

A scanning tunneling microscope is a powerful tool for obtaining micrographs from conductive and semi conductive materials and also for microscopy of nanostructure biomaterials on highly ordered atomic surfaces. Micro graphs could reveal structural details of immunoglobulin's G and M on the atomically flat surfaces. Obtained results confirmed that STM could be more useful than other microscopy techniques for the analysis of single biomolecules.

SPECIFICATIONS

Maximum Scan range $8\ \mu\text{m}$ ($\pm 4000\text{nm}$)

Maximum Z-range $3\ \mu\text{m}$ ($\pm 1500\ \text{nm}$)

Derive resolution Z $0.045\ \text{nm}$

Derive resolution XY $0.12\ \text{nm}$

Current set point $0.02 - 100\ \text{nA}$ in $3\ \text{pA}$ steps

Imaging modes Constant current (Topography), Constant Height (Current)

Spectroscopy modes Current-Voltage, Current-Distance

Lithography modes Bitmap, Vector and Manual

Tip voltage $\pm 10\ \text{V}$ in $0.3\ \text{mV}$ steps

Sample size Max $20\ \text{mm}$

Scanning Tunneling Microscope (STM)

