

Digital Iodine Value Meter



Digital Oil Spectrophoto Meter



FEATURES

- Portable and low cost
- Direct display of Iodine Number
- Reproducible results
- Low cost of analysis
- Readymade test reagents
- Easy to operate

DESCRIPTION

It has been designed for the Edible Oil Industry to determine the Iodine Value Number of commonly available oils like Coconut Oil, Groundnut Oil, Sunflower Oil, Soyabean Oil, Mustard Oil and other similar edible oils. This instrument has been designed and manufactured in technical collaboration with the Central Scientific Instruments Organisation, Chandigarh under the Technology Modernization and Upgradation Mission for Oil and Pulses Industry launched by the Ministry of Agriculture, Government of India, New Delhi.

Iodine Number is the Number of centigrams of Iodine absorbed by one gram of oil or fat.

Iodine Number is the most valuable parameter for differentiating or identifying oils and this number quickly indicate the group to which the oil belongs. The unsaturated acids of oleic, linoleic, linolenic or less saturated series and their glyceryl esters, absorb halogens to form mainly additional products. One molecular weight of triglyceride olein absorb 6 atomic weights of Iodine, where as one linolenin would absorb 18 atomic weight of Iodine.

TECHNICAL SPECIFICATION

Display	:	Digital 3½ digits
Measuring Range	:	0 to 1999 Iodine Number
Accuracy	:	± 2 Iodine Number
Power	:	220 V AC ± 10%, 50Hz for mains operations.
Filters	:	IR Range

FEATURES

- Low Cost and portable instrument
- Direct display of concentration in ppm
- Stable and dedicated reagents
- Long shelf life of reagents
- No standards required for calibration
- Reproducible results
- Easy-to-operate

DESCRIPTION

It has been designed for the Edible Oil Industry to measure metallic impurities of Copper, Nickel, Ferrous and Phosphate in ppm level in the Edible Oils like Coconut Oil, Groundnut Oil, Sunflower Oil, Soyabean Oil, Mustard Oil and other similar edible oils. **This instrument has been designed and manufactured in technical collaboration with the Central Scientific Instruments Organisation, Chandigarh** under the Technology Modernization and Upgradation Mission for Oil and Pulses Industry launched by the Ministry of Agriculture, Government of India, New Delhi.

Oils and fats obtain metal contents from soils where the plants are grown and later from contact equipment during crushing processing and storage. Many of the metal ions promote autoxidation that results in off-flavour and odour accompanied by colour development. Studies have identified copper as the most harmful metal followed by ferrous, manganese, chromium and nickel. Concentration of these ions vary from 0.1 to 2.0 ppm. According to the World Health Organisation (WHO), it is important that the edible oils do not contain toxic metallic contaminations. The presence of toxic metallic ions can lead to impairment of various body functions and dangerous health.

TECHNICAL SPECIFICATION

Display	:	Digital 3½ digits
Measuring Range	:	0.01 ppm to 2.0 ppm for Iron, Copper & Nickel 0.01ppm to 0.70ppm for Phosphorous
Accuracy	:	± 0.1 ppm
Power	:	6V Batteries (03 Nos) & 9V Battery (01) for battery operations
Filters	:	IR Range

Specific test reagents have been developed for the qualitative detection and quantitative estimation of copper, nickel, iron and phosphorous. The test reagents have been prepared in such a way that maximum two number of reagents are required for colour development of an ion under test. The shelf life of each reagent is more than six months.

APPLICATIONS : 7706

- ★ Iodine number of Oils and fats.
- ★ Iodine number of unsaturated compounds.
- ★ Iodine number of charcoal

APPLICATIONS : 7707

- ★ Metallic ions present in Edible oils, Water samples, Pollutants, Metals & Alloys and High purity materials.
- ★ Inorganic Phosphates-P in Edible oils, Water samples, Eutrophication measurements in different materials. Results of concentration are directly displayed on LCD.