

REFSYN ANALYSIS (2014-15)

PROXIMATE ANALYSIS

Moisture
Ash
Acid soluble ash
Acid insoluble ash
Water soluble ash
Water insoluble ash
Crude fiber
Dietary fiber
Reducing sugar
Carbohydrate
Fat
Protein
Energy value

LIPID ANALYSIS

Qualitative analysis
Total fatty acids
Fatty acids by TLC
Acid value
Saponification value
Fatty acids-GC-MS

PIGMENTS

Pigments-TLC
Beta carotene
Chlorophyll
Lycopene
Lutein
Total carotinoides
Anthocyanin
Betacyanin
Column purification
Purity-HPLC

VITAMIN ANALYSIS

Vitamin A
Vitamin B1/Thiamine
Vitamin B2/Riboflavin
Vitamin B3
Vitamin B6/Niacin
Vitamin B12
Vitamin C/Ascorbic acid
Vitamin D
Vitamin E
Vitamin K
Folic acid

WATER ANALYSIS

TDS
Turbidity
pH Value
Alkalinity
Chloride
Nitrite

Iron
Manganese
Nitrate
Sulphate
Phosphate
Silica
Calcium
Magnesium
COD
BOD

MINERAL ANALYSIS

Iron
Phosphorus
Calcium
Magnesium
Copper
Selenium
Manganese
Cobalt
Molybdenum
Sodium
Potassium
Nitrogen
Zinc

HEAVY METAL ANALYSIS

Hg
Cd
As
Pb

SEPARATION TECHNIQUES

TLC ANALYSIS

PREPARATIVE TLC PURIFICATION

Amino acids
Pigments
Carbohydrates
Lipids
Phyto chemicals

COLUMN CHROMATOGRAPHY

ANTIOXIDANT ACTIVITY

DPPH
FRAP
PMA
Hydroxy radical
Hydrogen peroxide
TBA
SOD
BHT
Catalase
Hydrogen peroxidase
Antioxidant activity-TLC

ANALYTICAL METHODS

pH meter
Moisture (KFT)
Moisture (IR)
Viscometer
Polarimeter
Melting point
UV-VIS Spectrophotometer
Viscometer
FT-IR
HPLC
NMR
GC-MS

MOLECULAR BIOLOGY

DNA isolation (Plant, Fungi and Bacteria)
RNA isolation (Plant, Fungi and Bacteria)
DNA estimation
RNA estimation
Agarose gel electrophoresis
PCR (Varies)
RFLP
RAPD

PROTEIN ANALYSIS

Protein isolation
Amino acid isolation
Protein estimation
Amino acid estimation
Qualitative analysis
SDS-PAGE
Native gel electrophoresis
Immuno electrophoresis
Gel documentation
Enzyme assay

MICROBIOLOGICAL ANALYSIS

TBC/TMV
Serial dilution
Biochemical test
Microscopic observation
Antibacterial activity
Antifungal activity
Bioautography-TLC
Antibiotic sensitivity test
Fermentation upstream processing
Fermentation down stream processing

PHYTOCHEMICAL/HERBAL ANALYSIS

Oven dry
Cold extraction
Hot extraction
Soxhlet extraction
Concentration by Roteva

REFSYN ANALYSIS (2014-15)

Phytochemical screening

Tannin

Saponins

Phenol

Flavonoids

Terpenoids

Glycoside

Purification of bioactive compounds

TLC analysis of Bioactive compounds

Antioxidant activity

Antioxidant activity by TLC

Antimicrobial activity

Fluorescence analysis

Characterization of Bioactive compounds