

Water Soluble Silk Fibroin (SF)

Product component

Item	Character	Package Size
SF	White spongy	1g/bottle

This instruction applies to EFL-SF-001

Product introduction

Silk fibroin (SF) is derived from the degumming of silk, and is a polypeptide composed of a variety of amino acids. SF molecule includes a hydrophobic peptide chain (H chain) and a hydrophilic peptide chain (L chain). The special amino acid sequences of H chain and L chain make it form a variety of protein secondary conformations. The properties of silk fibroin materials can be effectively controlled by regulating the secondary structure of silk fibroin, including the preparation of high strength and high orientation materials.

EFL team selects high-quality mulberry silk, through a series of processes to prepare a silk fibroin product EFL-SF series that can be quickly dissolved in water, which has good water solubility and stability, strong material scalability, and can be used with various types of hydrogels such as GelMA, HAMA, etc. to meet the needs of different application fields.

Storage and transportation

Dry state: 4°C, 6 months; -20°C, 12 months, it can be transported at room temperature.

Period of validity

The date of manufacture is shown in the package.

Precautions for solution preparation

1.EFL-SF products are easily soluble in water, only need to stir lightly/shake for 10-30 minutes, vigorous ultrasonication, heating, strong shear stirring, ethanol and other organic solvents may induce a large amount of SF precipitation or gelation.

2.There may be a small amount of insoluble matter in the prepared SF solution, which needs to be filtered with a 0.22μm filter membrane to prevent the induction of more SF precipitation. The filtered SF solution can be stored at 4°C for one week.

Illustrate: Silk fibroin solution is a semistable sol, which is easily induced by external stimuli such as strong shearing, ultrasound, high temperature, organic solvents, etc., and molecular



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self-assembly, precipitation or gelation behavior. It is normal to have a little insoluble matter in the silk fibroin solution, and it is recommended to remove the insoluble matter by centrifugation or filtration to avoid inducing more silk fibroin precipitation.



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