#### About ISSR

It is a public institution (based in Sulaimani city-Iraq) affiliated to the Ministry of Higher Education of the Kurdistan Region of Iraq (KRI). Vision

Becoming a reliable Centre of Excellence for strategic studies to address national and global challenges.

#### Mission

1- Delivering cutting-edge research and strategic studies to find knowledge-based solutions to local, national, and global challenges and needs.

2- Fostering interdisciplinary research to tackle complex problems and drive innovation.

3- Producing reliable data and knowledge that can inform decision-making and empower communities, especially marginalized and underserved communities.

4- Building extensive networks and research collaborations, locally and internationally.
5- Developing high-quality research capacity building and consultation.

# Field and Application

1.Used for spot chemical analysis in energy-Dispersive X-ray Spectroscopy.

2. Used in the analysis of cosmetic components which are very tiny in size.

3. Used to study the filament structures of microorganisms.

4. Used to study the topography of elements used in industries.





## Scanning Electron Microscope (SEM)

#### Description

Scanning Electron Microscope (SEM) is a type of electron microscope that images surfaces of microorganisms or different materials that uses a beam of electrons moving at low energy to focus and scan specimens. The development of electron microscopes was due to the inefficiency of the wavelength of light microscopes. electron microscopes have very short wavelengths in comparison to the light microscope which enables better resolution power.

## Explanation of Result

Images for the specimens were obtained at differentmagnifications.



### **Result Explanation**

Shape, size, external structure, and features are appeared both samples (1. Fossil 2. Pollen grain 3. Head louse 4.Surface of a teeth with fructures and joints 5. A leaf surface)

## Sample Type

Samples have to be solid like rocks, minerals, metals, microorganisms, spores, and pollens.

#### **Contact Person**

Hemin M. Hama Salih

MSc. In Reservoir and Sedimentology

Engineering Dept. at Kurdistan Institution for

Strategic Studies and Scientific Research (KISSR),

Sulaymaniyah/Iraq

hemin.salih@kissr.edu.iq

+964 770 1574136