Parameters analyzed

1. **GLC analysis with FID detector**
2. Analysis of **food ,herbal and pharmaceutical** products through **HPLC** with C18 coloumn with UV –VIS detector

Edible/non-edible oils and Fats

1. Fatty Acid Profile
2. Adulteration/Purity
3. Flash Point
4. Cloud Point
5. Pungency/Essential Oil(as % AITC)
6. Specific Gravity
7. Free Fatty Acids
8. Presence of solvent
9. Colour
10. Acid Value
11. Peroxide Value

Edible oil as per FSSAI/Agmark specifications

- Colour
- Essential Oil content
- Moisture and Insoluble Impurities
- Refractive Index
- Acid Value
- Saponification Value
- Iodine Value (Wijs)
- Unsaponifiable Matter %age by wt.
- Bellier Turbidity Test ºC
- Specific Gravity

Adulterants in edible oil

- Test for Argemone Oil by TLC
- Test for Mineral Oil by TLC
- Test for Castor Oil by TLC
- Test for Hydrocynic Test
- Test for added Synthetic Colour
- Test for Halphan Test
- Test for sesame oil
- Test for Polybromide
- Baudian Test

Oil seed , oil meal, deoiled cake & Animal Feed

1. Moisture & Non-volatile matter
2. Oil content
3. Crude Fibre
4. Crude protein
5. Total Ash
6. Acid Insoluble Ash
7. Volatile oil
8. Organic extraneous matter
9. Inorganic extraneous matter
10. Non-volatile Extract

Fat soluble Vitamins: A, D and E

Oryzanol in Rice Bran oil

Carrier Oils

1. Fatty Acid Profile
2. Cloud Point
3. Specific Gravity
4. FFA
5. Colour
6. Acid Value
7. Peroxide Value
8. Saponification Value

SPICES& Condiments in General (whole and powdered)

Turmeric /chilli whole and powdered (FSSAI/Agmark)

1. Moisture
2. Total ash
3. Acid Insoluble Ash
4. Colouring
5. Total starch
6. Test for lead chromates
7. Added colour

Ginger Powder

1. Moisture
2. Total Ash
3. Calcium as calcium oxide
4. Volatile oil content on dry basis
5. Water soluble ash
6. Acid insoluble ash
7. Alcohol soluble extract
8. Cold water soluble extract
9. Added colour

2. **Nutritional Value of all type of food items**
   1. Energy
   2. Moisture
   3. Fat
   4. Crude Protein
   5. Carbohydrate
   6. Crude Fibre

3. **Quality Parameters of food products**
   1. Moisture
   2. Total Ash
   3. Acid Insoluble Ash
   4. Crude Fibre
   5. Non-volatile matter
   6. Volatile oil
   7. Organic extraneous matter
   8. Inorganic extraneous matter
   9. Non-volatile Extract(DWB)

4. **Nutritional Value in edible oil**

   - Energy
   - Fat

     (1) Saturated Fat (SFA)
     (2) Unsaturated Fat
       - Monounsaturated Fat(MUFA)
       - Polyunsaturated Fat (PUFA)
   - Carbohydrate

- Protein
- Vitamin E , A , D

Other **Food Products Quality test and detection of adulteration and adulterants**

- Ghee
- Spices
- Besan
- Atta
- Honey
- Chocolates
- Biscuits

Cereals, Pulses& cereal products

Other food item

Pet Food

Water as per BIS/APHA

- Drinking water
- Industrial water

Theoretical nutritional value for nutritional claim of the food products