

TITLE: Stereology

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Stereology is defined as the “knowledge of space”. Stereological methods are used to approximate global and local measures of geometric structures such as volumes, surface areas, lengths, numbers and connectivity in three dimensional spaces, and their spatial variability. The objective of this project is to use the principles of design- based sampling method of stereology to determine the dimensions of length, area and volume of the test particulates (rice grains) using the Scion imaging software to reconstruct the 2D scans into 3D images. A small scale model using epoxy resin and coloured rice grains was constructed. Six layers were cut, ground, polished and scanned. It can be seen that there is no significant difference in the dimensions of length also the distribution of area measurements are continuous and the distribution of volume measurements is concentrated at particular ranges.