AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN

(AFFILIATED TO MADURAI KAMARAJ UNIVERSITY)

ANNA NAGAR, MADURAI-625 020, TAMIL NADU.

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6.5.2 The institution reviews its teaching learning process, structures & methodologies of operations and learning outcomes at periodic intervals through IQAC set up as per norms and recorded the incremental improvement in various activities.

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ACEDEMIC AUDIT REPORT:2018-2019

Name of the Auditor: T. Sivapriya **Department Audited:** Chemistry **Date of Audit:** July 1 2019

S.No	Audit Parameters	Level of Satisfaction			Observation /Remarks
		HS	S	NS	
1.	Institute /Department Academic Calendar in line to University	✓			As per University norm
2.	Faculty Teaching Work Load distribution	✓			As per University norm - 18 hours
3.	Preparation of Course plan		✓		
4.	Formation of COs, Mapping to POs, PSOs and Assessment process	✓			COs, POs may be improved
5.	Quality of Certificate Course	✓			No. of courses may be increased
6.	Quality of Value Added Course	✓			more advance courses can be introduced
7.	Elective Course selection	✓			more no. of course suggested
8.	Final Year Project Planning, Progress and quality-Review	✓			Good.
9.	Mentoring System	✓			Good
10.	Remedial Classes for weak Students	✓			Good
11.	Whether HOD is PhD qualified.			✓	—
12.	Faculty – Student ratio				As per University norm
13.	Papers published			✓	
14.	Number of Conference Papers published		✓		
15.	FDP Participation	✓		✓	Satisfied
16.	Number of Class rooms with ICT Facility.			✓	

17.	Laboratory facility	✓			Good
18.	No of FDP/ Seminars/ workshops/Conferences Organized.			✓	2 programs only
19.	Placement Percentage		✓		Core company placement encourage
20.	Higher Studies Through Competitive Exams		✓		
21.	Industrial Visit	✓			Good
22.	Guest Lecture by Industry Person.			✓	NIL
23.	MOUs and activeness			✓	NIL
24.	Technical Events under Professional Societies			✓	NIL
25.	University Result Analysis	✓			well prepared Good A
26.	Class Committee Meetings	✓			Yes, Conduct Regu
27.	Department Faculty Meetings	✓			Yes, Conduct Regul

*HS-Highly Satisfactory S-Satisfactory NS-Not Satisfactory

Recommendations of the Auditor:

Signature of the Head of the Department

Signature of the Auditor

Signature of the Principal

Part IV: Skill based course-III
PERFUMES AND COSMETICS

Credits-2

Hours/Week:2

Max. Marks 100

Ext:75+Int:25

UNITI: I NATURAL PERFUMES

Perfumes-plant and animal sources- examples -components of perfume –vehicle – characteristics of good vehicle fixatives and its types, odoriferous compounds, extraction of essential oils by distillation, enflurege and solvent extraction methods.

UNIT II: ARTIFICIAL PERFUMES AND FLAVORS

Preparation and uses of methyl anthranilate, methyl salicylate, methyl cinnamate, phenyl ethanol, citronellol, vanillin, coumarin and heliotrope.

UNIT III: COMPOSITION AND MANUFACTURE OF PERFUMERY COMPOUNDS

Rose and Jasmine-Composition and preparation of rose and jasmine perfumes-manufacture of fruit flavors-fruit syrup preparation and composition of apple and pineapple flavors.

UNIT IV: SOAPS AND DETERGENTS

Cleansing action of soap-differences between soap and detergents-ingredients of washing and bathing soap-TFM of bathing soap-composition of solid and liquid detergents-functions of ingredients in detergents.

UNIT V: COSMETICS AND PERSONAL HYGIENE PRODUCTS

Characteristics of good cosmetics-demerits of artificial cosmetics-basic composition of talcum powder-face cream-nail polish-hair dye-tooth paste-mouth wash (Composition only)

REFERENCE BOOKS

1. Industrial Chemistry-B.K Sharma
2. Textbook of cosmetics-Rajesh Kumar Nema, Kamal Singh Rathore, Balkrishna Dubey
3. Manufacture of perfumes, cosmetics, detergents-Gir Raj Prasad (from Small Industry research Institute)

AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN

ANNA NAGAR, MADURAI-20

DEPARTMENT OF CHEMISTRY- STAFF TIME TABLE

EVEN SEMESTER TIME TABLE NOV-2018

MRS. S. AMUTHA ASSISTANT PROFESSOR **NO.OF HOURS: 16**

DAY ORDER/HRS	1	2	3	LUNCH BREAK	4	5
I	I CHE		I MICRO		III CHE	
II	I CHE	I CHE			III CHE	
III	I MICRO LAB ⟷		III CHE			
IV			III CHE		I MICRO	
V	PHYSICAL LAB ⟷ III CHE					I MICRO
VI	I MICRO	I CHE				

HOD/CHEMISTRY **PRINCIPAL**

Synthetic perfumes

Introduction:-

The principal sources of odour bearing Compounds are plants and animals. Some of these Compounds possesses pleasant odours and have played an important role in human lives since ancient times. A perfume may be defined as a mixture of pleasant smelling substance incorporated into a suitable solvent. The odorous Compounds are products of plant metabolism and are found in leaves, fruits, flowers, bark, roots and rhizomes of plants. Some notable examples are the oil derived from aniseed, basil, caraway, cardamom, cedar, wood, celery, cinnamon, coriander, cumarin, eucalyptus, ginger, jasmine, lemons, rose, sandalwood, valerian. chemically, a perfume is composed of three ingredients. viz:- Vehicle, fixative, and odoriferous substance.

Methyl anthranilate:-

(methyl, o-aminobenzoate - $NH_2-C_6H_4-COOCH_3$) possesses a sweet odour of orange flowers and is indispensable in pseudo neroli oils. methyl

Soaps :-

A substance used with water for washing and cleaning, made of a compound of natural oils or fats with sodium hydroxide or another strong alkali and typically having perfume and colouring added.

Cleansing action of soap :-

Cleansing action of soaps and detergents.

Most of the dirt is oily in nature and oil does not dissolve in water. The molecule of soap constitutes sodium or potassium salts of long chain carboxylic acids. therefore, it form an emulsion in water and helps in dissolving the dirt when we wash our clothes.

soap is a kind of molecule in which both the ends have different properties.

* Hydrophilic end
* Hydrophobic end.

Difference between soap and detergents :-

soaps :-

They are metal salts of long chain higher fatty acids.

Detergents :-

These are sodium salts of long chain

Soaps	detergents.
1. They are Na and k salts of long chain acids	They are Na and k salts of long chain Sulponic acids
2. They have Ionic part $-COONA$ group	They have Ionic part $-SO_3Na$ or $-SO_4Na$ group
3. Their performance decrease in hard waters	Hard water does not affect their efficiance.
4. They take time to dissolve in water	They dissolve fastes in water
5. They are biodegradable Ex. Sodium Stearate	some detergents are not biodegradable Ex. Sodium lauryl Sulphate.

Ingredients of washing soap:

- Alcohol Ethoxylate
- Alkyl (or Alcohol) Ethoxy Sulphate
- Amine oxide. Amphoteric Surfactant
- Carboxymethyl cellulose
- Citric acid
- cyclodextrin
- Diethyl Ester Dimethyl ammoniam chloride
- Ethanol

Ingredients of Bathing soap:-

- Checking the individual labels.

→ Sodium Laureth sulfate, sodium laureth sulphate is cleanser with high-foaming properties that make it useful for those with hard water.

⇒ sodium palmitate
⇒ sodium Lauroyl Isethionate
⇒ sodium olivate
⇒ sodium cocoate.

TFM of Bathing soap:-

Total fatty matter (TFM) is one of the most important characteristics describing the quality of soap and it is always specified in commercial transactions. In older day in Europe and in some countries now, soap with TFM 45% minimum was referred to as Grade 1 and 65% minimum as Grade 2 and less 60% as Grade 3.

Composition of solid detergents :-

A method of preparing a solid hand laund. detergent composition comprising combining the following components.

a) 4% by weight 40% by weight anhydrous alkaline salts, based on the weight of the final composition.

b) 2% by weight to 30% by weight anhydrous detergency reinforcing agents.

c) water

d) 10% by weight to 50% by weigh surfactant.

e) 0.1% by weight 10% by weight sequestrant and f) 0.5 by weight to 20% by weight peroxide bleaching agent.

Composition of liquid detergents :-

Neodol .

Component	Weight %
Neodol 23-6.5	28
Ditallowalkyldimethyl ammonium chloride	7
Sodium toluene sulfonate	2
Ethanol	15
Water	48

A liquid detergen composition includes an

perfumes & cosmetics.

composition of rose :-

Rosa floral notes in perfumery Rose gallica - the oldest of the roses, cultivated in Egypt for the production of the oil and absolute. Analysis of the chemical composition of Rose reveals to us that the main components know as the rose alcohols are citronellol, geraniol, nerol and phenyl Ethyl Alcohol.

composition of Jasmine :

The approximate composition of jasmine flower oil obtained by enfleurage is benzyl acetate, linalool, linalyl acetate, benzyl alcohol jasmin, indole and methyl anthranilate. Jasmine is one of the oldest known and most widely used botanical scents.

Preparation :-

1. Wash the flower petals, gently clean to any dirt and sediment with water.
2. Soak the flowers. put cheesecloth inside a bowl with edges overlapping the bowl
3. Heat the flower & control water.
4. Bottle the perfume.

Fruit syrup:

simple syrup is a sweet, concentrated liquid made by boiling water and sugar together and its used in drinks and can be poured over cakes and other desserts. With the addition of fruit the syrup takes on the flavor and color of the fruit.

Composition of apple:

Malic acid is the main acid present in apples. the more sour the apple, the more malic acid contains. Bramleys cotain about 0.9%. malic acid by weight. some cider apples contain about twice that amount.

