GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY
DEPARTMENT OF CHEMISTRY

Jignasa Project Work on

Saturated Solutions: Measuring Solubility

Submitted by:

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Objective:

The goal of this project is to measure the solubilities of some common chemicals:

- Tablesalt (NaCl)
- Epsomsalts ($MgSO_4$)
- Sugar (sucrose, $C_{12}H_{22}O_{11}$).

Introduction:

A good part of the substances we deal with in daily life, such as milk, gasoline, shampoo, wood, steel and air are mixtures. When the mixture is homogenous, that is to say, when its components are intermingled evenly, it is called a solution. There are various types of solutions, and these can be categorized by state (gas, liquid, or solid).

Solubility depends on various factors like the Ksp of the salt, bond strength between the cation and anion, covalency of the bond, extent of inter and intramolecular hydrogen bonding, polarity, dipole moment etc. Out of these the concepts of H- bonding, covalency, ionic bond strength and polarity play a major role if water is taken as a solvent.

Also, physical conditions like temperature and pressure also play very important roles as they affect the kinetic energy of the molecules.

Experimental Procedure:

Determining Solubility

1. Measure 100 mL of distilled water and pour into a clean, empty beaker or jar.

a. 50 g non-iodized table salt (NaCl)

b. 50 g Epsom salts ($MgSO_4$)

c. 250 g Sugar (sucrose, $C_{12}H_{22}O_{11}$)

2. Add a small amount of the solute to the water and stir with a clean disposable spoon until dissolved.

3. Repeat this process, always adding a small amount until the solute will no longer dissolve.

4. Weigh the amount of solute remaining to determine how much was added to the solution.

5. Try and add more solute at the same temperature and observe changes if any.

6. Now heat the solutions and add more solute to the solutions.

Observations:

Salt	Amount of salt dissolved in 100ml water to make saturated solution.	Moles dissolved
NaCl common salt	36.8grams	0.7
$MgSO_4$	32.7grams	0.255
$C_{12}H_{22}O_{11}$(sucrose)	51.3grams	0.15

Adding more solute to heated solutions increased the solubility in all the 3 cases. The largest increase was shown by NaCl, followed by Epsom salt and sucrose. These facts too agreed with the theory as at high temperatures the kinetic energy of molecules increases and the collisions are more effective.

Conclusions:

The solubility of NaCl is the highest as it an ionic salt and easily dissociates in water. The solubility of $MgSO_4$ is also high as it is also an ionic salt, but due to a larger anion, collisions are not very effective. The solubility of $C_{12}H_{22}O_{11}$ is the least as it a very large molecule due to which hydrogen bonding with the water molecules is not very effective. Also due to the large number of carbon and oxygen atoms, inter molecular H-bonding is more dominant than intramolecular H-bonding.

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GOVERNMENT DEGREE COLLEGE FOR WOMEN, WANAPARTHY

DEPARTMENT OF COMMERCE

A Project Work on

Impact of GST on Indian Economy

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Under the Guidance of

S. AyodhyaRamulu

Lecturer in Commerce

OBJECTIVESOFTHESTUDY

- TounderstandtheconceptofGST

- ToknowthebenefitsandchallengesofGST

- TostudytheimpactofGSTondifferentsectorsinIndia

RESEARCHMETHODOLOGY

The study is based on exploratory research, on secondary data ofjournals, articles, newspapers and magazines.

INTRODUCTION

The GST Rollout has converted India into a unified market of 1.3 billion citigens. The GST was introduced in the Country from 1ˢᵗ July 2017. GSThasreplaced almost all otherindirecttaxes.

It was introduced in many other Countries long back. Australia in 2000, New Zealand in 1986, Canada in 1991, Singapore in 1994, etc.

Goods and Services Tax (GST) is an indirect tax (or consumption based tax) on the supply of goods and services. It is a comprehensive, multi-stage, destination-based tax.

Goods and services taxes are divided into five different tax slabs for collection of tax: 0%, 5%, 12%, 18% and 28%. However, petroleum products, alcoholic drinks, and electricity are not taxed under GST as of now. There is a special rate of 0.25% on rough precious and semi-precious stones and 3% on gold. In addition a cess of 22% or other rates on top of 28% GST applies on a few items like aerated drinks, luxury cars and tobacco products. Under GST, most goods are in the 18% tax range. Talking about long-term benefits, it is expected that GST would not just mean a lower rate of taxes but also minimum tax slabs.

Impact of GST onIndianEconomy

Positive impactsof GST:

Increase in FDI

Increase in market competition

More active vendors

Positive impact:

GST will reduce the costs of goods and services which were charged to double taxation. With elimination of cascading effect it will reduce the compliance cost also.

Due to simple tax structure GST is easier to administer, it will eventually help in the tax recovery and with most of the work online reducing paperwork

and only one type of tax return the service and the industry sector will flourish thus increasing the states' revenue.

Negative impact:

    i)   Increase in the cost of some commodities due to increased tax rates

    ii)   Some sectors are at a loss: Textiles, Media, Pharma, Telcom, etc

GST Impact Across Sectors:

Real Estate -Restaurants - manufacturinggoods – Ecommerce - Telecom-Automobiles –Insurance – Airlines-Cement.

CONCLUSION:

GST is a very noteworthy step in the field of indirect tax system. Multiple taxes are eliminated and there is only one tax. GST will make taxation easy for the industries. Customer is getting benefit as the overall tax burden on goods and services are reduced.

GST has now become easier to administer. New indirect tax system holds great promise in terms of sustaining growth for the Indian economy.

GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY
DEPARTMENT OF COMPUTER SCIENCE

Jignasa Project Work on

Dispensation of Geographically Distributed Traffic Data

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Guided by:

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Abstract

Vehicle number and time extraction system is one kind of an Intelligent Transport System (ITS). The proposed work is used to extract image from the traffic video to avoid traffic violations and confusions. This project will discuss a technique for the vehicle number plate recognition or time recognition in the traffic video using mathematical morphological operations. The main objective is to use diverse morphological operations to match the time or car number of vehicle with the given requirement accurately. Noises in the image are removed using filtering techniques. This is based on a variety of operations such as gray-scale conversion, morphological transformation, canny edge-detection and extraction of number plate from vehicle picture. After this segmentation is applied to identify the typescript present on number plate using template matching. This algorithm can identify number plate rapidly and precisely from the vehicles picture. Optical Character Recognition technique is also used for the character recognition and will take out the accurate image from the frames of the video which will match exactly for the particular requirement.

Keywords—JMF; JAI; gray-scale conversion; canny Edge-Detection; OCR;

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GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY
DEPARTMENT OF ECONOMICS
JignasaProjectWorkon

MISSIONBHAGIRATHAINWANAPARTHYDIST
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AIMSANDOBJECTIVES

1. The mission bhagiratha was related to save water. It was public welfare programme of the telangana state of India.

2. The Hon'blePrime Minister made special mention of Mission Bhagirathain his'Man Ki Bath' on 22nd may 2016 and applauded the efforts made by the Telangana government in water supply sector.

3. The objectives of telangana water grid to provide 100 liters to clean drinking water per person in rural household and 150 liters person in urban household. This project aim to provide water to about 25000 rural habitations and 67 urban habitations.

4. The main object of mission bhagiratha is to minimize the usage of ground water and to utilize surface water and to provide safe drinking water to people of rural areas.

5. Mission Bhagiratha is one of the flagship programmes withcommitment to provide safe, adequate, sustainable and treateddrinking water for the entire rural andurban areas.

INTRODUCTION

1Missionbhagirathaisdeclaredhasflagshipprogrammeby governmentofTelangana.

Ganga to earth from the heavens. The project is named for king Bhagiratha, who according to myth, the river

2. MissionbhagirathawasannouncedbythePrimeMinisterNarendraModiatKomatibandavillage, Medak district.

3. Itwaslaunchedon6thAugust2016.ThemanbehindthegreatprojectisK.ChandraShekarraothe chief minister of telangana

4. Mission Bhagiratha for providing safedrinking water project for every village intelangana state with a budget 43,761 crores.

5. MssionBhagirathais intendedtosurethatmemberoffemalemembersofhouseholdwouldneedto walk miles to carry a pot of water.

MATERIALSANDMETHODOLOGY

1. Thecollectionofdatafromvarious sourceslikevillagelevelandOfficeoftheSuperintending Engineer, Mission Bhagirathadepartment.

2. WemetDEE.Nagaraju,ComputerProgrammerRameshandcollectedthedataandinformation. We have gone to village level and collected the information under this Mission Bhagiratha.

OBSERVATION AND RESULTS

Mandalwise OHSRs,PipelineandHHCsReportofWanaparthy District

1. Inwanaparthysubdivision,thetotalhabs196,334tanks,624.154pipelines[kms]and46067 households' connections.

2. Inkothakotasubdivision,thetotal*habs*94,184OHSRs,459.396pipelines[kms]and37246 household and connection.

3. InPebbairsubdivision,thetotalhabs*110,216*tanks,561.17pipelines[kms]and41879household connections.

4. In wanaparthy district, the least habs, OHSRs, overhead shortage reservoir, household connections in Revally, Amarachinta, Srirangapur peoples.

5. Thehighest habs,tanks, andhouseholdconnectionsin wanaparthy, kothakota.

6. TheMinitankwasconstructedintheyearof2022undertheguidanceofChairmanY.Karunaand Ward members in Pebbair village.

7. TheMissionBhagirathatankwasconstructedin2017under guidance ofSarpanchinDhodaguntapalli village.

CONCLUSION

1. The Chief Minister of the newly carved out state of Telangana renamed the Telangana drinking water grid project as Mission Bhagiratha. The primary objective of this project is to provide the

2. best and healthly drinking water to rural and urban population of the state.

Govt. Degree College for Women, Wanaparthy

Dept. of Botany

Jignasa Study Project

Preparation of Jeevamrutham - A traditional Medicine for Crop Plants

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LECTURER IN BOTANY

Abstract

Jeevamrutha is a natural liquid fertilizer. It is made by mixing water, dung (in the form of manure) and urine from cows with some mud from the same area as the manure will be applied in later.

Prepareation of Jeevamrutham

For preparation Jeevamrutham, you need a 200-liter tank or a water barrel is required.

You should add 10kgs of cow dung into the water. with the help of a stick Stir the mixture in clockwise.

After put the handful of fertile soil from your farm in to the mixture.

And add 10 liters cow urine to the mixture. Stir it well again clockwise.

Finally, you must add remaining the semi powdered jaggery and the flour to the mixture.

The above mixture should be kept in a shaded place and away from sunlight.

The mixture should be stirred a thrice a day (10 min every day) for 4 days.

And Cover the water barrel or tank with a breathable jute bag.

After the fermented process complete and Jeevamruthami s prepared for the use.

This jeevamrutham can be used for 2-3days.

Do not use Jeevamrutham after seven days.

Jeevamrutha is a liquid organic manure popularly used as means of organic farming. It is considered to be an excellent source of 'natural carbon', 'biomass', 'Nitrogen', 'Phosphorous' 'Potassium' and lot of other micro nutrients required for the crops.

