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Transmission electron microscopy

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MATERIALS

2.5% glutaraldehyde in phosphate buffer (pH7.0), phosphate buffer (pH7.0), 1% OsO₄ in phosphate buffer (pH7.0), ethanol (50%, 70%, 80%, 90%, 95% and 100%), absolute acetone, Spurr resin, uranyl acetate, alkalinelead citrate.

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- 1** Double fixation: The specimen was first fixed with 2.5% glutaraldehyde in phosphate buffer (pH7.0) for more than 4 hours; washed three times in the phosphate buffer; then postfixed with 1% OsO₄ in phosphate buffer (pH7.0) for 1 hour and washed three times in the phosphate buffer.
- 2** Dehydration: The specimen was first dehydrated by a graded series of ethanol (50%, 70%, 80%, 90%, 95% and 100%) for about 15 to 20 minutes at each step, transferred to absolute acetone for 20 minutes.
- 3** Infiltration: The specimen was placed in 1:1 mixture of absolute acetone and the final Spurr resin mixture for 1 hour at room temperature, then transferred to 1:3 mixture of absolute acetone and the final resin mixture for 3 hours and to final Spurr resin mixture for overnight.
- 4** Embedding and ultrathin sectioning: Specimen was placed in capsules contained embedding medium and heated at 70°C for about 9 hours. Ultrathin sections (70 nm) were obtained and stained by uranyl acetate and alkalinelead citrate for 15 minutes respectively, and photographed by a Hitachi Model H-7650 transmission electron microscope (Tokyo, Japan).