Preparation of apple flavour syrup:-

combine apples and water in a small saucepan over high heat. Bring to a boil reduce heat and simmer for 2 hours or until concentrated to your liking remember, it might be sour depending on type of apple used but we will be adding sugar later.

sition of pineapple flavors:

Pineapple nutritional benefits are as fascinating as their anatomy " pineapples contain high amounts of vitamin C and manganese. said san Diego-based nutritionist Laura Flores These tropical treats are also a good way to get important dietary fiber and bromelain (an enzyme)

Preparation of pineapple syrup:-

Combine four parts sugar with two parts water in a large bowel. Remove the inedible outer skin from a small pineapple and slice it into cubes. Add the cubed pineapple to the sugar-and-water mixture and let sit for 4 hours. If you would like an additional flavour in the syrup such as vanilla or basil add it now.

Perfume :-

A Perfume is a substance that emits and diffuses a fragrant odour. Scents are classified as notes based on their olfactory charchter. A perfume is a Unique mixture of top, middle, and base notes designed to give a particular harmony of scents.

Preparation :-

Perfume comes from the Latin Per meaning through and fumum or smoke. Many ancient Perfumes were made by extracting natural oils from plants through pressing and steaming. Some Products are even perfumed with industrial odorants to mask unpleasent smells or to appear "unscented".

Raw materials :-

Natural ingredients - flowers, grasses, spices, fruit, wood, roots, resins, balsams, leaves, gums and animal secreations as well as resources like alcohol, Petrochemicals, Coal and Coal tars are used in the manufacture of Perfumes. Therfore

Animal extracts

Some Perfume ingredients are animal Products. For example, Castor Comes from beavers, musk from male deer, and Ambergris from the Sperm whale. Animal Substances are often used as fixatives that enable Perfume to evaporate slowly and emit odors longer. other fixatives include Coal tar, mosses, resins or Synthetic Chemicals.

Plant Sources

Plants have long been used in Perfumery as a source of essential oils and aroma Compounds. These Aromatics are usually secondary metabolites Produced by Plants as Protection against herbivores, infections as well as to attract Pollinators. The Sources of this Compound may be derived from various Part of the Plant. Orange leaves, blossoms, And fruit zest are the respectively source of Petitgrain, neroli and

The Plant source are classified as seven types.

i) Bark: Commonly used barks include Cinnamon and Cascarilla. The fragrant oil in Sassafras root bark is also used either directly or purified for its main constituent, Safrole which is used in the synthesis of other fragrant compounds.

ii) Fruits: Fresh fruits such as apples, strawberries, cherries rarely yield the expected odors when extracted. The most commonly used fruits yield their aromatics from the rind. They include citrus such as oranges, lemons and limes. Since the natural aromatic contains sulfur and its degradation product is quite unpleasant in smell.

iii) Leaves and twigs: Commonly used for perfumery are lavender leaf, Pat Chouli, sage, violets, rosemary and citrus leaves. Sometimes leaves are valued for the green smell they bring to perfumes examples of this include hay and tomato leaf.

iv) Resins: Commonly used resins in perfumery include labdanum, frankincense/olibanum, myrrh, balsam of Peru, benzoin. Some of what is called amberand copal in perfumery today

Organic Solvent extraction

Organic Solvent extraction is the most Common and most economically important technique for extracting aromatics in the modern perfume industry. Raw materials are submerged and agitated in the solvent that can dissolve the desired aromatic compounds. Commonly used solvents for maceration/solvent extraction include hexane and dimethyl ether.

In organic solvent extraction, aromatic compounds as well as other hydrophobic soluble substance such as wax and pigments are also obtained. The technique can also be used to extract odorants that are too volatile for distillation or easily denatured by heat. The solvent is then removed by a lower temperature distillation process and reclaimed for re-use.

v) Seeds: Commonly used terrestrial Portions in Perfumery include iris rhizomes, Vetiver roots, various rhizomes of the ginger family.

vi) Woods: Highly important in providing the base notes to a Perfume, wood oils and distillates are indispensable in Perfumery. Commonly used Woods include Sandalwood, rosewood, birch, Ceder and pine These are used in the form of macerations or dry-distilled (rectified) forms.

vii) Room temperature: Orchid scents.

Animal sources

A musk Pod. Extensive hunting of male musk deer for their pods in recent history has resulted in the detriment of the species.

Ambergris: Lumps of oxidized fatty compounds, whose precursors were secreted and expelled by the Sperm whale. it remains one of the few animalic fragrancing agents around which little controversy now exists.

Ethanol extraction

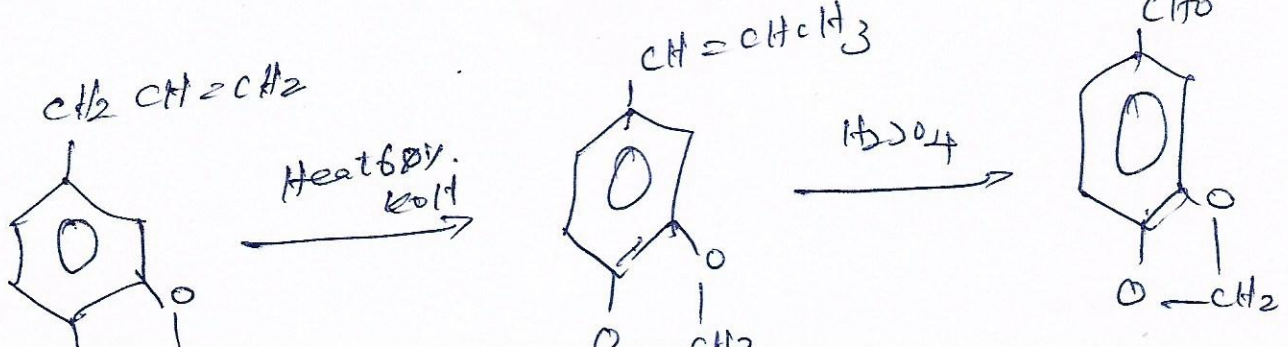
Ethanol extraction is a type of solvent extraction used to extract fragrant compounds directly from dry raw materials, as well as the impure oils or concrete resulting from organic solvent extraction, expression or enfleurage. The impure substance or oils are mixed with ethanol, which is less hydrophobic than solvent used to organic extraction, dissolves more of oxidized aromatic constituents, leaving behind the wax, fats and other generally hydrophobic substances. The alcohol is evaporated under low-pressure, leaving behind absolute

The absolute may be further processed to remove any impurities that are still present from the solvent extraction.

Vanillin:-

Vanillin can also be prepared from lignin through an alkaline pressure cook at 130 – 200 lbs pressure for 30 – 60 minutes of the calcium lignosulphonic acid. The vannillin is purified through the sodium bisulphate Compound and extraction with benzene or isopropanol. It can also be prepared from phenol (or) o chloro nitro benzene through guaiacol.

The Piotropin: ($CH_2O_2C_6H_3(CHO)$) is a white yellowish white crystalline solid having a delightful odour of cherry pie. it is artificially prepared by the oxidation of iso-safrole, but originally obtained from pepper by the oxidation of piperic acid with $KMnO_4$ in alkaline soln. This aldehyde is the methylene ether of protocatechuic aldehyde



Civet: Also called Civet musk, this is obtained from the odorous sacs of the Civets, animals in the family Viverridae related to the mongoose. World animal Protection investigated African Civets caught for this purpose.

Hyraceum: Commonly known as dried stone is the petrified excrement of the rock hyrax

musk: orginally derived from a gland (sac or pod) located between the genitals and the umbilicus of the himalayan male musk deer moschus moschiferous, it has now mainly been replaced by the use of Synthetic musk sometimes known as "white musk".

Other natural sources

Lichens: Commonly used lichens include oakmoss and treemoss absolli.

Seaweed: Distillates are sometimes used as essential oil in Perfumes. An example of a Commonly used seaweed is Fucus Vesiculosus, which is Commonly referred to as bladder wrack. Natural seaweed fragrances are rarely used due to their high cost and lower potency than Synthetics

Distillation

Distillation is a common techniques for obtaining aromatic compounds from plants, such as orange blossom and roses. The raw material is heated and the fragrant compounds are re-collected through condensation of the distilled vapour. Today, most common essential oils such as lavender, peppermint and eucalyptus, are distilled are known either as essential oils or ottos. Today, most common essential oils flowers, leaves, wood, bark, roots, seeds, or peel is put into an alembic

Blending

Once the perfume oils are collected, they are ready to blended together according to a formula determined by a master in the field known as a nose. Toilet water has less amount - 2%, oil in 60-80% alcohol and 20%

The flower Parts dissolve in the Solvents and leave a waxy material that Contains the oil, which is then Placed in ethyl alcohol. The oil dissolves in the alcohol and rises, Heat is used to evaporate the alcohol, which once fully burned off, leaves a higher Concentration of the Perfume oil on the bottom.

enfleurage:

During enfleurage flowers are spread on glass Sheets Coated with grease. The glass Sheets are Placed between wooden frames in tiers. Then the flowers are removed by hand and changed until the grease has absorbed their fragrance.

maceration: maceration is Similar to enfleurage except that warmed fats are used to soak up the flower Smell. As in Solvent extraction, the grease and fats are dissolved in alcohol to obtain the essential oils

Manufacturing Process

Collection: Before the manufacturing Process begins, the intial ingredients must be brought to the manufacturing Center. Plant Substances are harvested from around the world, often hand-Picked for their fragrance. Aromatic chemicals used in Synthetic Perfumes are Created in the laboratory by Perfume Chemists.

Extraction

oils are extracted from Plant Substances by Several methods.

Steam distillation: Steam is Passed through the Plant material held in a Still, whereby the essential oil turn to gas. This gas is then Passed through tubes, Cooled and liquified. Oils Can also be extracted by boiling Plant Substance like flower Petals in water instead of steaming them.

Solvent extraction:

Flowers are Put into large rotating tanks or drums and benzene or a Petroleum ether is Powred

Expression

Expression is the oldest and least complex method of extraction. Expression as a method of fragrance extraction where raw materials are pressed, Squeezed or Compressed and the essential oils are Collected. This is due to the large quantity of oil is present in the Peel of these fruits as to make this extraction method economically feasible. Citrus peel oils are expressed mechanically or Cold Pressed. Due to the large quantities of oil in Citrus Peels of these fruits as to make this extraction method economically feasible. Lemon or Sweet orange oils that are obtained as by-Products of the Commercial Citrus industry are among the Cheapest Citrus oils.

Cosmetics:-

Cosmetics are substances or products used to enhance or alter the appearance of the face and texture of the body.

Use of applying: face, hair, and body.

