

Indian Institute of Toxicology Research (IITR)

Every day, we come into contact with many chemicals through food, medicines, cosmetics, air, and water. While many chemicals are useful, it is important to understand how they affect human health and the environment. Scientists at the **CSIR - Indian Institute of Toxicology Research (IITR)** work to study the safety of chemicals and protect public health.

Located in **Lucknow**, IITR is a research institute under the **Council of Scientific and Industrial Research (CSIR)**. The institute specializes in **toxicology**, the science of studying how chemicals, pollutants, and other substances affect living organisms.

Researchers at IITR examine how exposure to certain chemicals may impact human health. Their work helps identify harmful substances in **food, water, air, medicines, and consumer products**. By studying the effects of these substances on cells, tissues, and organs, scientists can determine safe levels and suggest ways to reduce risks.

The institute also works on **environmental health and pollution research**. Scientists study contaminants in air and water and analyze how they may affect ecosystems and human populations. Their findings help governments and industries create better safety guidelines and environmental regulations.

IITR also plays an important role in **drug safety and chemical testing**. Before many products are approved for public use, they must undergo careful testing to ensure they are safe.

The research carried out at IITR helps ensure that medicines, chemicals, and industrial products meet safety standards.



Activity Idea for Teachers

Teachers can introduce the concept of **chemical safety and environmental health** through a simple observation activity. Ask students to identify common products at home or school that contain chemicals, such as cleaning liquids, soaps, perfumes, or pesticides.

Students can discuss questions like:

- Why is it important to use chemicals safely?
- How can pollution affect human health?
- What steps can we take to reduce exposure to harmful substances?

This activity helps students understand the importance of **safety in science and responsible use of chemicals**, while also connecting classroom learning to the real - world work carried out at institutes like IITR.