

**SWAMI KESHVANAND INSTITUTE OF TECHNOLOGY,  
MANAGEMENT & GRAMOTHAN, JAIPUR**



**A Report**  
**On**  
**Workshop on Volumetric Analysis and Quality**  
**Determination of Lubricants and Coal**  
**(09-10 February, 2023)**

**Organised by**  
**Department of chemistry**  
**Swami Keshvanand Institute of Technology, Management**  
**& Gramothan, Jaipur**

**Submitted by**  
**Dr. Poonam Ojha(Associate Professor)**  
**Dr. Anurag Sharma(Associate Professor)**  
**Department of Chemistry**

**Name of Institute:** Swami Keshvanand Institute of Technology, Management  
& Gramothan, Jaipur

**Name of Department:** Chemistry

**Title of Event:** Workshop on Volumetric Analysis and Quality Determination of  
Lubricants and Coal

**Maximum Number of Participants:** 30

**Date :** 09-10 February 2023

**Duration :** 2 days

**Venue :** Chemistry Lab I and II

**Level of the Event:** College Level

### **Objectives of the event**

This workshop was targeted for the I year students, and through demonstration and practical performance in Chemistry Lab, students were taught some experiment based on titration procedures like, Redox Titration, Acid-Base Titration, Complexometric Method, Iodometric Method, External Indicator Method, Double Indicator Method and the topic Fuels and Lubricants like Bomb Calorimeter, Proximate Analysis, Redwood Viscometer, Pensky-Martens Apparatus and Cloud & Pour point Apparatus.

### **Topics covered in the Workshop**

- Redox titration of FAS vs Potassium Dichromate (practical demonstration and performance by students) with internal and external indicator methods
- Iodometric Titration of copper sulphate and hypo (practical demonstration and performance by students)
- Acid Base Titration with single and double indicator methods (practical demonstration and performance by students)
- Determination of Calorific value of solid fuel by Bomb Calorimeter (through video)
- Proximate Analysis of coal (both through video and practical demonstration and performance by students)
- Viscosity measurement of lubricating oil by Redwood Viscometer (Practical demonstration and performance by students)
- Flash and fire point of lubricating oil measurement by Pensky-Martens Apparatus (Practical demonstration and performance by students)
- Cloud & Pour point of lubrication oil measurement by Cloud and Pour point apparatus (Practical demonstration and performance by students)

### **Details of the Schedule**

S.No	Session	Date	Timing	Venue	Resource Persons	Technical Assistance
1.	Session-I	09/02/2023	01:30-03:30 pm	Lab-I (II Floor,Civil Block)	Dr. Poonam Ojha	Mr. Rajendra Sharma
3.	Session-II	10/02/2023	01:30 -3:30pm	Lab-II (III Floor,Civil Block)	Dr. Anurag Sharma	Mr.Goverdhan Chawla

## Poster of the Event:



**SWAMI KESHAVANAND INSTITUTE OF TECHNOLOGY,  
MANAGEMENT & GRAMOTHAN,JAIPUR**



**Department of Chemistry**

**Date: 08/02/2023**

**Workshop on**  
**Volumetric Analysis and Quality Determination of Lubricants and Coal**

**Department of Chemistry is going to organize a student workshop on Volumetric Analysis and Important properties of Lubricant, on 09-10 Feb. 2023 at Chemistry lab I & II.**

**Objective of Workshop:**

Participant will get the practical knowledge of different types of titration procedures like, Redox Titration, Acid-Base Titration, Complexometric Method, Iodometric Method, External Indicator Method, Double Indicator Method. Handling of Redwood Viscometer, Pensky Martein Apparatus, Flash and Fire Point Apparatus. Working of Hot air Oven & Muffle Furnace.

**OutCome of WorkShop –**

1. B.Tech I Year student' s get the practical Knowledge of Different types of titration and do the hand's on practice individually.
2. By working on the Instruments i.e. Redwood Viscometer, Cloud & Pour Apparatus, Flash & Fire point, Student 's will be familiar about construction and working of Apparatus and will be aware about the importance of lubricant in different types of industries.
3. Participant will be familiar with working of Hot air oven, Muffle furnace and able to do Quality Analysis of coal by Proximate analysis of unknown fuel sample.

**Schedule of Workshop**

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**Faculty Coordinators**  
**Dr. Poonam Ojha, Dr. Anurag Sharma**

## Details of the Event

B. Tech I Year student' s got the practical Knowledge of different types of titration and do the hand's on practice individually. By working on the Instruments i.e. Redwood Viscometer, Cloud & Pour Apparatus, Flash & Fire point, Student 's would be familiar about construction and working of Apparatus and got aware about the importance of lubricant in different types of industries. Participant would be familiar with working of Hot air oven, Muffle furnace and able to do Quality Analysis of coal by Proximate analysis of unknown fuel sample. students were very much benefitted of this workshop and a good learning experience was observed by them. More than 25 students participated with enthusiasm. Participation certificates were also given to them.

### List of student participants

S.No	Name of Student	Year	Branch	Roll Number
1	Vivek Garg	I	EC	R-30
2	Yash Singh Rawat	I	EC	R-31
3	Rishi Raj Singh	I	EE	R-32
4	Ritesh Gupta	I	EE	R-33
5	Ritik Sain	I	EE	R-34
6	Roshni Tirthani	I	EE	R-35
7	Sakshi	I	EE	R-36
8	Sanidhya Jangid	I	EE	R-37
9	Satyam	I	EE	R-38
10	Saurabh Kumar	I	EE	R-39
11	Shishupal Jatav	I	EE	R-40
12	Snehal Gajraj	I	EE	R-41
13	Soniya Prajapat	I	EE	R-42
14	Rupal Sharma	I	EE	N-10
15	Sachin	I	EE	N-11
16	Sachin Singh Rawat	I	EE	N-12
17	Sahil Tapariya	I	EE	N-13
18	Sajee Shah	I	EE	N-14
19	Saksham Agarwal	I	EE	N-15
20	Manmeet Singh Yadav	I	IT	K-02
21	Mannat Pangotra	I	IT	K-03
22	Jyoti Saini	I	IT	M-04
23	Kamal Sharma	I	IT	M-05
24	Kanak Dadheech	I	IT	M-06
25	Kanishk Jain	I	IT	M-07



26	Karan Asija	I	IT	M-08
27	Karan Sharma	I	IT	M-09
28	Kartik Yadav	I	IT	M-10
29	Kashish Goyal	I	IT	M-11
30	Aakash Kumar Mahawar	I	EE	Q-

## Glimpses of the Event