They are generally mixtures of chemical compounds. Some being derived from Natural source (such as Coconut oil)

Characteristic of good cosmetics:-

The sensory experience of a cosmetic product is based on its appearance, texture, and odor and is a measure of its quality

customer acceptance of cosmetic products is largely based on the physical characteristics of the product, mainly the way it feels to the touch.

The sensory experience of a cosmetic product is based on its appearance, texture, and odor, and is a measure of its quality.

customer acceptance of cosmetic products is largely based on the physical characteristics. of the product mainly the way it feels to the touch.

In the retail Sector where some cosmetic products are expensive, the physical characteristics of cosmetic products need to be combined with the expected performance based on the manufacturer's claim.

Demerits of artificial cosmetics :-

1. Skin infection :-

skin infection is one of the biggest skin issues where a person has to suffer from irritation and allergies which is really very irritating and painful.

If you are suffering from a skin infection then you may have red marks all over the skin.

2. Damage to internal organs :-

The chemicals present in these products seeps into the bloodstream from these pores and attacks the internal organs slowly but it can be deadly because in may completely damage the organ.

3. Acne and pimples :-

If the skin of a person does not have enough capacity to retain the attack of the chemicals on the skin, then the symptoms can be easily noticed on the skin in the form of skin problems including acne and pimples.

4. Damage to the nervous system :-

It is not known to many that the nervous system of a human is also attacked by the utilization of a result of excessive usage.

5. Skin Cancer :-

The chemicals of these products are so harmful that it may cause severe skin disease like cancer.

Mercury and parabens is a chemical used as preservatives in many beauty brands but these chemicals may cause cancer.

6. Early ageing :-

Excess use of chemical induced products causes early ageing and the symptoms of ageing like fine lines and wrinkles starts appearing at a young age.

Introduction :

Nail polish :- Varnish applied to the fingernails or toe nails to colour them or make them shiny

Hair dye : A natural or synthetic substance used to chang the colour of a person's hair.

Face cream :- Cosmetic Cream applied to the face to improve the complexion.

Tooth paste :- a thick, soft, moist substance used on a brush for cleaning one's teeth.

Mouth wash :- A liquid used for rinsing the mouth or gargling with.

Basic composition of Talcum powder:-

Talcum powder:-

Talcum powder is the refined, powdery form of the softest Mineral on earth.

Tall is an "inert" ingredient, Meaning it does not generate a chemical reaction when ingested or used on the skin. people have taken advantage of its natural smoothness, safety and adsorbency since ancient Egyptian times.

Talc is a clay Mineral composed of hydrated magnesium silicate with the chemical formula $Mg_3Si_4O_{10}(OH)_2$.

Tal in powdered form, often in combination with corn starch, is a widely used substance known as baby powder.

A cosmetic composition in the powder form, comprising:

a basic portion that comprises.

⇒ 1.0-40 wt % of a load of moist-touch lamellar particles of coated mica.

⇒ 0.1-20 wt. % of a load of dry-touch spherical with statistical size distribution of up to

⇒ a binding compound and a carrier comprising a large Mineral load with particles smaller than 10 microns.

⇒ 0.1 - 8.0 wt % pentaerythritol tetraester.

⇒ 0.05 - 9.5 wt % stearoyl isocetyl stearate.

⇒ 0.01 - 5.0 wt % of at least one polyperfluoroisopropylic ether.

greater than 40 wt. % of a carrier of Micronized talcum powder.

Basic composition of face cream:-

Between about 1.0 and 10.0 w/w percent sulfur
Between about 5.0 and 15.0 w/w percent anhydrous sodium sulfacetamide.

Between about 0.1 and 1.0 w/w percent allantoin.

Water :- xanthan gum : disodium EDTA : sodium thiosulfate : Methyl paraben ; propylene glycol. stearic acid ; PEG-8 stearate ; emulsifying wax ; Isopropyl myristate ; propylene glycol stearate ; propyl paraban fragrance.

an effective amount of sodium hydroxide to maintain a pH at or above 7.0

The basic composition of nail polish :-

From about 50% about 10.0% nitro cellulose 18-25 cps
From about 0.2% to about 8.0% santolite MHP.
From about 2.4 to about 5-6% santolite MS-80
from about 1.6% to about 3.2% Cellovar CV-160
" " 0.01% " " 1.0% Nalco 395
" " 0.01% " " 1.0% Troykyd 366 Anti Crater

and 0.0% to about 15.0% shade paste.

said composition having a Brookfield viscosity not greater than about 150 cps.

The basic composition of toothpaste :-

A toothpaste composition in accordance with claim 2 where in the fluoride ion source is sodium fluoride

A toothpaste composition in accordance with claim 3 which contains an additional toothpaste composition component selected from the group consisting of

A) From about 0.1% to 6% of a sudsing agent
B) from about 0.01% to 2% of a flavoring agent
C) from about 0.05% to 2% of a sweetening agent
D) from about 0.03% to 5% of a toothpaste binder

E) Mixtures of these additional toothpaste composition components.

The Basic composition of Mouthwash:-

A) from about 0.02% to 0.20% of a quaternary ammonium compound.

B) an amount of a tetra-alkali metal pyrophosphate salt sufficient to provide from about 0.5% to 5% of the $P_2O_7^{-4}$ species.

C) a carrier liquid

where in the pH of said composition is adjusted to the range of from about 7.0 to 9.5 with a mineral or organic acid.

A Mouthwash composition according to the carrier liquid is an ethanol / water mixture and is present at a level of from about 60% to 99%.

The pH of the composition is adjusted to the range of from about 7.0 to 8.5.

Basic composition of Hair dye:

2% hexylene glycol
4% diethyleneglycol monoethyl ether
5.77% ammonia
2.84% ammonium chloride
2% sodium lauryl sulfate
0.2% sodium chloride.
12.3% hydrogen peroxide
0.04% phenacetin
0.02% EDTA.

ASSIGNMENT SKILL BASE III

5/5 Good

BY,

D. MEENALOCHINI,

I - BSC CHEMISTRY.

SYNOPSIS

- COMPOSITION OF APPLE
- PREPARATION OF PERFUME FROM APPLE.
- EXTRACTION
- STRUCTURE OF APPLE
- USES OF APPLE

COMPOSITION OF APPLE:-

A rock or a substance sometimes have a chemical composition but something of the same size and so simple as an apple doesn't, it simply can't be described by a single or even thousands of chemical reaction.

Chemical Substance of Apple:-

There are lot of chemical composition present in the fruit Apple.

Alpha - Linolenic Acid, Asparagine, D-Categin, Isoquercetrin, Hyperoside, Ferulic-Acid, Farnesene, Neoxathin, Phosphatidyl-choline, Reynoutrin, Sinapic-Acid, Caffeic-Acid, Chlorogenic-Acid, P-Hydroxy-Benzoic-Acid, P-Coumaric acid, Avicularin, Lutein, Quercitin, Rutin, Ursolic acid, Proto Catechuic acid, Silver, Tryptophan, Threonine, Isoleucine,

Leucine, Lycine, Methionine, Cystine, Phenylalanine, Tyrosine, Valine, Argenine, Histidine, Alanine, Aspartic Acid, Glutamic Acid, Glycine, Proline and Serine.

Trace amounts of Boron, Carbon, Cobalt, Proteins, Insoluble fibers, Water, Carbohydrates, Lipids, Saturated fats, traces of pesticides and fertilizers and many more that haven't been discovered at all. We don't even know our exact chemical composition, all the variables and the difficulty of saying that apples. The chemical formula would be really hard.

PREPARATION OF PERFUME FROM APPLE :

Ingredients:-

- Jojoba oil (or) Sweet almond oil – 15ml.
- Alcohol (Vodka) – 75ml.
- Distilled water only – 2 table spoons.
- A coffee filter (even a funnel).
- Dark-Coloured glass bottle – 1(or) 2.
- Essential oils – 25 drops.

- 7 drops of base note oils. [Vanilla, cinnamon, fern, Sandalwood, Patchouli, Cedarwood, moss, lichen.]
- 7 drops of middle note oils [nutmeg, lemongrass, geranium, clove, ylang-ylang, neroli] and

• 6-7 drops of top note oils [Lavender, rose, jasmine, orchid, lemon, lime, bergamot, neroli]

Procedure:-

Step 1:- Readying your bottles:-

i) Sterilise your glass bottles.

ii) Run them through the dishwater or just boil them in hot water for about 5 minutes.

Step 2:- Pouring the base oil:-

Pour the jojoba or sweet almond oil in the bottle.

Step 3:- Get the essential oils right:-

i) The top note is what you smell when you spritz it on first.

ii) It disperses to make way for the middle note;

which then evaporates to leave behind the base note. This is what lingers on your skin

for the longest time. It is important to add your essential oils to the perfume in the opposite order - the base note first, then the middle and finally the top note.

If you're a newbie and just learning how to make perfume. Keep a note of everything you add if you want to repeat the fragrance some time later.

Step 4: The alcohol:

i) Now add the alcohol.

ii) Shake it well.

iii). Put away into a cupboard for 48 hours to up to 6 weeks.

Step 5: Is the Perfume ready?

After 6 weeks, get the bottle out.

i) If the perfume smells the way you want it to, add 2 tablespoons of spring water.

ii). Shake the bottle well to mix all ingredients.

iii). Using the coffee filter (or) funnel, Carefully Pour your homemade perfume into a dark glass bottle.

iv). Air and light are the biggest enemies of essential oil aromas. Top up the bottle and glass is Keep it in a dark Cupboard.

v). You can add a tablespoon of glycerine to retain its smell longer.

Step 6: Using the perfume:

i). Pour only a little into a decorative bottle for daily use.

ii). Give it an exotic name.

iii). Make Sure you have a record of every step.

EXTRACTION:-

Sources of Natural essential oil:-

Essential oils are generally derived from one or more plant parts, such as flowers (eg. Rose, jasmine, Carnation, clove, mimosa, rosemary, lavander), leaves (eg. mint, Ocimum, lemongrass, jamrosa), leaves & Stems, wood, roots, Seeds, fruits (bergamot, Orange, lemon, juniper), rhizomes (ginger, Calamus, Curcuma, Orris). and gums or Oleoresin exudations. (balsam of peru, Myroxylon balsamum, storax, myrrh, benzoin).

