

Measurment of blood velocity using Laser Doppler method for the designing module

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Abstract

We built the Dual Beam Mode of the LDA (Laser Doppler Anemometry) frame, set the photodetector at the same side with light source which collect the scattering light of blood cell. It's proper to reduce LDA optical path and convenient for our designing module. The concentration of chicken blood in this study is about 1% and we measured the relations actually between flood velocity and the angle of beams cross on particles, temperature, and the diameter of aqueduct. We found better results while the cross angle was less than 38.8 degree, diameter of aqueduct was 6 mm, and temperature of blood was set to 36°C. These parameters can also provide important basis for the LDA module kit that we are designing.