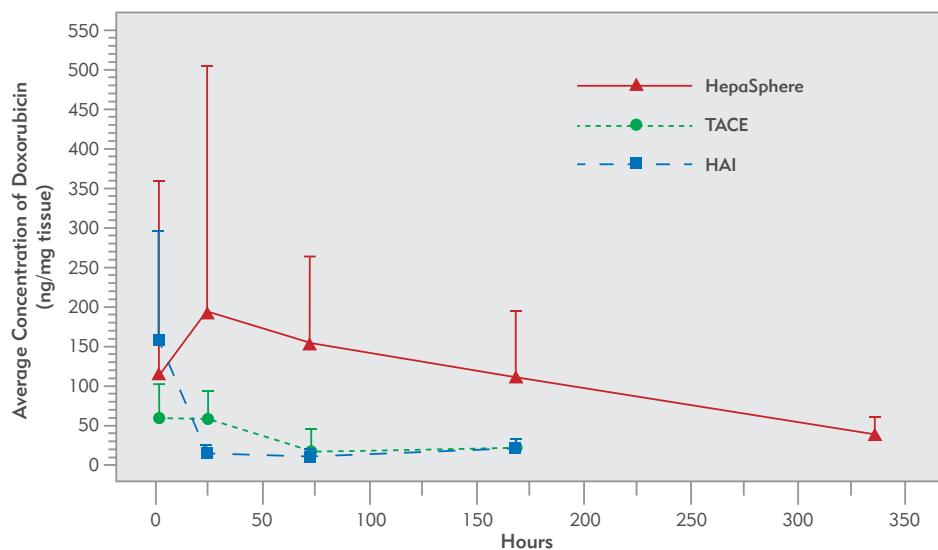
THOROUGH LOADING & SUSTAINED ELUTION

Doxorubicin is loaded throughout HepaSphere Microspheres and is retained by an ionic bond, providing a sustained release over 14 days² with peak intratumoral concentration of doxorubicin observed at 3 days³.



Photomicrograph of cross sections of HepaSphere Microspheres loaded with doxorubicin (original magnification, 20x). The red color indicates the presence of doxorubicin, which is loaded throughout the microsphere. Data on file.

DELIVER MORE DRUG DIRECTLY TO THE TUMOR FOR LONGER²



In the hepatic arterial infusion (HAI) and transarterial chemoembolization (TACE) groups, intratumoral doxorubicin levels declined to negligible levels at 1 and 3 days after treatment, while in the HepaSphere group, the intratumoral doxorubicin level was still detectable at 14 days after treatment and was higher than that in the other groups at 1, 3, and 7 days.

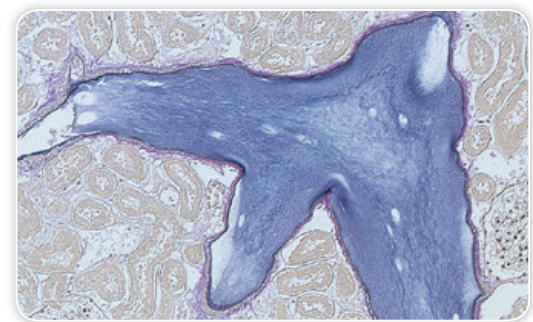
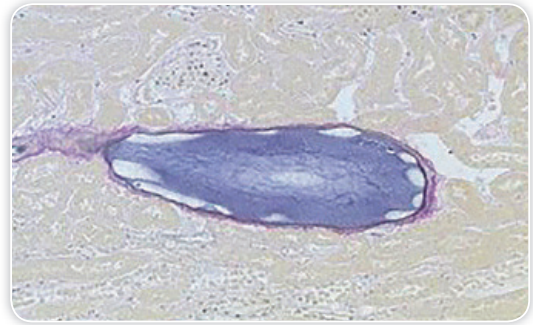
*Recommended loading time is 60 minutes for all sizes of HepaSphere Microspheres.

**Loaded with lyophilized doxorubicin HCl reconstituted with preservative-free 0.9% sodium chloride and stored at 2-8°C.

EXPERIENCE THE POWER OF CONFORMABILITY

HepaSphere is a drug-eluting microsphere that conforms to the vasculature for complete occlusion:

- Providing optimal contact between the microsphere surface and vessel wall, enabling greater drug diffusion into the tumor³⁻⁵
- Enabling greater tumor necrosis^{6,7}
- Decreasing the risk of vessel recanalisation⁴
- Enhancing the embolic effect, reducing the amount of product needed to reach embolisation endpoint⁴



In vivo photomicrographs show the high conformability of HepaSphere Microspheres. Images courtesy of Dr. Keigo Osuga.

GREATER DRUG DIFFUSION

Because of its high conformability, HepaSphere provides optimal contact between the microsphere surface and vessel wall, enabling greater drug diffusion into the tumor.^{3,5}