Hydrodistillation:-

In Order to isolate essential oils by hydrodistillation, the aromatic plant material is packed in a still and a Sufficient quantity of water is added and brought to a boil;

alternatively, live steam is injected into the plant charge. Due to the influence of hot water and steam, the essential oil is freed from the oil glands in the plant tissue. The vapor mixture of water and oil is condensed by indirect cooling with water. From the condenser, distillate flows into a separator, where oil separates automatically from the distillate water.

Mechanism of distillation:

Hydrodistillation of plant material involves the following main physicochemical processes:

i) Hydrodiffusion.

ii). Hydrolysis.

iii). Decomposition by heat.

Types of Hydrodistillation:

There are three types of hydrodistillation for isolating essential oils from plant materials.

1). Water distillation.

2). Water and Steam distillation.

3). Direct Steam distillation.

Water distillation:

In this method, the material is completely immersed in water, which is boiled by applying heat by direct fire, Steam jacket, Closed Steam jacket, Closed Steam Coil or open Steam Coil. The main characteristic of this process is that there is direct contact between boiling water and plant material.

Water and Steam distillation:-

In water and Steam distillation, the Steam can be generated either in a Satellite boiler or within the Still, although Separated from the plant material. Like water distillation, water and Steam distillation is widely used in rural areas.

Moreover, it does not require a great deal more capital expenditure than water distillation. Also, the equipment used is generally Similar to that used in water distillation, but the plant material is Supported above the boiling water on a perforated grid. In fact, it is common that persons performing water distillation eventually progress to water and Steam distillation.

Direct Steam Distillation:-

Direct Steam distillation is the process of distilling plant material with steam generated outside the still in a satellite steam generator generally referred to as a boiler. As in water and steam distillation, the plant material is supported on a perforated grid above the steam inlet. A real advantage of satellite steam distillation is that the amount of steam can be readily controlled.

Because steam is generated in a satellite boiler, the plant material is heated no higher than 100°C. It should not undergo thermal degradation. Steam distillation is the most widely accepted process for the production of essential oils on large scale.

Essential oil Extraction by Maceration:

Certain plant materials require maceration in warm water before they release their essential oils, as their Volatile components are glycosidically bound.

Example:

Leaves of Wintergreen (Gaultheria procumbens) Contain the precursor gaultherin and the enzyme primeverosidase; when the leaves are macerated in warm water, the enzyme acts on the gaultherin and liberates free methyl salicylate and primeverose.

Other similar examples include brown mustard (Sinigrin), bitter almonds (amygdalin) and garlic (alliin).

STRUCTURE OF APPLE:-

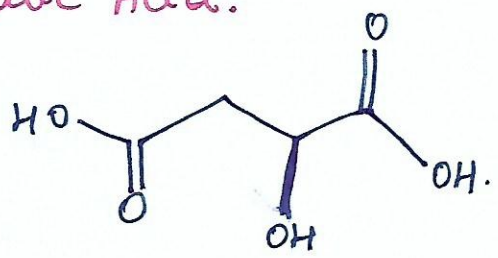
L-Malic acid is the naturally occurring form, whereas a mixture of L- & D-malic acid is produced Synthetically.

Malate plays an important role in biochemistry. In the C_4 Carbon fixation Process, malate is a source of Co_2 in the Calvin cycle. In the citric acid Cycle, (S)-malate is an intermediate, formed by the addition of an -OH group on the Si face of fumarate. It can also be formed from pyruvate Via anaplerotic reactions.

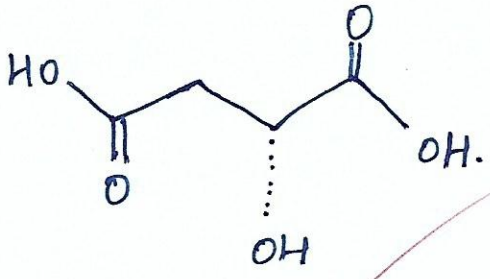
Malate is also Synthesized by the Carboxylation of phosphoenolpyruvate in the guard cells of plant leaves. Malate, as a double anion, often accompanies potassium Cations during the uptake of Solutes into

the guard cells in order to maintain electrical balance in the cell. The accumulation of these solutes within the guard cell decreases the solute potential, allowing water to enter the cell and promote aperture of the stomata.

L-Malic Acid:-



D-Malic Acid:-



USES OF APPLE :-

1). Improve Lung Health :-

Apples contain several phytochemicals that are thought to promote lung health. Studies have shown that apples help people suffering from allergies and asthma.

2). Treat Your Skin Right :-

Apples are a great way to give your skin that glow it deserves.

3). Boost Your Workout :-

Squeeze an apple between your thighs the next time you're doing Crunches to add extra challenge to your workout routine.

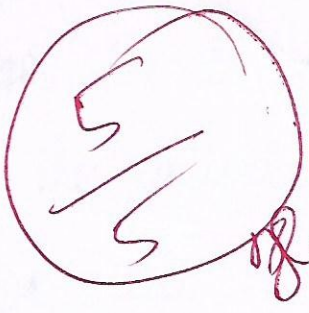
4). Get Rid of a Migrane :-

Take a whiff of a green apple the next time you feel a migrane comingon. Studies have shown that the smell of green apples helps ease the pain & shorten the time they last.

Skill Based

Assignment.

Pine apple



By:-
M. Priya.
I^st B.sc chemistry.

Pineapple uses

pineapple Health benefits, Risk & nutrition

facts:

* Serving size : 1 cup chunks (165g)

* Immune system support

* Bone strength

* Eye health

* pineapple can help reduce the risk of molecular degeneration. a disease that effects the eyes as people age, due in part to its high amount of vitamin c and the antioxidants it contains flores said.

* Digestion

* Anti-Inflammatory benefits

Extract Method:

Alcohol extractions provide the simplest way to distill just about any fruit to its essence but pineapple isn't just any fruit. pineapple contains bromelain, a protease tenderizer. Normally a tittle bromelain isn't a problem it works wonders on tough meat but in doughs and batters. it breaks down the gluten needed for structure and strength Bromelain does the same to gelatin turning it to liquid. This is way canned foods are sometimes better than fresh. During canning bromelain is destroyed making the extract you create from it safe for use in baked goods and desserts.

composition of pineapple

Abstract

pineapple with excellent quality. special flavor and nutritional richness. is favored by consumers world wide. It is the third most commerical important tropical fruit. In this chapter. In addition to reviewing pineapple nutrient composition soluble sugar and organic acid contents in 18 traditional pineapple cultivars and 16 modern pineapple cultivars dietary fibes Content in 12 pineapple cultivars Vitamin A, Vitamin C, Vitamin B_3, Vitamin B_6 and Vitamin B_{12} contents in 11 pineapple cultivars were

analyzed. Aroma compounds and their odor activity for six pineapple cultivars were identified phenolics and flavonoid concentration of 11 pineapple cultivars and antioxidant capacity of 12 pineapple cultivers were also compared.

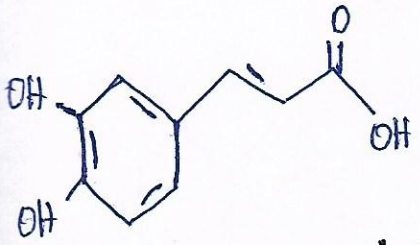
Manufacturing process of pineapple

The manufacturing process of pineapple products viz. slices and juice involes many steps and different sub. processes. Ripe and matured pineapple are washed, graded and peeled. Then they are crushed in the crusher to obtain juice.

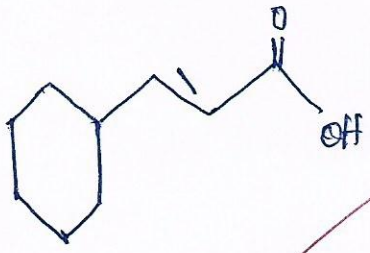
In case of slices, after peeling, uniform slices are made on the slicer. Juice is then taken to vessels and boiled and certain preservatives are added. It is finally taken to stroage tanks and packed in bottles on vaccam filling machine. In case of slices, they are dipped in sugar syrup for about 3 to 4 hours. Then the slices are

taken to lacquered cans and cans are sterillized. while canning, sugar syrup is added. cans are cooled quickly and after sealing and labeling they are stored. The average yield is around 80%

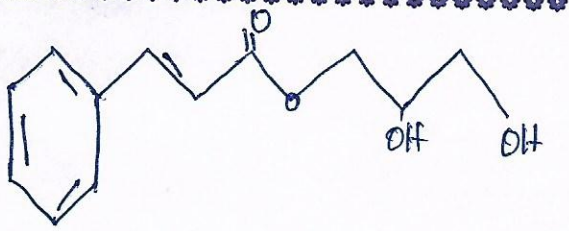
Chemical structure of five compounds from the extract of pineapple:



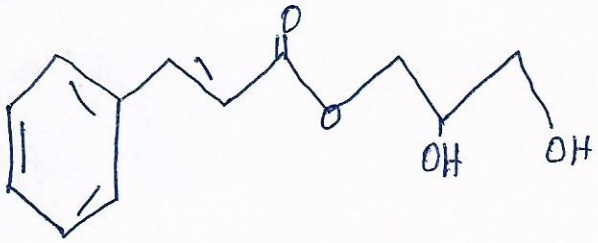
caffeic acid



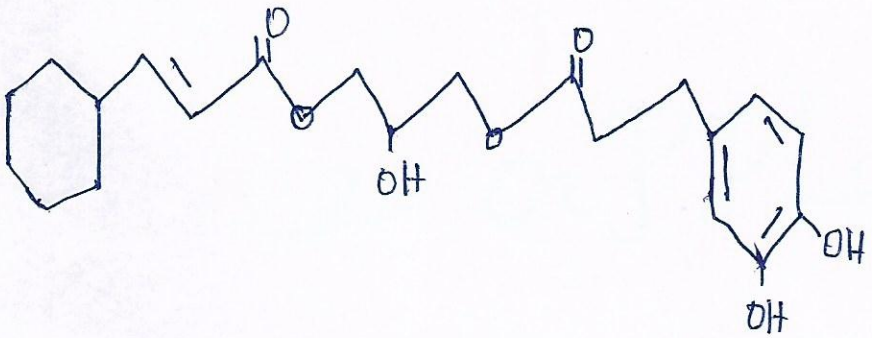
p - coumaric acid



1-O caffeoylglycerol



1-O-p coumaroylglycerol



1,3, Odicaffeoylglycerol (cananazate)

SKILL Based III Assignment

Pine apple

5/5

By:-
A. Selvarani
1st B.sc chemistry.

