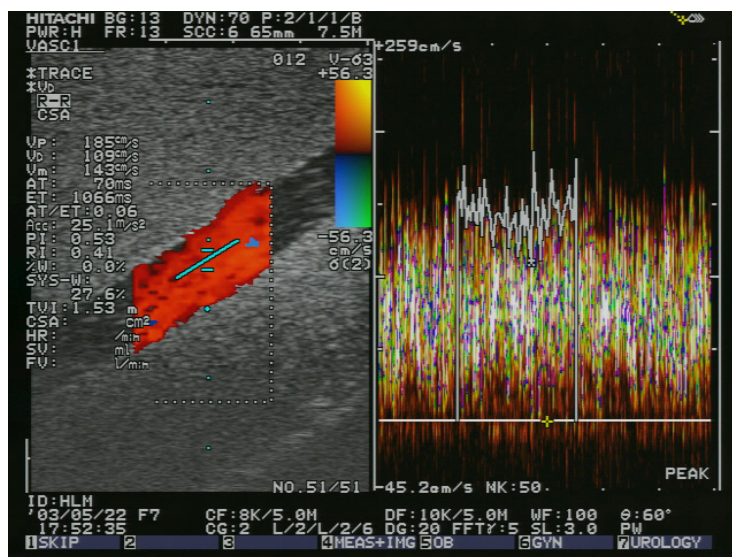


# Doppler Fluid

Model 769DF



CIRS Doppler Fluid, model 769DF, is a reliable, stable and non-hazardous fluid formulated to mimic the acoustic and physical properties of human blood. The fluid, when used in conjunction with ultrasound doppler flow phantoms and pumping systems, can be used to evaluate the system performance of a Doppler imaging system.

The 769DF formulation is based on published standards (see table 1). It is fully degassed prior to packaging to minimize noise from air bubbles. The fluid is tested for speed of sound, attenuation, density and viscosity using test equipment traceable to NIST.

## Benefits

- Evaluates system performance of doppler imaging systems
- Mimics acoustic and physical properties of blood
- Used in conjunction with CIRS Doppler Flow phantoms
- No refrigeration necessary

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**CIRS**

Tissue Simulation & Phantom Technology

PROPERTY	IEC 61685:2001 BMF SPECIFICATION	769DF
Viscosity (cP)	4 ± 0.4	4 ± 0.5
Density (g/cc)	1.05 ± 0.04	1.05 ± 0.04
Sound Speed (m/s)	1570 ± 30	1570 ± 15
Attenuation coefficient (dB/cm/MHz)	< 0.10	0.10 ± 0.02
Backscatter coefficient (f <sup>4</sup> *m <sup>-1</sup> *sr <sup>-1</sup> )	1 x 10 <sup>-31</sup> - 1 x 10 <sup>-30</sup>	≈ 10 <sup>-30</sup>
Particle size (micrometers)	7-8	5 ± 1
Fluid Properties	Non-Newtonian	Newtonian

Table 1

**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:** Solidify with vermiculite or other suitable material and then place in the trash.

**STORAGE INFORMATION:** Particle separation may occur during prolonged storage. Stir before each use. The fluids have been formulated to prevent clumping of particulates within this fluid, allowing repeated use after stirring the fluid.

## MODEL 769DF INCLUDES

QTY	COMPONENT DESCRIPTION
1	Doppler Fluid (half gallon)
1	Safety Data Sheet
1	User Guide
-	6 Month Warranty

## Reference:

1. K. Ramnarine, et. al., "Validation of a New Blood-Mimicking Fluid for Use in Doppler Flow Test Objects", *Ultrasound in Medicine & Biology*, Vol. 24. No. 3, pp.454.
2. IEC 61685:2001-07 "Ultrasonics – Flow measurement systems – Flow test object"

