# 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

Homogenizers are widely used in:

Biological research: For cell lysis and protein extraction.

Food industry: To create emulsions or finely mix liquid samples.

Pharmaceuticals: To blend formulations or extract active ingredients.

Environmental science: For soil or water sample preparation.

# Homogenizer

# Description

This is a laboratory homogenizer, a device used to break down and mix samples into a uniform consistency. The setup consists of a motor-driven probe attached to a stand. The probe is designed to rapidly rotate, creating mechanical shear forces to disrupt the sample›s structure.

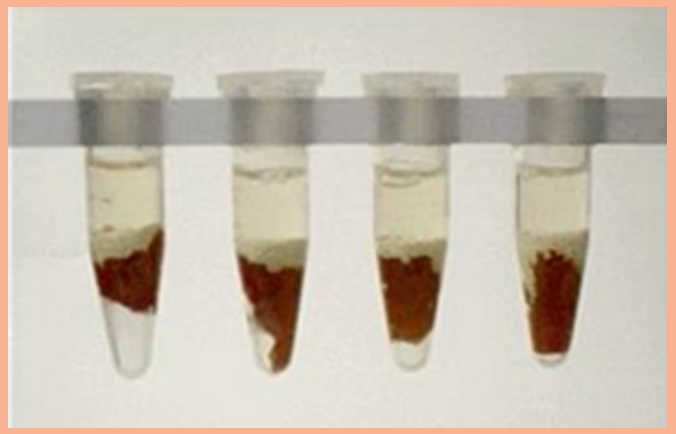
# Explanation of Result

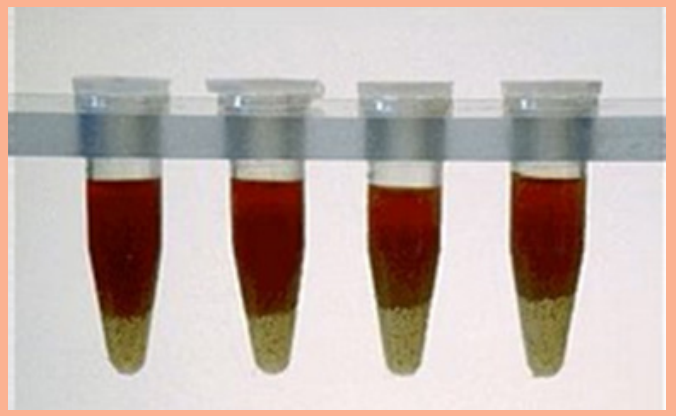
The homogenizer breaks down complex sample matrices into smaller, uniform particles. The resulting homogenate can be further analyzed for:

Protein, DNA, or RNA concentrations.

Particle size distributions in emulsions.

Homogeneity of the mixture for consistent testing or production.





# Result Explanation

Atomic Absorption Spectrometry (AAS) Data Analysis. Data analysis in atomic absorption spectrometry (AAS) is a multi-step process, with the user having to select the correct method and wavelengths in order to obtain optimal results. Background correction is also a key component of successful AAS data analysis.

# Sample Type

Homogenizers can process a variety of sample types, including:

Biological tissues: Liver, kidney, or other organs for enzyme and RNA/DNA extraction.

Liquid suspensions: Cell cultures or emulsions.

Environmental materials: Soil or plant matter.

Soft materials: Food products or gels.

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