Pine apple uses:

Pine apple health Benefits Risks (&)

Nutrition facts:

⇒ Serving Size: 1 cup chunks (165g).

⇒ Immune System Support

⇒ Bone strength.

⇒ Eye health.

⇒ Pine apple can help reduce the risk of Macular degeneration a disease that affects the eyes of People of vitamin c. and the antioxidants it Contains flones said.

⇒ Digestion.

⇒ Anti - Inflammatory benefits.

Extract Method:

Alcohol extraction Provide the simplest way to distill just about any fruit to its essence but Pineapple isn't just any fruit.

Pineapple contains bromelain
is not a problem it works wonders
on through meat but in doughs
and batters it breaks down the
gluten needed for structure and
strength. Bromelain does the same
to gelatin turning it no liquid.
This is way canned foods are
some times better than fresh.
During canning bromelain is
destroyed making the extract you
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Composition of pineapple:

Abstract:

Pine apple with excellent
quality, special flavor and nutritional
richness is flavored by consumers
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Commerical important tropical fruit. In this chapter. In addition to reviewing. Pineapple nutrient Composition Soluble sugar and Organic and Contents in 18 traditional Pineapple cultivars and 16 Moders. Pineapple Cultivars dietary fibers Contents in 12. Pineapple Cultivars Vitamin A, Vitamin C, Vitamin B_3, Vitamin B_1 and Vitamin B_{12} Contents in 11 Pineapple Cultivars were analyzed. Aromatic Compounds and their odor activity for Six Pineapple Cultivars were Identified. Phenolics and flavonoid Concentration of 11. Pineapple Cultivars and artioxidant capacity of 12. Pineapple cultivar were also compared.

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The Manufacturing Process of Pineapple Products viz. Slices and Juice Involes Many steps and different Sub. Processes. Ripe and Matured Pineapple are washed, graded and Peeled. Then they are crushed in the Crusher to obtain Juice.

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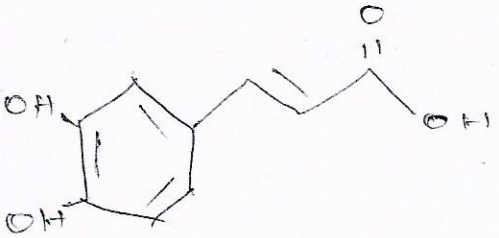
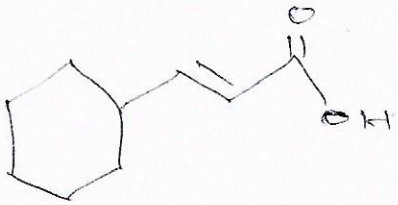
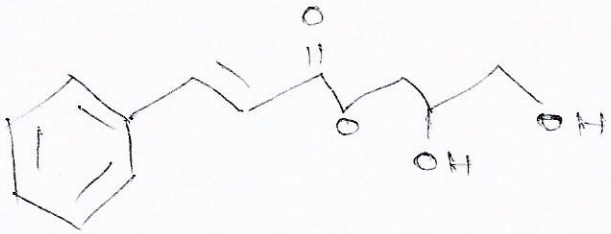


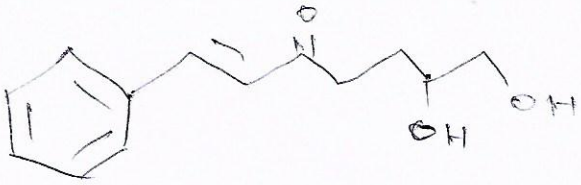
Caffeic acid



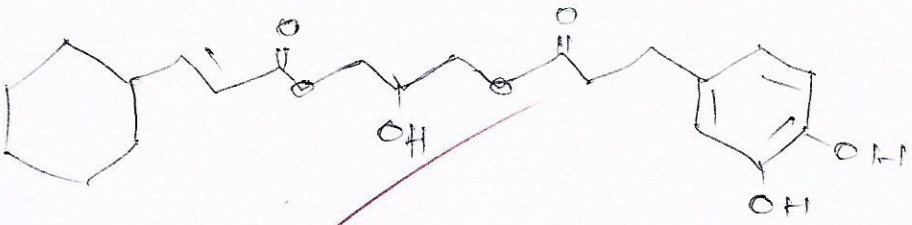
P- Coumaric acid



1-O caffeoylglycerol.



1-O-P coumaroylglycerol.



1,2,O dicaffeoylglycerol (unknown)

SKILL Based III Assignment

Pine apple

5/5

By:-
A. Selvarani
1st B.sc chemistry.

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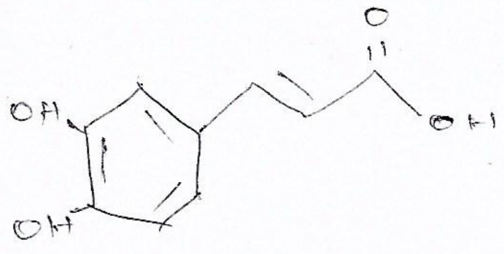
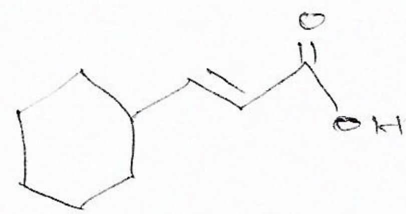
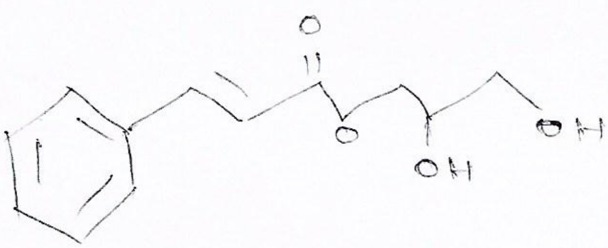


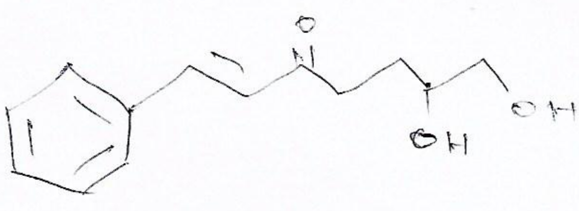
Caffeic acid



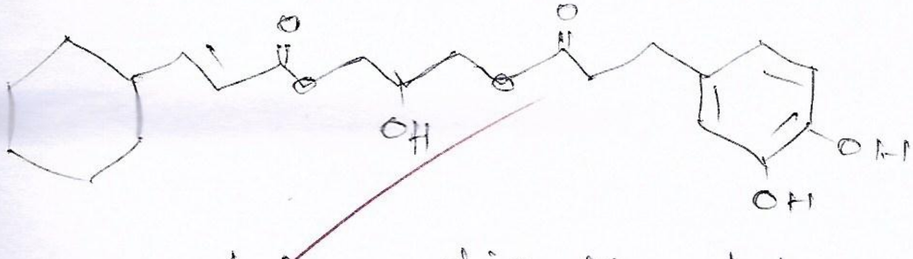
P- Coumaric acid



1-O caffeoylglycerol.



1-O-P Coumarcylglycerol.



1,2,O dicaffeoylglycerol (ananasate)

AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN
ANNANAGAR,MADURAI-625020
DEPARTMENT OF CHEMISTRY
SEMINAR MARKS ODD/EVEN SEM-2019
I-B.Sc [CHEMISTRY]

TITLE OF THE PAPER: PERFUME AND COSMETICS. SB III

S.NO	ROLL NO	REGISTER NO	STUDENT NAME	SEMINAR MARK	MARKS
1	18A1401	B8S19601	K.ARUNA	ORANGE	5
2	18A1402	B8S19602	DIVYA PRIYA.P	JASMINE	5
3	18A1403	B8S19603	GAYATHRI.S	PINEAPPLE	5
4	18A1406	B8S19604	LAVANYA.K	STRAWBERRY	5
5	18A1407	B8S19605	LOGA NANDHINI.R.N	ROSE	5
6	18A1408	B8S19606	MEENA LOCHINI.D	ROSE	5
7	18A1409	B8S19607	MUHILARASI.M	PINEAPPLE	5
8	18A1410	B8S19608	NANDHINI.T	PINEAPPLE	5
9	18A1411	B8S19609	PRIYA.M	JASMINE	5
10	18A1412	B8S19610	RISVANA PARVEEN.A	JASMINE	4.5
11	18A1413	B8S19611	SARANYA.M	STRAWBERRY	5
12	18A1414	B8S19612	SELVA RANI.A	ROSE	4.5
13	18A1415	B8S19613	SIVA SANGARI.R	APPLE	5
14	18A1416	B8S19614	SIVAKANCINIMATHI.S	JASMINE	5
15	18A1417	B8S19615	SUMAIYA BARHANA.K	STRAWBERRY	5
16	18A1418	B8S19616	SWETHA.S	APPLE	5
17	18A1419	B8S19617	SWETHA.S	JASMINE	5

No of copies : 20

AMBIGA COLLEGE OF ARTS SCIENCE FOR WOMEN
ANNA NAGAR, MADURAI-20.

I-INTERNAL TEST

Class: I B.Sc Chemistry **PERFUMES AND COSMETICS-III** **Marks: 75**
Date: 1. 2.19 **Time: 3 Hrs**

SECTION-A (10 × 1 = 10 marks)

Answer ALL questions:

1. Which one of the following example for animal fixatives?
   (a) Musk (b) benzoin (c) labdanum (d) coumarin
2. Commercially coumarin is obtained from ---------- reaction.
3. The chemical formula of phenyl ethanol is----------
4. Define perfume.
5. What are the odorous compounds?
6. What are the ingredients present in the perfume?
7. What are fixatives?
8. Define vehicle and it requirements.
9. Write a structure of vanillin.
10. Molecular formula of methyl salicylate is ------

SECTION-B (5 × 7 = 35 marks)

Answer **Any FIVE** questions

11. Mention the preparation method of helitropin
12. What is the difference between artificial and natural flavors?
13. Draw the flow chart for the preparation of and flavoring materials.
14. Write a note on winter green oil
15. Mention the preparation of vanillin
16. Write a note on rhodinol.

