

## NanoSuit<sup>®</sup> Solution I.

For microorganisms, small organisms and small biological wet tissues

### Instructions for use

The NanoSuit solution was developed for observing samples such as microorganisms and small organisms by a conventional scanning electron microscope. The biocompatible polymers contained in this solution polymerizes by electron beam under the conditions of electron microscopic observation. The polymers form a film on the sample surface, which suppresses the evaporation of water from the sample.

\* This product assists the original water retention capacity of the sample itself (cell, tissue, etc.), therefore it does not cover the water droplets themselves to prevent transpiration. It cannot be used for droplet samples, samples immersed in water, water-absorbing fibers containing a lot of water, water-containing polymers, etc. Also, please note that the degree of water retention and shape retention varies depending on each sample, and this product does not guarantee the results but can expect to observe the real structures of biological samples.

### Protocol

- 1) Adjust the size of each sample to be placed on the sample table of the electron microscope. (Approximately 5 mm or less. If the sample is too large, it may not be possible to protect their structures.)
- 2) When observing the cut tissue, trim it to the above size with a 76 razor (Nisshin EM Co., Ltd.).
- 3) If the sample surface is too wet, the NanoSuit solution may be diluted and the film formation may be insufficient. In such a case, use filter paper or KimWipes to remove excess water from the sample in advance.
- 4) Drop the NanoSuit solution onto the sample with a small pipette so that the entire surface gets wet.
- 5) Absorb the excess NanoSuit solution that protrudes from the sample with filter paper or KimWipes.

6) Place the sample on the sample stand with the conductive double-sided tape using tweezers and fix it gently.

7) Put the sample stand in an electron microscope and perform normal observation.  
(Depending on the sample, if plasma irradiation is performed before putting it in the electron microscope, good results may be obtained due to the polymerization of the polymer contained in this product. Please try it if necessary.)

8) Please refrigerate the NanoSuit solution regardless of whether it is unopened or opened. For long-term storage, we recommend shading and freezing.

For more detail, please watch the video on this QR code.



### **Precautions**

■ Please wear safety glasses and experimental gloves when using. Should it get in your eyes, rinse immediately with running water and seek medical advice. If it gets on your skin, wash it with running water and consult a doctor.

■ The NanoSuit solution should be refrigerated. Solution precipitates may occur if the storage environment is poor. In that case, please stop using it. A solution with a precipitate will not be able to form a film.

■ This product does not cover the water droplets themselves to prevent transpiration. It cannot be used for droplet samples, water-immersed samples, water-absorbing fibers, water-containing polymers, etc. We are not responsible for any damage to the electron microscope caused by improper use.

■ This product is not a drink.

■ The main component of the NanoSuit solution is a water-soluble polymer compound. Please follow the rules of the national and local governments when disposing.