



**FICCI Research & Analysis Centre  
(FRAC)**



# Life at FRAC





# Our Projects and Infrastructure

At FRAC we have three labs for testing the components effectively, namely Chemical, Instrumental and Microbiological. Chemical lab is meant to test the chemicals present in the food and beverages, instrumental lab tests the metal content present in the food & beverages whereas microbiological lab tests the spoilage of the products due to microbial organisms.

At FRAC we have best instruments and staff to provide accurate results to our clients. Instruments like **HPLC** to test vitamins, preservatives, NOTS, antioxidants, artificial sweeteners, pungency; **Gas Chromatograph** to test pesticides, cholesterol; **ICP-OES** to test heavy metals and metals; **FTIR** to test characterization and mineral oil; **Gamma counter** for testing radioactivity are some effective instruments that the lab has, to deliver quality results.

We, at FRAC, are engaged in a lot of projects ranging from testing to **bench marking studies, out sourcing of quality services**.

We test a variety of products ranging from **raw materials to the processed food articles**. Some of them are: rice, wheat, coffee, juices, oil, bakery & confectionery items, alcoholic beverages, milk, many more. FRAC's scope does not limit to just food testing but of **testing drinking water, bore well water, RO water and packaged drinking water** and their containers as well. It is a certified lab with the best accreditations in its bucket that comply with ISO 17025 and adheres to all Indian and International standards (APHA, AOAC etc).

We perform performance efficacy tests to analyse instruments that are supposed to filter components for purity, like air filters, STP plants, ETP plants etc. Apart from this, our highly competent team performs market assessment for hygiene and sanitation. Swabs are collected from specific areas to study its hygiene maintenance and effectiveness of sanitation methods.

FRAC also has its own **Research and Development** wing, which is **recognized by DSIR**. The R&D department has various work areas: food processing, **method development, nutritional evaluation, bench marking, development of new recipes, shelf life study and improvement** and many more.

Freshers from areas related to food technology come to FRAC to get hands-on trainings to get industry ready. We offer courses, internships and trainings to students and also assist them in their dissertation projects. We believe that **"practical knowledge weighs equally as theoretical knowledge"**.

We have also been associated with different brands to train their working professionals to make them prepared for analysis at their own in-house labs.

We have a strong network of sample collection team spread pan India as we have clients from all states. This is a well-trained team which knows how to handle samples with care and not allow contamination or spoiling of any sorts and they maintain a good TAT.



Our scope of testing also **includes air monitoring, waste water from STP, ETP and LTP, noise level monitoring and testing of soil for contaminants**. Apart from these, we also test bio-assay and sludge.

Our conference room facility caters to the needs of different events for companies. We offer sophisticated projectors and internet connectivity for presentations. For such conferences, meals are also arranged for the participants.



# Food Testing

FRAC has a wide scope of testing services in the area of food.  
The product range we test are:

- Sugar based: bakery, confectionary, honey, boiled sugar etc.
- Dairy based: milk, SMP, cheese, condensed milk and all milk based product.
- Raw materials: wheat, flour, spices (raw and formulated), pulses, cereals, grains, seeds etc.
- Edible oil and oil seeds.
- Frozen meat and fishes
- Processed food items
- Cooked and ready to serve food articles
- Dry extruded snacks
- Nicotine Based Products: cigarettes, pan masala and other tobacco based products
- Fresh fruits and vegetables
- Health products, herbal products
- Animal feed

The common concerns that are found in food contamination are mostly related to microbial presence, heavy metal like Lead, contamination from minerals and pesticides, and adulterants.





# Research and Development



Our lab has its own Research and Development unit, which is DSIR approved. FRAC's state of the art R&D facility makes sure that our consumers get to have all the added information about their products. Our R&D team constantly works on projects that help in adding nutritive values to food and beverages.

Here are a list of food articles, and findings corresponding to them, according to our R&D team:

## Therapeutic Food

We created therapeutic food that is high in energy

and protein, with added electrolytes, mineral and vitamins.