SECTION-C (3 × 10 = 30 marks)

Answer **All** questions

17. Explain in detail the various methods of extraction of essential oil in perfume industry.
18. Explain in detail animal and plant fixatives with examples.
19. Describe any three components of artificial flavors and its uses.

I internal

Answer key

1. Musk
2. perchmann reaction
3. $C_{10}H_8O_2$
4. Mixture substance.
5. Compound fragrance.
6. Odour fixatives
7. animal fixatives
8. vehicle
9. vanillin
10. $C_6H_4(OH)(CO_2CH_3)$

AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN
ANNANAGAR,MADURAI-625020
DEPARTMENT OF CHEMISTRY
INTERNAL MARKS ODD/EVEN SEM-2019

I-B.Sc [CHEMISTRY]

TITLE OF THE PAPER: perfume and cosmetics SBII

S.NO	ROLL NO	REGISTER NO	STUDENT NAME	MARKS
1	18A1401	B8S19601	K.ARUNA	16
2	18A1402	B8S19602	DIVYA PRIYA.P	42
3	18A1403	B8S19603	GAYATHRI.S	36
4	18A1406	B8S19604	LAVANYA.K	41
5	18A1407	B8S19605	LOGA NANDHINI.R.N	56
6	18A1408	B8S19606	MEENA LOCHINI.D	70
7	18A1409	B8S19607	MUHILARASI.M	46
8	18A1410	B8S19608	NANDHINI.T	32
9	18A1411	B8S19609	PRIYA.M	32
10	18A1412	B8S19610	RISVANA PARVEEN.A	20
11	18A1413	B8S19611	SARANYA.M	41
12	18A1414	B8S19612	SELVA RANI.A	37
13	18A1415	B8S19613	SIVA SANGARI.R	28
14	18A1416	B8S19614	SIVAKANCINIMATHI.S	37
15	18A1417	B8S19615	SUMAIYA BARHANA.K	36
16	18A1418	B8S19616	SWETHA.S	26
17	18A1419	B8S19617	SWETHA.S	14

Roll No : 18A1408

Dept : I-BSc Chemistry

Date : 01.02.2019

Day : Friday

Exam : Perfume.

E

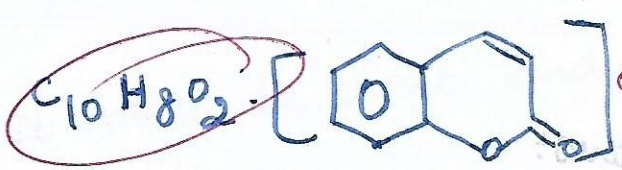
I - Internal Test.

Perfumes & Cosmetics-III.

SECTION-A.

1). Musk.

2). Perchmaunn reaction.

3). $C_{10}H_8O_2$ 

4). Perfume is a mixture of substance which is incorporated in a suitable solvents.

5). The compounds which emits a pleasent fragrance to our body is called oderiferous compounds. eg:- Musk, Bark, woods, flowers, leaves etc.

6). The main ingredients present in the Perfume are,

* Vehicle,
* Fixatives,
* Odouriferous compounds and
* essential oils.

7). Fixatives:

Fixatives are the substance which needed to keep the odoriferous compound. commonly they are four fixatives.

* animal fixatives.
* resin fixatives
* essential fixatives. and
* Synthetic fixatives,
* Plant fixatives.

8). Vehicle:

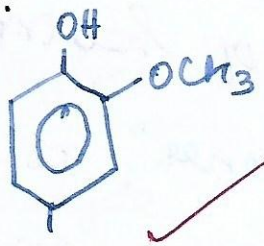
Vehicle or the solvent is needed to keep the fragrance of the substances. The vehicle must have these characteristics,

i). It must be volatile

ii) It should not be irritant to the human skin,

iii) It must be inert and colourless.

9). Vanillin:

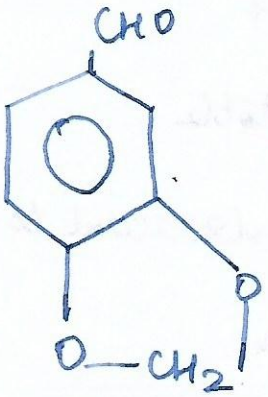


10). Molecular formula: $C_6H_4OH(CO_2CH_3)$

SECTION-B.

11). Helitropin:-

The structure of helitropin is



⇒ Helitrophin.

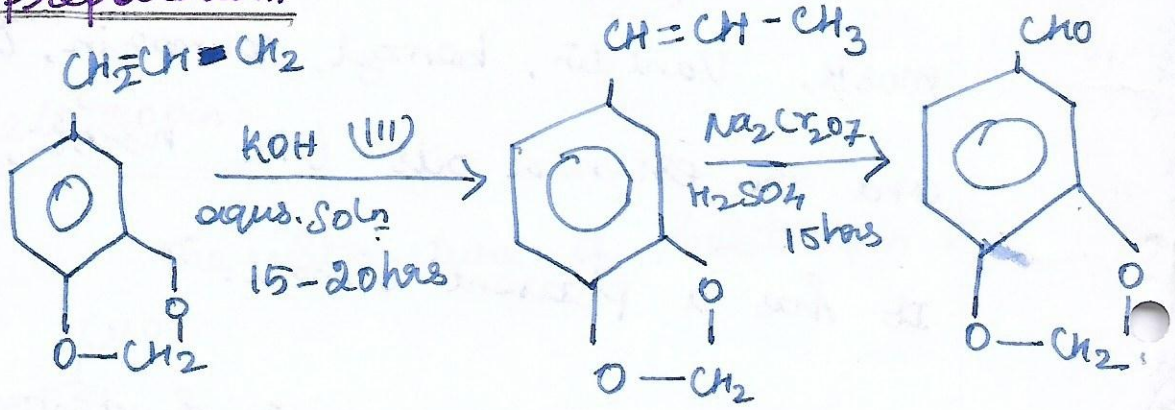
Helitropin is indispensible of helitrope. It is a sweet odour. It is the garden variety of helitropin called "Heletrophium arboescenes". It can be used as a modifiers in perfume.

It is not only used in perfume industries but also used in electroplating industries.

It can be mixed with anisicaldehyde, musk, Vanillin, benzyl, coumarin, isoeugenol and the essential oils like neroli, bergeriole. It has a pleasent smell.

The heliotropin is synthetically prepared from iso safrole but the originally prepared from the pepper to the pepsic acid by KOH as the alkaline solution. The aldehyde of methylene ester from the proto catechic aldehyde.

Preparation:



Safrole — Iso Safrole — Heliotropin (98%).

Safrole is isomerised into iso Safrole by boiling the KOH solution at 15-20 hrs and the iso Safrole is treated with Sodium dichromate & H_2SO_4 it can be heated for 15 hrs to get 98% of heliotropin.

Uses:-

* Heliotropin is used in perfume industries.

* It is used in electroplating also.

* It is used as a modifiers for the perfumes.

---

4). Methyl Salicylate :-

Methyl Salicylate is a organic compound.

It is also called as Wintergreen oil.

It is systematically produced by the plants - wintergreen.

The molecular formula is $C_6H_4OH(CO_2CH_3)$.

The chemical formula is $C_8H_8O_3$.

It is synthetically

It also called Methyl 2 hydroxy benzoate.

Molecular weight is 152.15 g/mole.

Density is 1.174 g/cm^3.

It is Soluble in Organic Solvents.

It is a Colourless liquid, Volatile liquid and Sweet odour.

It is Methyl ester of the Salicylic acid.

It is used in the Soap and Perfume industries.

It is obtained from the plants Wintergreen which grows in the cold places.

Especially U.S, Canada etc.

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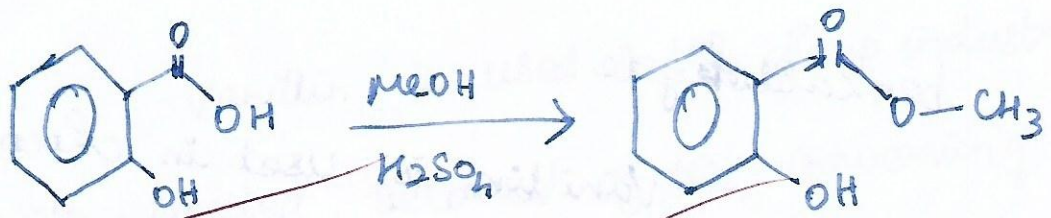
Preparation:

Methyl Salicylate is prepared by esterifying the Salicylic acid with Methanol / H_2SO_4.



Salicylic acid.

Methyl Salicylate.

Uses:

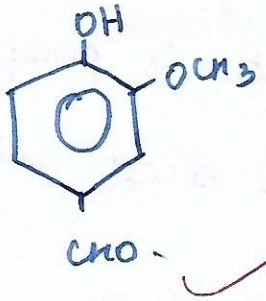
* Methyl Salicylate is used in the perfume industries.

* It is also used in Soap industries.

* It is used to release a muscular pain in all the ointments it can be used.

15). Vanillin:

The structure of the Vanillin is



It is also called 4 hydroxy 3 methoxy benzaldehyde.

Vanillin is used in chocolate, candy, bakery products, icecreams and perfumes.

Guaiacol is prepared from the various methods.

Vanillin is mixed with heliotropin, benzyl, coumarin and isoeugenol in perfume.

It is used as fixer, modifier

Eugenol is obtained from the oil of clove it is converted into isoeugenol by the KOH solution. The iso-eugenol is oxidized by nitrobenzene it can produced Vanillin.

It is extract from the cloves.

Vanillin is used in the soap industries with limited. Because of the conversion of soap brown patches.

The extraction is in white or Yellowish white crystalline structure.

