

Blood Mimicking Fluid

The Model 046, Blood Mimicking Fluid is intended for use in any flow phantom and with any type of pumping mechanism. It was formulated to simulate the acoustic and physical characteristics of blood, thus providing a stable and reliable fluid for Doppler studies and system evaluations.

The fluid is non-hazardous and is formulated to meet the requirements for recommended blood-mimicking fluid as described in the IEC 1685 draft specifications. The fluid is fully degassed prior to packaging to minimize noise from air bubbles. In addition the scatters are neutrally buoyant thus preventing clumping and settling of the particles. Each batch of fluid is certified for speed of sound, attenuation, density and viscosity traceable to NIST.



Model 046

Model 046 Specifications

Property	Human Blood (37°C)	Model 046 Blood Fluid
Viscosity (mPa s)	3	4 ± 0.5
Velocity (m s ⁻¹)	1583	1570 ± 30
Attenuation (dB cm ⁻¹ MHz)	0.15	<0.1
Backscatter (f ⁴ m ⁻¹ sr ⁻¹)	4X10 ⁻³¹	Not Measured
Fluid Properties	non Newtonian	Newtonian

"Validation of a New Blood-Mimicking Fluid for Use in Doppler Flow Test Objects", K. Rammnarine, et. al., Ultrasound in Medicine & Biology, Vol. 24. No. 3, pp.454.

PACKAGE SIZE: 1.9 Liter Bottle

SAFETY INFORMATION: CIRS has evaluated this fluid and does not believe it poses a hazard at the quantities and concentrations provided. Although this product has been evaluated and found to be safe if used as intended, it is always best to avoid repeated or prolonged skin contact with materials not intended for use on the skin.

DISPOSAL INFORMATION: This product contains 0.57 mg/l phenolic compounds and is safe to discharge to the sanitary sewer system in most instances. If in doubt, check with your local water treatment plant. Alternatively, the product may be solidified with vermiculite or other suitable material and then placed in the trash.