Jeevamrutha promotes immense biological activity in soil and enhance nutrient availability to crop. Similarly, beneficial effects of silicon, vermiwash and leaf extracts (of lemon grass and Aleo vera) have been reported to protect the crop from soil borne and seed borne pathogens and also improves seed germination

Jeevamrut is the traditional Indian bio pesticide and organic manure that is prepared by the unique technique of fermentation of the combined mixture of cow dung, cow urine, jaggery, pulses flour, soil and water. Jeevamrut Not only it is cost effective but it is beneficial for both plants and soil.

Precautions:

Do not use chemical fertilizers, Pesticides or weedicides for 20 days before and after application of Jeevamrutha.

Conclusion:

Jeevamrutham helps to maintain the soil health and fertility. It provides varieties of benefits to user like less cost, easily adoptable to poor farmers, increase the crop productivity, environmental safety, and successful crop production.

We can store jeevamrutham for many days or for weeks too. Stored material also have their own advantages like increase in nitrogen, micronutrients, EC, etc. To get good yield, healthy quality of crop, we must have to adopt this organic fertilizer application.

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DEPARTMENT OF ENGLISH

JIGNASA PROJECT WORK ON

ENHANCING ENGLISH FOR

EMPLOYABILITY SKILLS

Under the guidance of

SMT. K V RAJESHWARI

Submitted By

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AIMS AND OBJECTIVES

- To enrich English language by keeping oneself updated with latest terminology.
- To expose the learners to use the language effectively in various contexts.
- To develop the communication skills in English.
- To attain high level proficiency in English.
- To gain Employability Skills to sustain in any environment.
- To make students face challenges emerging in work place with respectiveto English language.
- To be able to speak fluently and accurately.
- To overcome the obstacle related to language incapabilities.
- To empower student vocabulary and knowledge.
- To acquaint the students with various strategies related to the language development.

ABSTRACT

Employability skills are also termed as Career Management Skills. Employability is considered to be a multi-faced characteristic of a person that includes a set of skillslike knowledge and personal attributes that make an individual more eligible to secure a job and be successful in their chosen field This in turn not only benefits one individual securing a job but also helps the organization grow economically. Employability skills also embrace certain personal traits, such as self-confidence, self-control, inter and intra-personal skills, honesty, decision making skills, integrity, problem solving abilities, reliability, adaptability, flexibility, willingness to work, stress management, time organization etc. This paper mainly focuses on the requirements of students to empower their careers with flying colors. It reveals the significance of cross-linguistic differences for overall development of the language. The students who are equipped with good proficiency over English can be easily be shined at the work place. Language expertise essentially required for sustaining careers and it is necessary for any process of selection. As people from different backgrounds, having different mother tongue come to work together and serve organization smoothly with English, being it a connecting language universally.

"Language is the dress of thought". Communication has become a vivacious fragment in our life. In this globalized world, English is being used as the intuitive language for more than 300 million people around the world. Each and every country adjoining the world have different communities and people speak different languages, whereby it becomes difficult to learn all languages. So, English serves as one and only language understood and spoken by people across the world.

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WANAPARTHY

STUDENT STUDY PROJECT

DEPARTMENT OF HISTORY

A PROJECT WORK ON

KURUMURTHY JAATHARA(MAHABUBNAGAR)

కురుమూర్తి స్వామివారి
దేవాలయం

SUBMITTED BY:1. M.PRASHANTHI 2.D.THULASI 3.N.SWARNA 4.P.SINDU 5. C.PARVATHI

CERTIFICATE

This is to certify that M.PRASHANTHI Roll No. 20033019875002,.**D. THULASI** Roll No. 20033019129013,. **N.SWARNA** RollNo.220330191292054**, .P.SINDHU** Roll No.220330191291031**, C.PARVATHI** Roll No.220330191292015 are Studying BA(HEP)3rd &I year has completed this original project work on "**KURUMURTHY JAATHARA".** They prepared this project report in collaboration with History Department

Signature of Supervisor   Signature of Principal

DECLARATION

We are Studying BA(HEP) III year at Government Degree College for Women Wanaparthy during the academic year 2022-2023 hereby declare that this is our Original project work on **KURUMURTHY JAATHARA(MAHABUBNAGAR)**

Submitted under the Guidance of Sri. P. Srinivas Lecturer in **History.**

2023/1/29 12:46

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THANK YOU

GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY

DEPARTMENT OF MATHEMATICS

JIGNASA PROJECT

Topic: NEW TECHNIQUES IN DIVISIBILTY

UNDER THE GUIDANCE OF

Smt.D.Sattemma,Asst. Prof in Mathematics

Name of the Students

1. B.Rekha   **- B.sc. (MPCs) III year**

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5. S.Hemalatha   **- B.sc.(MPCs) III year**

Abstarct:

We have introduce a new techniques,that are

i) To find the total number of positive divisible numbers

    ii) To find the first,last numbers and rth term

    iii) To find the sum of numbers

between two numbers,that are exactly divisible by a number(Prime or Composite).

Floor integer function and Ceiling integer function are especially suitable for treating divisibility problems.In this work we are using Floor integer function and Ceiling integer function.