It is seen in nature from the balsams of resin and to be on the surface of blooms which is in crystalline

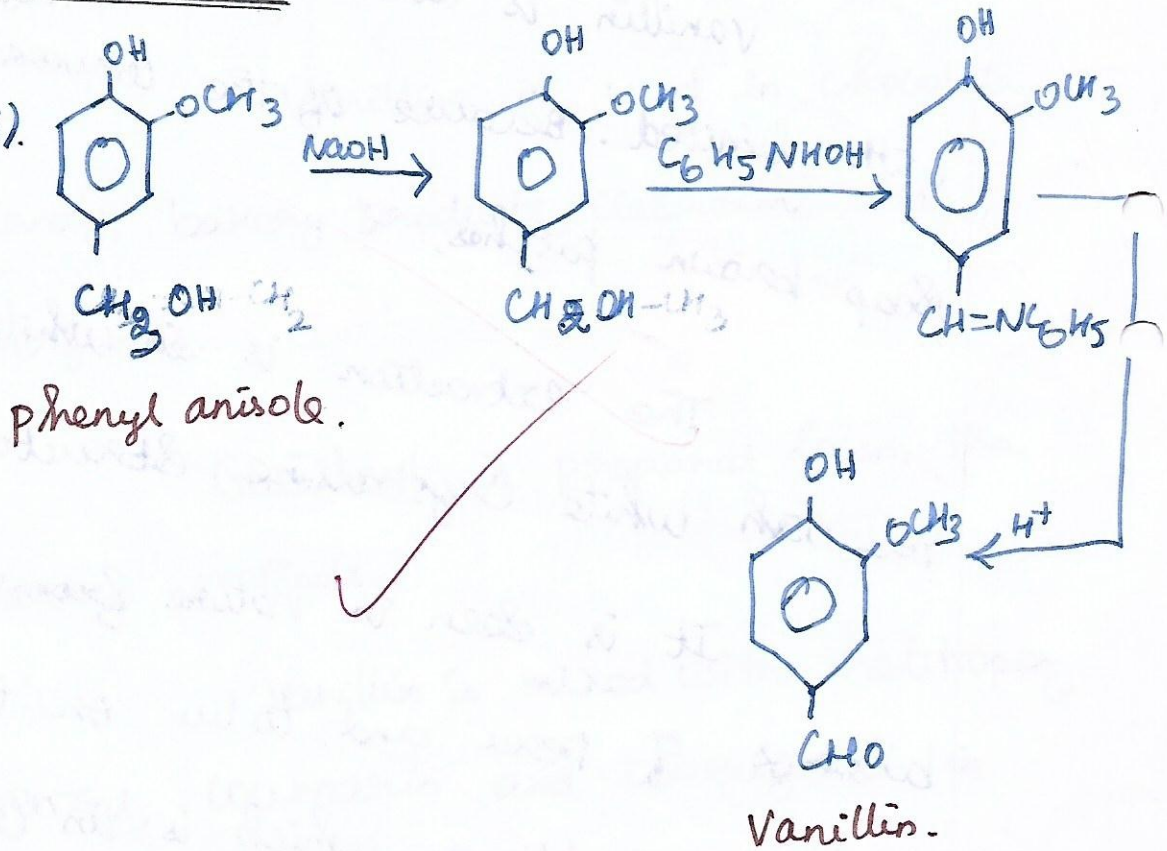
structure of white blooms.

Vanillin is used as the essence called Vanilla.

It is used in the sweet flavour of perfume.

Preperation:-

i).



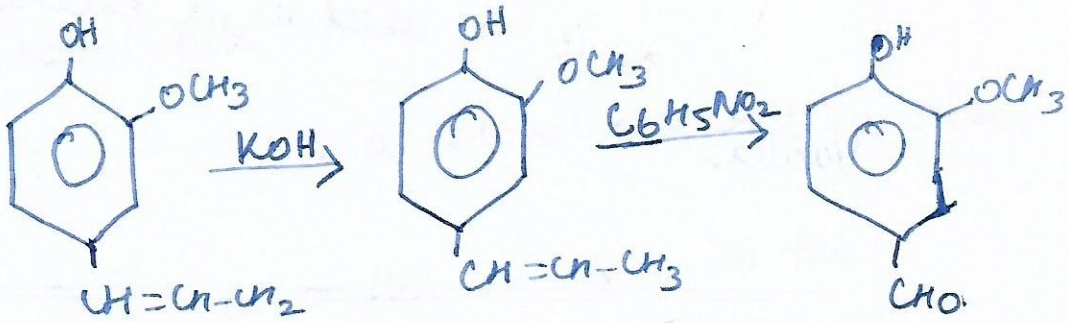
Phenyl anisole.

Vanillin.

Q.12

Phenyl anisole is treated with oxime it forms the isomer and it can be treated with phenyloxime it forms intermediate and it undergoes Reduction process to form Vanillin as Vanilla.

ii)



Eugenol Iso eugenol Vanillin.

Eugenol converts into iso eugenol by Nitrobenzene and it forms Vanillin.

Uses:

* It is used in chocolates, candy, ice creams.

* It is used in bakery products

* It is used as a sweet flavour for food & beverages.

* It is used as a essence as Vanilla.

16). citranellol [Rhodinol]:-

The citronellol is called as rhodinol.

It is an isomeric of rhodinol.

It is found in rose, germanium and citronellol oils.

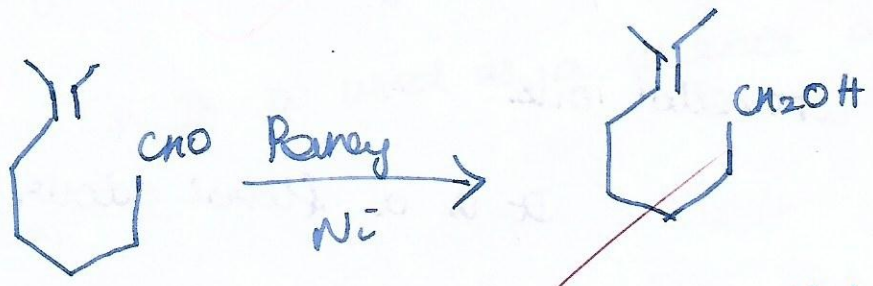
It is a floral odour like rose.

citronellol is used in the perfume like odour of rose and lily perfumes.

$-CH_3C=CHCH_2CH_2-CH(CH_3)CH_2CH_2OH$.

It is an esters of formate, acetate and isobutyrate.

Commonly citronellol is prepared from citronellel to oxidized with Raney Nickel to get a citronellol as a product. which is mostly in the rose and lily perfumes.

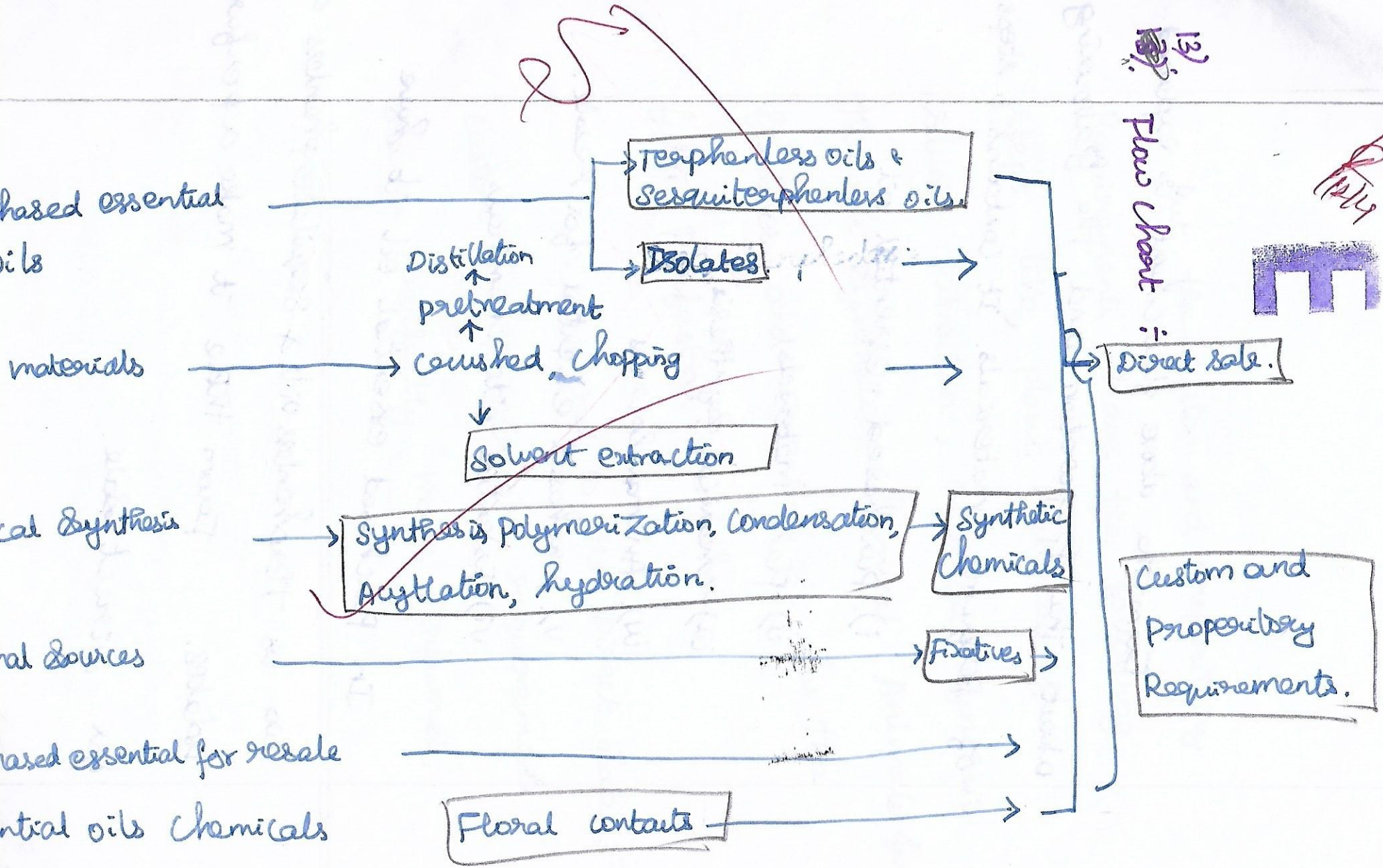


citronellel

citronellol.

Uses:-

- citronellol is used in perfume industries.
- It is present in the rose.


