

## SALIENT FEATURES

- Goodbye Titration !!!
- Rapid Analysis
- Precise, & Accurate
- Minimal Safety Requirement
- Low Cost of Analysis
- Low Maintenance & Operation Cost
- Easy Sample Preparation
- Easy Operation
- Highly Customisable



CSIR-Central Scientific Instruments Organisation  
Sector 30C  
Chandigarh 160030, INDIA  
[www.csio.res.in](http://www.csio.res.in)

## SPECIFICATIONS

Oils	Coconut
	Palm
	Olive
	Groundnut
	Mustard
	Soyabean
	Sunflower
	Rise Bram
	Customisable
Measurement Range	0 to 200
	Customisable
Precision	$\pm 0.25$
Accuracy	$\pm 0.50$
Resolution	$\pm 0.50$
Display	7"Colour Touch Panel
Sensor	ORP Electrode
Power	5V DC Adaptor
Weight	500 gms

CALL US TODAY !!! ... for...  
*Demonstration*  
*Commercialisation*  
*Prototype Procurement*

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## CONTACT

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# PRECISION IODINE VALUE ANALYSER



## CSIR

CENTRAL SCIENTIFIC INSTRUMENTS ORGANISATION

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## TECHNOLOGY

Iodine value is the measure of degree of unsaturation of esters present in oils. It is expressed as a gram of iodine per 100 gram of the oil/fat. This value is considered as imperative quality indicator of oils & fats (viz. melting point, hardness, gumming, and drying power, hydrogenations).

Conventionally, Iodine Value is determined using manual titration and few analytical instruments based on automated titration are also available in the market. Apart from longer time of analysis, these techniques/instruments use toxic chemicals like glacial acetic acid, iodine monochloride, mercuric acetate and chloroform. Also, special laboratory setup is required for handling these chemicals.

Our team at CSIR-CSIO specialising in Analytical Chemistry, Computational Chemistry, Machine Learning and Hardware Development, have developed this unique technology for Iodine value measurement which reduces analysis time, minimises toxicity and is economical. Our technology uses a specially optimised reagent and machine learning algorithms to predict a fair and accurate Iodine Values of Oils & Fats. The technology can be customised for all types of Oils & Fats. The technology is available for commercialisation on non-exclusive basis.

Prototypes are also available on payment basis for testing and market evaluations. Turn overleaf for contact details.



## ANALYSIS METHOD

### STEP 1

Weigh Oil sample as prescribed (250 to 800 mg)

Add Chemical A (25 ml) and shake (5 sec)

### STEP 2

Add Chemical B (capsule) and shake (30 sec)

Add Chemical C (25 ml) and shake (5 sec)

### STEP 3

Select Oil type

Press measure

Iodine Value is displayed on LCD

## POTENTIAL APPLICATIONS

Oil Extraction Units

Quality Control & Assurance Labs

Food Regulatory Authorities

Soaps & Cosmetics

Bakeries

Meat Industry

Paint Industry

Charcoal Industry

Biodiesel Industry

Ghee and Butter