## High Fibre Bread

High fibre is used to lower glucose levels, and

increasing the dietary bulk. Rice bran contents were used as an ingredient to increase the nutritional value of bread. With this view point, the high fibre bread was prepared.

## Badam Kesar Milk Fortification

Health drink full of nutrition.

Useful for all age group people. Simple recipe of milk kesar fortified, with appropriate vitamin and mineral mix to provide adequate nutrition.



## **Low Calorie Cookies**

New cookies were developed by our

department designed for diabetic patients to lower their blood pressure.

FRAC's R&D facility also provides fortification and method development services. Fortification means amplifying the amount of particular micro-nutrient to focus on the product's health benefits. Method development services from FRAC provides consultancy services to manufacturers on how they can improve the quality and yield of the products.

## **Technology Transfer**

FRAC works on areas such as product

development, product stabilization, packaging material studies, benchmark studies, shelf life study and improvement. The results of these studies are technologies that manufacturers can use to improve quality and yield of their products. FRAC, hence, provides technology transfers to these manufacturers.

Upon receiving the needs of the clients, we perform the above mentioned studies. Also a scalability study may be performed where in a small scale industrial machinery is set up. The same is carried out as per HACCP and ISO. Then the yield and performance of these small scale machines are studied if expanded to a full scale industry.



# Training and Post-Graduation

Indira Gandhi National Open University (IGNOU) has approved and established FRAC as a study centre for Post Graduate Diploma in Food Safety and Quality Management Systems as per the notification no. IG/RSD/Notification/0045 and recognized our lab under Regional Centre-3 for the same course.

Apart from being a post-graduation centre for IGNOU, FRAC provides students who are pursuing courses related to food technology, week-based and project-based training, where they are given a hand on experience on the our lab equipment and taught different testing methods of various parameters.

FRAC extends its training services to corporates as well. Freshers, usually have great theoretical knowledge, but somewhere they miss out on the practical, hands-on trainings. We provides our training services to bridge this gap. Companies send their teams of in-house analysts to take IS based trainings from our highly competent staff. These teams are graded on their performance and then certified to perform the tests that they took training for.

We also accept students into our training programs in fields like shelf life studies, method developments, and other Research and Development based services. We assist them in their dissertation projects. They perform tests and research for their research papers at our facility.





# Environmental Monitoring

We have ardently pursued an objective of providing quality habitat to the common public. A habitat where one can breathe clean, consume good quality food, and have nothing but only quality water and beverages, in order to elevate the lifestyle of people. Our endeavour has been recognised by competent pollution control boards who have empanelled us to be able to monitor air, water, soil and noise levels.

## Air

With the increase in the number of vehicles, factories, restaurants and other establishments, there has been a constant worry about the air that we are today breathing in. The presence of Particulate Matter, and poisonous gases like SO<sub>x</sub>, NO<sub>x</sub> and Carbon Monoxide, have proven to be a major cause in the increase in the number of patients suffering from breathing disorders like asthma. FRAC helps monitor the levels of these gases, and provide consultancy on how to reduce these elements from air.



## Waste Water

Water forms the basis of our lives. It affects in ways more than we really imagine. The source of the water



Water forms the basis of our lives. It affects in ways more than we really imagine. The source of the water we consume matters equally as the quality of environment of the source. It is a known fact that industrial waste is often released into water bodies. A constant check is thus, extremely important, on the contaminants that are released. FRAC provides ETP, STP water testing services, along with

waste liquid, sludge, and solid waste testing. This constant check also helps in protecting our soil that absorbs this water, the water table beneath the soil, and the flora and fauna in the surrounding areas.



## Noise

Noise monitoring becomes extremely essential as high decibel values in the habitat may cause hearing problems starting right from a new born, to an elderly. The increased number of vehicles on road, changing trend in terms of social enjoyments and celebrations, and city wide constructions have added to the noise levels in cities.



FRAC helps responsible establishments by constantly monitoring the noise levels released by their factories, restaurants, manufacturing units, and other point source emissions.

