

GOLD SHADOWED LATEX POINT SEPARATION RESOLUTION TEST

Product No. 628-B

These are latex particles of 0.204 μ m diameter shadowed with a fairly heavy coating of gold. The gold forms islands of strongly scattered material and produces a suitable test object for STEM. The smallest particles of the evaporated metal are to be found at the edges of the shadows of the latex particles for particle separation resolution checks.

This specimen may be used to test the resolution of the electron microscope by the point separation test. The distance between the centers of two small particles, which can just be distinguished as separate, can be taken as a measure of the resolution.

Because of the statistical nature of the electron irradiation of the object, small local areas of blackening of the emulsion can occur which may not correspond to structure in the specimen. It is essential, therefore, that two successive micrographs of the same field of view, at the same focal setting be recorded.

Pairs of points, which are identifiable in two successive micrographs, must be used for any deductions about microscope performance. Furthermore, several pairs of points in different orientations should be selected, so that any directional image defects can be allowed for.

If an optical diffractometer is available, it is preferable to examine the negatives with its aid, since it integrates the fine structure and gives a more reliable reading of the particle separations at randomly chosen points.