Procedure:

Theorem1: Let a and b be positive integers with a≤b,and p be a positive integer.Then the numbers that are exactly divisible by p in between a and b is $\left\lfloor \frac{b}{p} \right\rfloor - \left\lfloor \frac{a-1}{p} \right\rfloor$

Proof: Let a,b,p are positive integers

$\left\lfloor \frac{b}{p} \right\rfloor$= It gives the number of terms that are exactly divisible by p between 1 to b

Let assume the numbers from 1 to b is $1,\ldots p,2p,\ldots a,\ldots\ldots k_1p,\ldots b$

∴$k_1p \leq b$

    $k_1 \leq \frac{b}{p}$

    By the definition of Floor function $k_1 = \left\lfloor \frac{b}{p} \right\rfloor$

$\left\lfloor \frac{a-1}{p} \right\rfloor$=It gives the number of terms that are exactly divisible by p between 1 to a-1

Let assume the numbers from 1 to b is $1,\ldots p,2p,\ldots\ldots\ldots k_2p,..a-1,a,\ldots b$

    $k_2p \leq a-1$

    $k_2 \leq \frac{a-1}{p}$

By the definition of Floor function $k_2 = \left\lfloor \frac{a-1}{p} \right\rfloor$

$\therefore$The numbers that are exactly divisible by p in between a and b is $k_1 - k_2 = \left\lfloor \frac{b}{p} \right\rfloor - \left\lfloor \frac{a-1}{p} \right\rfloor$

Theorem2:If a,b ∈N and a<b,n is any positive number(Prime or Composite).Then

i)How many natural numbers are there up to a that are divisible by n?

ii)How many natural numbers are there up to b that are divisible by n?

iii)How many numbers are there in between a to b that are exactly divisible by n?

iv)Finding First term, Last term and r th term in between a to b that are exactly divisible by n?

v)Find the Sum of numbers that are exactly divisible by n in between a to b.

Proof: Let a,b ∈N and a<b,

      n is any positive number(Prime or Composite)

i)The natural numbers up to a that are divisible by $n = \left\lfloor \frac{a}{n} \right\rfloor$

ii) The natural numbers up to b that are divisible by $n = \left\lfloor \frac{b}{n} \right\rfloor$

iii) The natural numbers are there in between a to b that are exactly divisible by n is

$\left\lfloor \frac{b}{n} \right\rfloor - \left\lfloor \frac{a-1}{n} \right\rfloor$

iv) First term in between a to b that are exactly divisible by $n = \left\lceil \frac{a}{n} \right\rceil \times n$

   Last term in between a to b that are exactly divisible by $n = \left\lfloor \frac{b}{n} \right\rfloor \times n$

   r th term in between a to b that are exactly divisible by n $t_r = (\left\lceil \frac{a}{n} \right\rceil \times n) + (r-1)n$

v) the Sum of numbers that are exactly divisible by n in between a to b=

$\frac{\left\lfloor \frac{b}{n} \right\rfloor}{2}\{2n + (\left\lfloor \frac{b}{n} \right\rfloor - 1)n\} - \frac{\left\lfloor \frac{a-1}{n} \right\rfloor}{2}\{2n + (\left\lfloor \frac{a-1}{n} \right\rfloor - 1)n\}$

Government degree college women
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Department of political science
JignasaProject work

మహిళ సాధికారత

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Introduction.

- సాధికారిక అంటే మహిళ తన హక్కులను బాధ్యతలను తెలుసుకొని, తనకున్న శక్తి యుక్తులను సమగ్రంగా ఆవిష్కరించుకొని అందిన అన్ని అవకాశాలను వినియోగించుకొని సమాజానికి దేశానికి ప్రపంచానికి ఉపయోగపడని

- సాధికారిక అనగా సామర్థ్యం నిర్మాణ ప్రక్రియ. ప్రతి వ్యక్తి తన వ్యక్తిగత లేదా సామూహిక జీవనానికి సంబంధించిన విషయాలలో స్వయం నిర్ణయాన్ని తెలుసుకునే ధైర్యాన్ని సామర్థ్యాన్ని స్వేచ్చను కలిగి ఉండటం నిర్ణయాలు తీసుకునేటప్పుడు ఇతరుల సహాయం తెలుసుకోకూడదు

- మహిళా విద్య ఆరోగ్య ఉద్యోగ రంగాల్లో భాగస్వామ్యాన్ని కలిగి ఉండటం తన సమస్యను దాని పరిష్కరించుకుని సామర్థ్యాన్ని కలిగి ఉండాలి. తన సొంత ఉద్యోగంతో సంపాదన సంపాదించుకోవాలి ఏ రంగంలో అయినా మహిళలే ముందు అందులో ఉండాలి, స్త్రీ చేతకాని పని అంటూ ఏది ఉండదు, దేశం కోసం పోరాటం చేయడానికి ఎల్లప్పుడూ సిద్ధంగా ఉండాలి, మహిళలు అంటే ఏమిటో నిరూపించుకోవాలి.స్త్రీ అంటే దేనికి పనికిరాదు అంటూఉండరాదు

- 1985లో నైరోబియాలో జరిగిన యూనియన్ యొక్క మూడవ ప్రపంచ మహిళలపై సాధికారిక ఒక భారంగా ప్రవేశపెట్టబడింది ఇది అనుకూలంగా సామాజిక మరియు ఆర్థిక శక్తుల పునః పంపిణి మరియు వనరుల నియంత్రణగా నిర్వహించబడింది
- మహిళలు అనగా అందరి దృష్టిలో ఒక ఆదిపరాశక్తి అని గుర్తు పెట్టుకునేలా ఉండాలి
- మహిళలు అంటే ఇంట్లో చేతులు ముడుచుకొని ఉండటం కాదు సమాజంలోకి వచ్చి తనకున్న కలలను నెరవేర్చుకోవాలి
- దేశానికి ఉపయోగపడే పనులు తన వంతు చేయాలి అప్పుడే మన దేశం అభివృద్ధి చెందుతుంది
- అధికారిక కోసం రాజ్యాంగంలో పొందుపరచబడిన చట్టాలు
- చట్టాలను పొందుపరచడం జరిగింది మహిళల జీవన విధానం పట్ల స్వావలంబన పొందుపరచడం కోసం ఏర్పాటు చేయబడును ప్రభుత్వ పథకాలను ఉపయోగించుకుంటూ వారు తమ యొక్క జీవితాన్ని కొనసాగించబడుతుంది.

GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPARTHY
DEPARTMENT OF PHYSICS

A Project Work on

To find out the Refractive Index of different liquids using a Hollow Prism

1) **M Mahalaxmi - 20033019468053**

2) **M Jyoshna - 20033019468050**

3) **G Maneesha - 20033019468033**

4) **K Saritha - 20033019468044**

5) **V Kalpana - 20033252441026**

CERTIFICATE

This is to certified that M Mahalaxmi – 20033019468053, M Jyoshna – 20033019468050, G Maneesha – 20033019468033, K Saritha – 20033019468044, V Kalpana – 20033252441026.Have completed their project work on REFRACTIVE INDICES GDC (W) Wanaparthy. They have successfully prepared this project report in the Department of Physics in GDC (W) Wanaparthy.

ACKNOWLEDGMENT

DECLARATION

We the following students studying B.Sc. III year at Govt. Degree college for women, Wanaparthy during the academic year 2021-22 hereby declared that this is our original project work on "To find out the Refractive Index of different liquids using a Hollow Prism" and submitted under the guidance of R Manjula and G Vishnumurthy lectures of Physics Department.

S.NO	HALL TICKET NO.	NAME OF THE STUDENT	SIGNATURE
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2	20033019468050	M Jyoshna	
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INDEX

CHAPTER-1

Introduction: -

Definition

The **relative refractive index** of an optical medium 2 with respect to another *reference* medium 1 (n_{21}) is given by the ratio of speed of light in medium 1 to that in medium 2. This can be expressed as follows

$$n_{21} = \frac{v_1}{v_2}.$$

If the *reference* medium 1 is *vacuum,* then the refractive index of medium 2 is considered with respect to vacuum. It is simply represented as n_2 and is called the **absolute refractive index** of medium 2

The <u>absolute refractive index</u> n of an optical medium is defined as the ratio of the speed of light in vacuum, c = 299792458 m/s, and the phase velocity v of light in the medium,

$$n = \frac{c}{v}.$$

The phase velocity is the speed at which the crests or the phase of the wave moves, which may be different from the group velocity, the speed at which the pulse of light or the envelope of the wave moves.[1] Historically air at a standardized pressure and temperature has been common as a reference medium.

History

Thomas Young was presumably the person who first used, and invented, the name "index of refraction", in 1807 At the same time he changed this value of refractive power into a single number, instead of the traditional ratio of two numbers. The ratio had the disadvantage of different appearances. Newton, who called it the "proportion of the signs of incidence and

refraction", wrote it as a ratio of two numbers, like "529 to 396" (or "nearly 4 to 3"; for water) Hauksbee, who called it the "ratio of refraction", wrote it as a ratio with a fixed numerator, like "10000 to 7451.9" (for urine).Hutton wrote it as a ratio with a fixed denominator, like 1.3358 to 1 (water) Young did not use a symbol for the index of refraction, in 1807. In the later years, others started using different symbols: n, m, and μ. The symbol n gradually prevailed.

Some representative refractive indices

| Name of material	Refractive index no. n
Vacuum	1 (by definition)
Air at STP	1.000273
Gases at 0 °C and 1 atm	
Air	1.000293
Carbon dioxide	1.00045
Helium	1.000036
Hydrogen	1.000132
Liquids at 20 °C	
Arsenic trisulfide and sulfur in methylene iodide	1.9
Carbon disulfide	1.628
Benzene	1.501
Carbon tetrachloride	1.461
Silicone oil (nD25)	1.393–1.403
Kerosene	1.39
Ethanol (ethyl alcohol)	1.361
Acetone	1.36
Water	1.333
10% glucose solution in water	1.3477
20% glucose solution in water	1.3635
60% glucose solution in water	1.4394
Solids at room temperature	
Silicon carbide (moissanite; 6H form)	2.65
Titanium dioxide (rutile phase)	2.614
Diamond	2.417
Strontium titanate	2.41
Tantalum pentoxide	2.15
Amber	1.55
Sodium chloride	1.544
Fused silica (a pure form of glass, also called fused quartz)	1.458
Other materials	
Liquid helium	1.025
Perfluorohexane (Fluorinert FC-72)	1.251
Water ice	1.31
TFE/PDD (Teflon AF)	1.315

Name of material	Refractive index no. n
Cryolite	1.338
Cytop	1.34
Polytetrafluoroethylene (Teflon)	1.35–1.38
Sugar solution, 25%	1.3723
Cornea (human)	1.373/1.380/1.401
Lens (human)	1.386–1.406
Liver (human)	1.369
Intestinal mucosa (human)	1.329–1.338
Ethylene tetrafluoroethylene (ETFE)	1.403
Sylgard 184 (polydimethylsiloxane)	1.4118
Sugar solution, 50%	1.42
Polylactic acid	1.46
Pyrex (a borosilicate glass)	1.47
Vegetable oil	1.47
Glycerol	1.4729
Sugar solution, 75%	1.4774
Poly(methyl methacrylate) (PMMA)	1.4893–1.4899
Halite (rock salt)	1.516
Plate glass (window glass)	1.52
Crown glass (pure)	1.50–1.54
PETg	1.57
Polyethylene terephthalate (PET)	1.575
Polycarbonate	1.6
Crown glass (impure)	1.485–1.755
Flint glass (pure)	1.60–1.62
Bromine	1.661
Flint glass (impure)	1.523–1.925
Sapphire	1.762–1.778
Boron nitride	2–2.14
Cubic zirconia	2.15–2.18
Potassium niobate (KNbO3)	2.28
Zinc oxide	2.4
Cinnabar (mercury sulfide)	3.02
Silicon	3.42–3.48
Gallium(III) phosphide	3.5
Gallium(III) arsenide	3.927
Germanium	4.05–4.1