## Soil

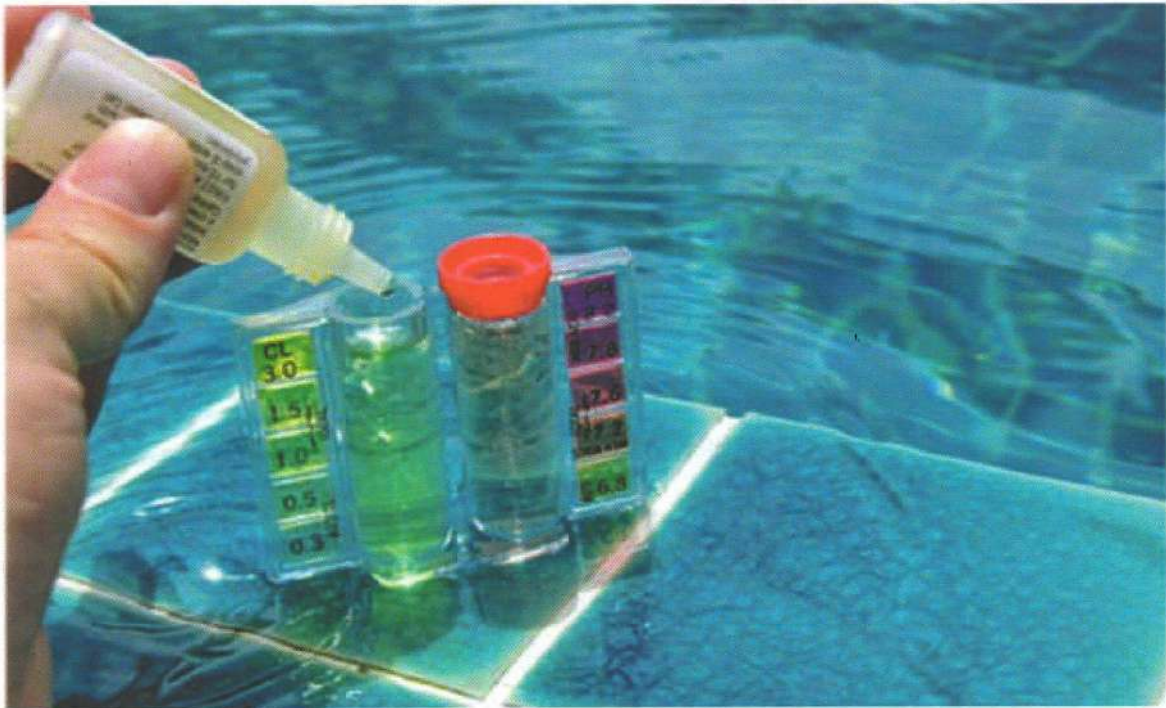
Soil is a farmer's gold in India, being an agro based country. If the quality of soil is compromised, the produce from the farms get affected too. FRAC helps determine the quality of soil by evaluating the levels of heavy metals and microbial presence in the soil. A constant monitoring of these levels may help one keeping the soil up to their requirements.



# Beverage Testing

Some of the beverages we test are:

- Dairy based: milk, condensed milk and all milk based product.
- Water: Packaged drinking water, bore well water, RO/UV water
- Non-Alcoholic Beverages: milk based, malt based, fruit and vegetable based, carbonated etc.
- Alcoholic Beverages: Whiskey, Rum, Gin, Vodka, Beer etc.
- Health products, herbal products
- Tea and coffee
- Fresh juices from raw fruits and vegetables







Visit [www.fraclabs.org](http://www.fraclabs.org)  
Phone: 011-45333500 (20 lines)  
Mail To Us At : [info@fraclabs.org](mailto:info@fraclabs.org)

**FICCI Research and Analysis Centre, Plot 2A, Sector 8, Dwarka, New Delhi – 110077  
(Nearest metro station Dwarka Sector 9) (Opposite KFC, near Apeejay College of Management)**