

FLUOSTAR

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Technical instruction

1) Pre-mixing

FLUOSTAR fluorescent particles feature excellent water dispersibility, but pre-mixing of particles prior to seeding is preferred like most dry particles, such as hollow glass spheres. There is no need to put a chemical solution to help particles to be dispersed, which may adversely impair an emission efficiency of fluorescence. A simple hand-shaking will do using a small bottle (Fig.1).



Fig.1 Pre-mixing

2) Long-pass filter

A long-pass filter is required to enjoy an advantage of FLUOSTAR particles (Fig.2-3).

The filter is available from major optics suppliers at an economical price. The filter should have a sharp cut-off wavelength at around 550 nm since a modern green PIV laser, such as Nd:YAG, has a 535-nm wavelength and Rhodamine B encapsulated in FLUOSTAR particles has a 580-nm emission wavelength (see brochure). A filter attachment may help install the filter either before a lens or between a lens and an imaging sensor, but not mandatory, where you can simply place the filter anywhere in an optical pass.

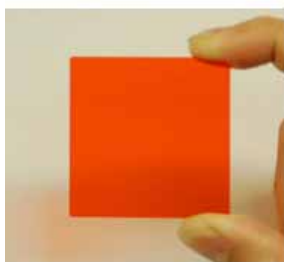


Fig.2 Optical filter and attachment

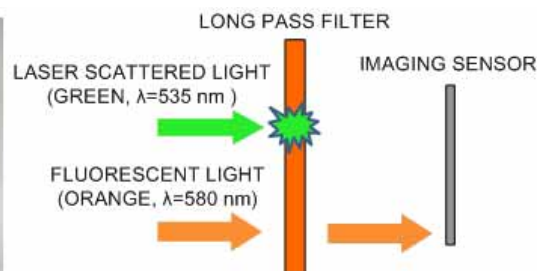
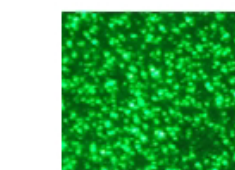
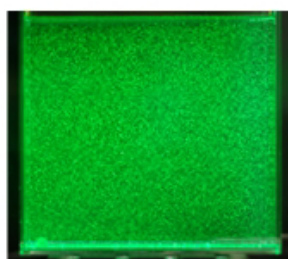
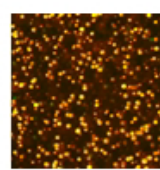
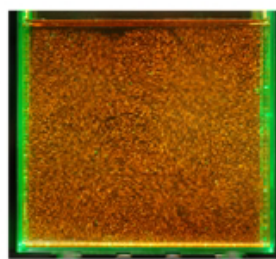


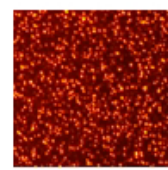
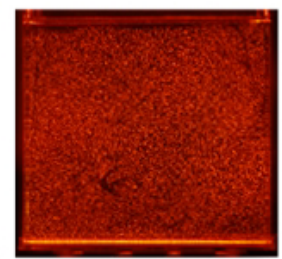
Fig.3 Schema of a long-pass filter



HOLLOW GLASS SPHERES



FLUOSTAR
(WITHOUT FILTER)



FLUOSTAR
(WITH FILTER)