CHAPTER-2

Apparatus Required

1. Hollow glass prism
2. Various liquids like water, Dil . Sulphuric Acid, Benzaldehydeetc.
3. Bell pins
4. Drawing board
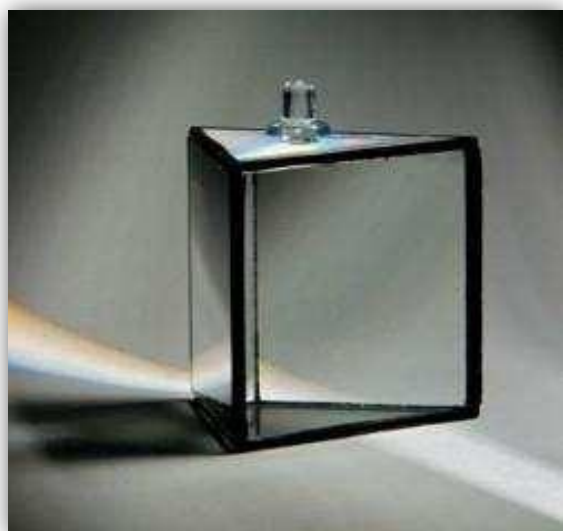
Procedure

1. Fix a white sheet of paper on the drawing board with helpof drawing pins.

2. Keep the prism and mark the outline of it as ABC.

3. Drop a normal PQ on the side AB.

4. Draw the angle of incidence in accordance with the normalPQ and place 2 pins so that they appear to be in the straightline.

5. Place the prism filled with given sample of liquid, on themarked outline ABC.

6. Now take the pins and place them on the side AC so that allthe 4 pins appear to be in same line.

7. Remove the prism and draw the line joining the points soobtained.

8. Mark the diagram as shown in the figure.

Repeat this with different liquids and different angle ofincidence.

Theory

A prism is a transparent optical element with flat, polished surfaces that refract light. Prisms can be made from any material that is

PE – Incident ray
EF – Refracted ray
FS – Emergent ray
∠A – Angle of the prism

∠i – Angle of incidence
∠r – Angle of refraction
∠e – Angle of emergence
∠D – Angle of deviation

transparent including glass, plastic and fluorite. A prism can be used to break light up into its constituent spectral colors. Prisms can also be used to reflect light, or to split light into components with different polarizations.
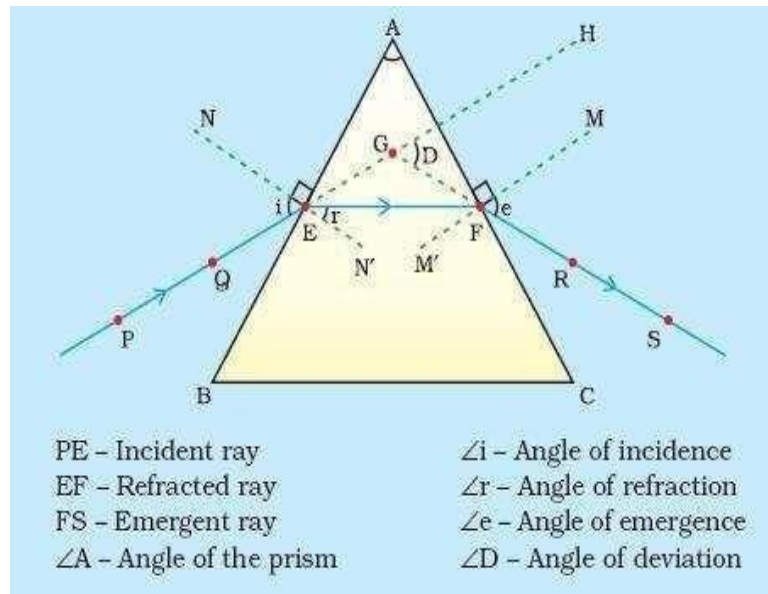
The refractive index of the liquid
Is given by the formula:

U=sini/sinr=sin((a+d)/2)/sin(a/2)

Where,

U=refractive index of the liquid.

a= the angle of minimum deviation

d=angle of prism

i=angle of incidence

r=angle of refraction

CHAPTER-3

Data Analysis & Interpretation/Results and Discussions

- Benzaldehyde

Sl.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	30	44
2	60	35	43
3	*60*	*37.5*	***41***
4	60	39	44
5	60	40	46

U=sin ((60+41)/2)/sin (30)

=Sin (101)/2/Sin (30)

=Sin (50.5)/Sin (30)

=0.77/0.5

=1.54

- Water

Sl.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	30	24
2	60	35	23
3	60	40	21
4	*60*	*45*	*25*
5	60	50	27
6	60	55	29

U=sin ((60+21)/2)/sin (30)
=Sin (81)/2/Sin (30)
=Sin (40.5)/Sin (30)
=0.64/0.5
=1.28

- ## Dil. Sulphuric Acid

S.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	20	32
2	60	30	35
3	60	35	24
4	60	40	30
5	60	45	34

U=sin ((60+24)/2)/sin (30)

=Sin (84)/2/Sin (30)

=Sin (42)/Sin (30)

=0.66/0.5

=1.32

- ## Ethyl Alcohol

S.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	50	25
2	60	60	18
3	60	65	23

U=sin ((60+18)/2)/sin (30)

=Sin (78)/2/Sin (30)

=Sin (39)/Sin (30)

=0.62/0.5

=1.24

Sunflower Oil:

S.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	60	40
2	60	50	38
3	*60*	*40*	*40*

U=sin ((60+38)/2)/sin (30)

=Sin (98)/2/Sin (30)

=Sin (49)/Sin (30)

=0.754/0.

