

# Crude oil Refining overview- Feed & Products

PRIYA DILIP PILLAI

Lecturer in Chemistry,

\*Gokhale Education Society's, SIR DR. M. S. GOSAVI POLYTECHNIC INSTITUTE,  
Nashik Road, Nashik, Maharashtra, India.

**Abstract:-** Nowadays Fast Life & for prestige issue people are nowadays using vehicles to a large extent but the fuels use has increased so much that there will be shortage of fuels in the future. To create an awareness among the people for Environmental Protection Refining overview is done.

**Key Words:-** Crude oil, Refinery

**Introduction:-** Refining is done in Refineries. It is an industry where Crude Oil is transformed into naphtha, kerosene, diesel and hundreds of other useful products.

Crude oil ----- Refinery -----

- 1) L.P.G
- 2) Gasoline (Petrol)
- 3) Diesel
- 4) Kerosene

**Framework:-** This study is based on Research method of refining products, feed & Processes. This method was done with the help of Mechanical Engineer Dilip Pillai who works in Radiant Engineering, Baroda which does shut down for Refineries.

**Methodology:-** The researcher used observation method & research method to know the feed products, products & Processes of refining.

**Content:-**

### 3) **Feed:- Crude Oil**

It is a mixture of large number of Hydrocarbons with small amount of sulphur, nitrogen, metal etc.

#### **Classification**

Sweet Crude : Low sulphur e.g., BH, Assam  
Sour Crude : High sulphur (1-5%); Arabian  
Light Crude : Low Sp. Gr.; Nigerian  
Heavy Crude : High Sp. Gr.; Arabian,  
Iranian, Venezuelan .



Kerosene	Flash Pt	Distillation range. Feedstock for

### 5) Gasoline:-

Characteristic	India 2000	Bharat stage II 2005	Bharat Stage III 2010	Euro II 1993	Euro III 2000
Octane Number	87	88/93	91/95	95	95
RVP (kpa)	60	60	60	-	60
Benzene Vol %	5	3/5	1	5	1
Aromatics vol%	-	-	42	-	42
Olefin vol %	-	-	21/18	-	18
Sulfur (ppmw)	1000	500	150	500	150
Lead g/l	0.013	0.013	0.005	0.013	0.005

### 6) Diesel:-

Characteristic	India 2000	Bharat stage II 2005	Bharat Stage III 2010
Cetane No	48	48	51
Sulfur (ppmw)	2500	500	350
Density (kg/m <sup>3</sup> )	860	860	845
Recovery T °C 95	370	370	360

#### 7) Other Products:-

Product	Specification & Use
ATF	Flash Point & Jet Fuel Distillation range
Furnace Oil	Road and Marine Transport Fuel
Lube Oil	Viscosity Index Pour Point Lubrication of engine & machine parts.

#### 8) Refinery Configuration:-

Based on the product pattern, market demand and crude availability refinery configuration can be chosen :

1. Topping Refinery (Mini Refinery)
  - sweet and light crude
2. Fuel Refinery

### 3. Lube Refinery

#### **Conclusion & Recommendation:-**

The Study used Observation method & Research method to know the overview of refining.

It gives us the brief overview of feed,products of refining.

With this we come to know that refining is not an easy process,it is a costly process so we must take certain measures to stop over-use of fuels.

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#### **Authors:-**

**First Author:- Priya Dilip Pillai,Master of Analytical Chemistry,Bachelor of Education, Lecturer in Chemistry,Gokhale Education Society's SIR.DR.M.S.GOSAVI POLYTECHNIC INSTITUTE, Nasik Road,Nasik,Maharashtra,India,[prp.sci19@gmail.com](mailto:prp.sci19@gmail.com)**

Data Analysis:- The data gathered through test were classified,organised,tallied and tabulated.

Results & Discussions:- The researcher used the Observational type of research using Experimental & Control Group.

The problems faced by students were Irritation during hormonal changes,presure from parents to stand in this Competitive world,race to become popular in college.The Experimental group was exposed then to Counselling & Questionnaires were distributed among both the groups to see the awareness in girls how to tackle the problems.

Result of Pretest:-

Group	No.of girls	No of girls awareness	% of Awareness
Control	10	04	40
Experimental	11	05	45

Findings reveal that on administration of pre-test,the control group had 40% of awareness& Experimental group had 45% of awareness.Based on the results of pretest,there is no much difference between two groups which made them qualified for experimental research in which experimental group is exposed to counselling.

Group	No.of Girls	No.of Girl Awareness	%of Awareness
Control	10	04	40%
Experimental	11	11	100%

It is glared from table that in terms of % awareness,Control group has 40%,while Experimental Group gathered 100%. It Shows the awareness rate increased after Counselling in Experimental Group which is reflected in their posttest.

Conclusion & Recommendation:-

The Study used Observation method to know the problems the girls face after taking admission in College. Then the researcher used Experimental method to know the Change in behaviour after Counselling.

Findings reveal that after Counselling, there was behaviour Change in College girls, the Percentage Awareness of Experimental group is higher Compared with control group.

Based on Findings Following REcommendations Are Formulated,

- 1) Counselling Techniques should be used to teach students how to tackle their Problems
- 2) Awareness of Counselling methods should be known to College Lecturers.
- 3) Learning and Teaching Process should be done in a friendly manner so that girl students feel comfortable to share their problems to College Lecturers without hesitation.
- 4) Further research for this study should be conducted.

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#### Authors:-

First Author:- Priya Radhakrishnan Pillai, Master of Analytical Chemistry, Bachelor of Education, Lecturer in Chemistry, Gokhale Education Society's SIR.DR.M.S.GOSAVI POLYTECHNIC INSTITUTE, Nasik Road, Nasik, Maharashtra, India, [prp.sci19@gmail.com](mailto:prp.sci19@gmail.com),