=1.508

Coconut Oil:

S.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	60	41
2	60	50	36
3	*60*	*40*	*44*

U=sin ((60+36)/2)/sin (30)

=Sin (96)/2/Sin (30)

=Sin (48)/Sin (30)

=0.74/0.5

=1.48

Acetone:

S.no	a °(angle of prism)	i ° (angle of incidence)	d ° (angle of deviation)
1	60	60	34
2	60	50	24
3	60	40	27

U=sin ((60+24)/2)/sin (30)

=Sin (84)/2/Sin (30)

=Sin (42)/Sin (30)

=0.66/0.5

=1.32
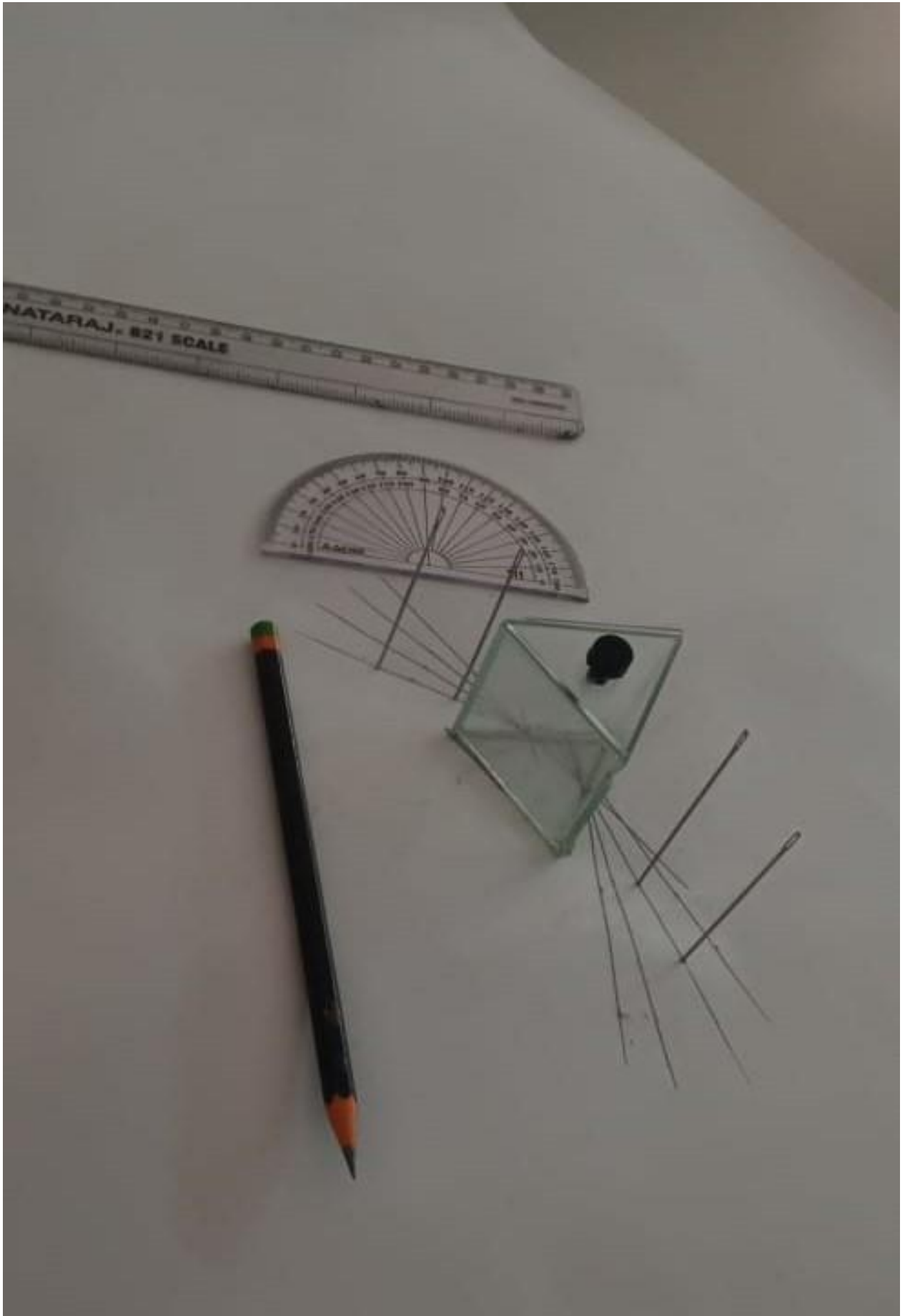
CHAPTER-4

Summary & Conclusion

Refractive indices at room temperature:

- Benzaldehyde
    - Actual: 1.546
    - Experimental: 1.54
- Water
    - Actual: 1.33
    - Experimental: 1.28

- Dil . Sulphuric Acid

    - Actual: 1.355
    - Experimental: 1.32
- Ethyl Alcohol

    - Actual: 1.36
    - Experimental: 1.24
- Sunflower Oil:

    - Actual: 1.4735
    - Experimental: 1.508
- Coconut Oil

    - Actual: 1.46
    - Experimental: 1.48
- Acetone

    - Actual: 1.3586

○ Experimental: 1.320

- Angle of incidence should lie b/w 35-60 degree.

- Pins should be vertically fixed and should lie in same line.

- Distance b/w two points should not be less than 10mm.

- Same angle of prism should be used for all observation.

- Arrow head should be marked to represent emergent andincident ray.

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CHAPTER-5

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GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPRTHY 2022-23

DEPARTMENT OF TELUGU

JIGNASA STUDENT STUDY PROJECT

A Project Work on

వనపర్తి జిల్లా ఆధ్యంనికిక కవులు

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GOVERNMENT DEGREE COLLEGE FOR WOMEN WANAPRTHY 2022-23

DEPARTMENT OF ZOOLOGY

JIGNASA STUDENT STUDY PROJECT

A Project Work on

Biomedical Waste Management In Wanaparthy Hospitals

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Bio Medical Waste Management (BMW) in Hospitals

Aim: Our project work aim is to know various types of managing methods for bio medical waste in local hospitals.

We visited many hospitals in wanaparthy.

Objectives:

❖ To know the proper storage of waste as per their classification mode of treatment and disposals in hospitals.

❖ To know about providing necessary training to the hospital staff handling waste at the health care.

❖ To educate and make the individual health care facilities, awareness of storing the waste in a scientific manner.

Definition: Any waste produced during the diagnosis, treatment or immunization of human, animal research activities and in health camps.

Introduction:

Hospitals are not only source of treatment for the disease but they can generate many contagious diseases. The waste produced in hospitals is called Bio medical waste & it can spread diseases if not properly disposed off. There are many hospitals categorized into super speciality, multi speciality, speciality and clinics.

A part from hospitals the biochemical and pathological labs conducting the tests related to many diseases. This all institution generating biomedical waste, which is hazardous, must be dispose using proper methods and techniques.

Kinds of Bio medical waste

- Generally there are four different kinds of bio medical waste
    1. Infectious waste: This include human or animal tissue blood – soaked bandages, surgical gloves, cultures, swabs, stocks of infectious agents etc.
    2. Hazardous waste: This include chemical, outdated medicines and sharps (needles, scalpes, lancets etc.)
    3. Radioactive waste: Radioactive waste produced from nuclear medicine treatments, cancer therapies etc.
    4. General waste: General waste includes things like paper, plastic, liquids, kitchen waste, tea cups, syringe covers, covers of blood bags etc.

Biomedical waste management follows, generation of waste, and proper segregation, collection, transportation, treatment and safe disposal. The collection of biomedical waste involves use of different types of container from various sources of biomedical waste like, operation theatre, laboratory, wards, kitchen, corridor etc.

The containers or bins should be placed in such a way that 100% collection is achieved.
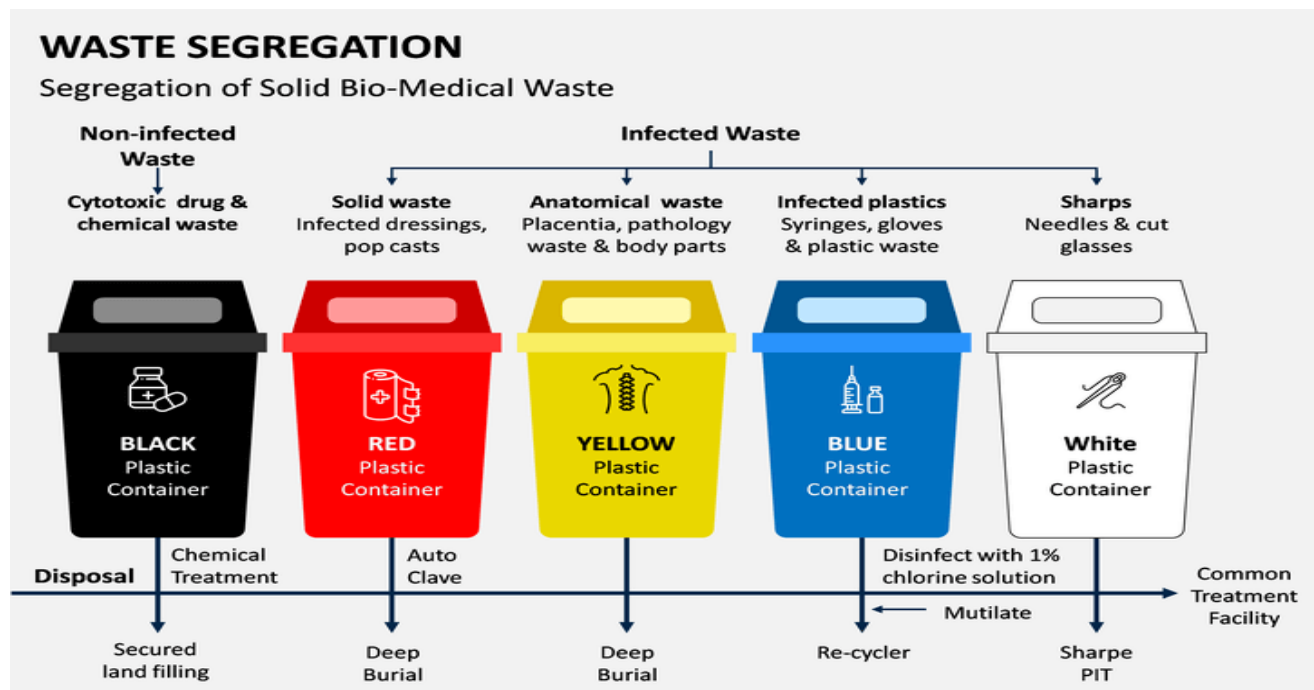
Biomedical waste disposal methods

➢ Incineration

➢ Chemical disinfection

➢ Auto calving and dry thermal treatment

➢ Micro wave irradiation

➢ Land disposal

➢ Inertization

Benefits of Bio medical Waste Management

• Cleaner and healthier surroundings.

• Reduction in the incidents of hospital acquired and general infections.

• Reduction in the cost of infection control within the hospital.

• Reduction in the possibility of diseases and death due to reuse and repackaging of infectious disposables.

Conclusion:

Most of the wanaparthy hospitals are maintaining hygienic conditions by methodical disposal of biomedical waste.

Medical waste should be classified according to their source, typology, and risk factors associated with their handling, storage and ultimate disposal.

Protecting our environment and our lives is really necessary because this medi-waste cause a really harm to the environment as well as human life.

Collection of this materials and as well as disposal should also maintain in hygienic manner, so that no one is effected from the substances evolved by the waste.