Flow Chart :-
hased essential
oils
materials
cal Synthesis
ral Sources
ased essential for resale
ntial oils Chemicals
Terpheneless oils & Sesquiterpheneless oils.
Isolates
Distillation
pretreatment
crushed, chopping
Solvent extraction
Synthesis Polymerization, Condensation, Acylation, hydration.
Fixatives
Floral contants
Direct sale.
Synthetic Chemicals
Custom and Proprietary Requirements.

From the above flow chart is explained about the Preparation and the flavouring of perfume materials. It contains 6 steps.

i). Purchased essential oil.

ii) Plant materials.

iii) Chemical Synthesis.

iv). Animal Sources

v). Purchased essential for resale.

vi). Essential oils chemicals.

In Purchased essential oil it have two as terpheneless oils & sequiteterpheneless and Isolates. From these it make a perfume for Direct Sale.

But the custom and properitory Requirements have the following steps like, plant materials from .Sdvent extraction, chemical Synthesis through Synthetic Chemical, Animals for fixatives and essential oil for the fully perfected perfume.

Compared to the direct Sale the custom and properitory requirements are a perfectly made perfumes.

SECTION - C.

17). Methods of Extraction:

SYNOPSIS.

* Introduction.
* Extraction.
* Solvent extraction.
* Steam distillation.
* Enfleurage.
* Maceration.
* Expression.
* Conclusion.

Introduction:

There are various types of extraction methods we can see about in the following ways as detailed.

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Extraction:

The method extraction can be used for extract the essential oil from the plant sources. It have 5 types. They are,

i). Solvent Extraction.

ii). Steam distillation.

iii). Enfleurage.

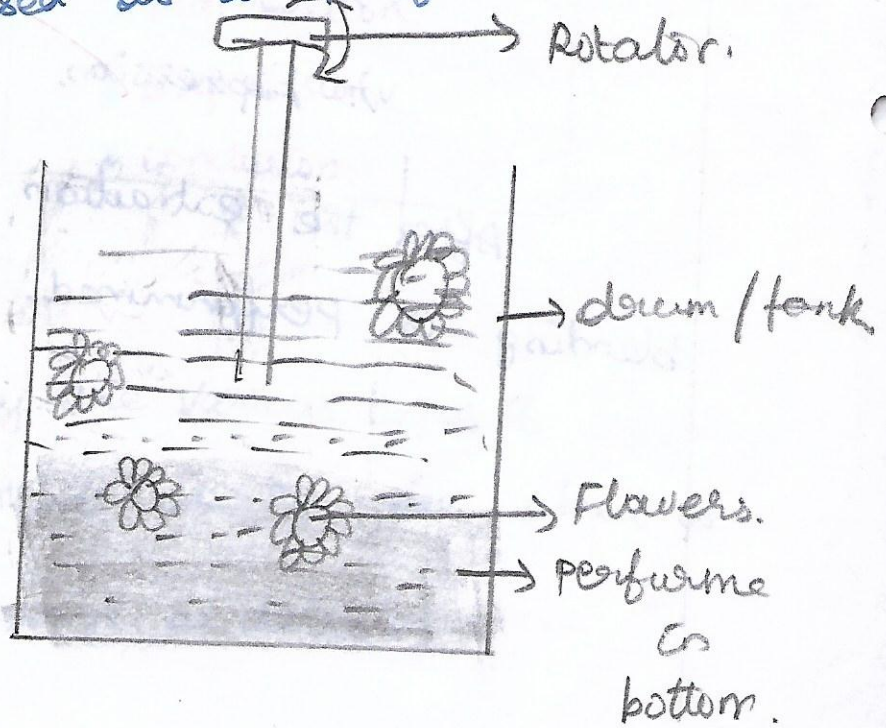
iv). Maceration.

v). Expression.

After the extraction aging and blending is performmed.

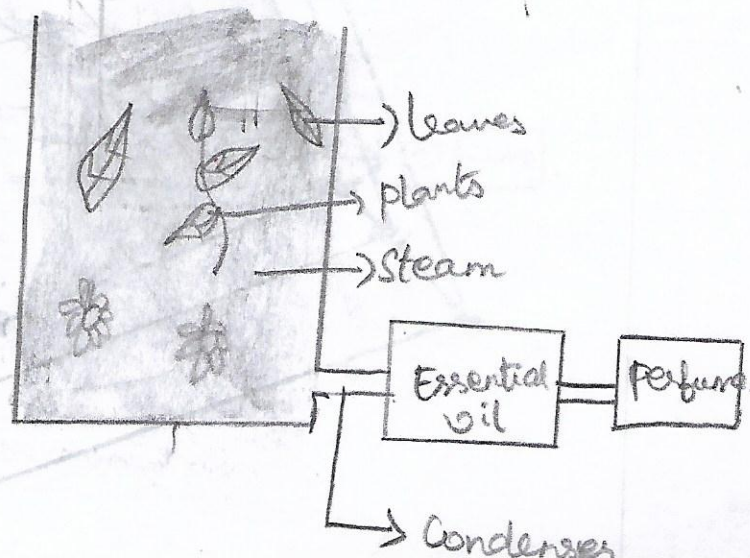
Solvent Extraction:

In Solvent extraction the flowers are placed in the large rotating drums (or) tanks with a benzene (or) petroleum ether. They are dissolved in the solvents and the ethyl alcohol is added for extract. The flowers are picked by hands and the leaves are dried which can be used as a perfume in bottom.



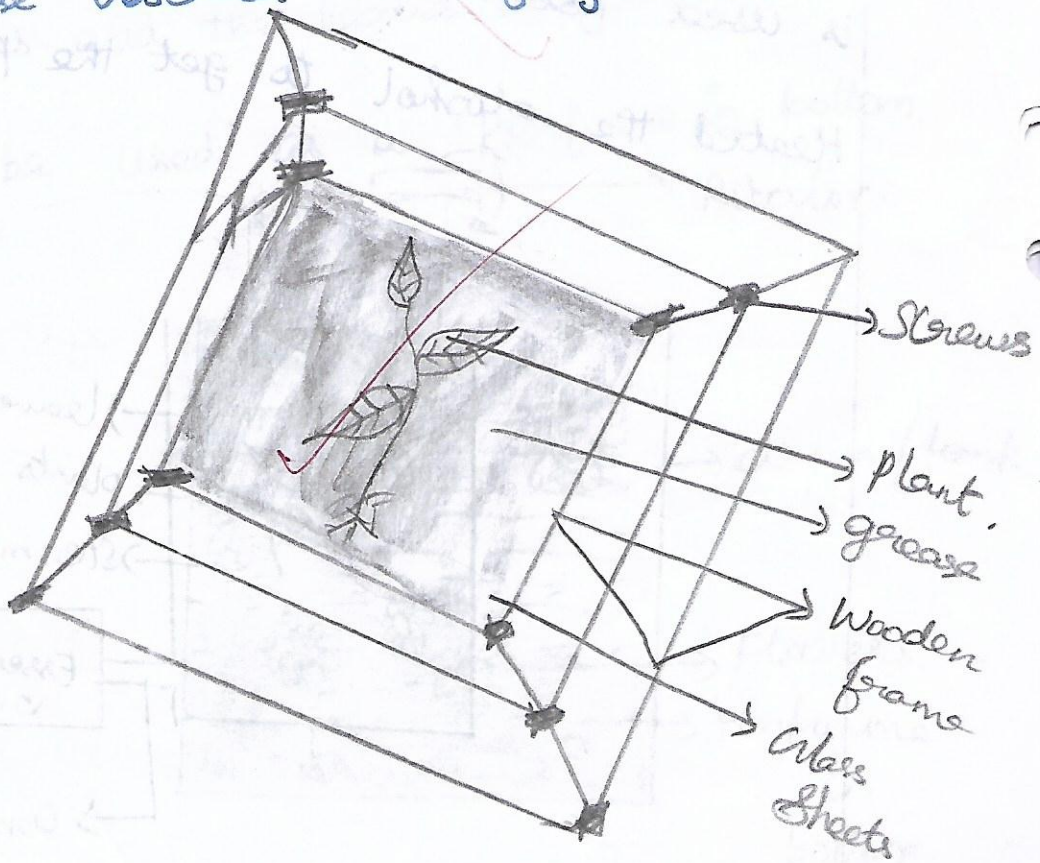
Steam distillation:

In Steam distillation the plants can be immersed in a Steam tank They are in the form of gas. A tube is connected to collected the gas, Cooled and than liquified. Ethyl alcohol is used for the extract of essential oil. Heated the alcohol to get the perfume.



Enfleurage:

In Enfleurage the plants are placed in a glass sheets which are coated with grease. The glass sheets are placed in wooden frame and tiers. Ethyl alcohol is added and Heated until the grease Obsorved their fragrances.



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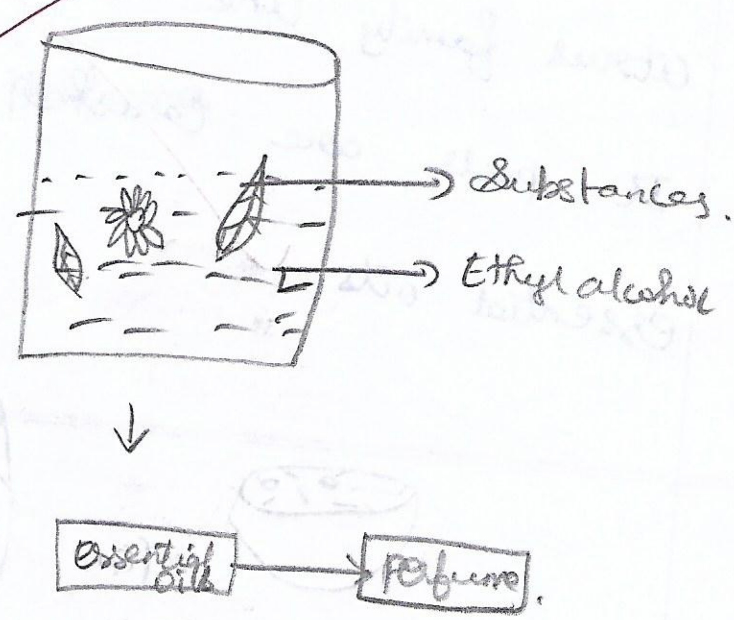
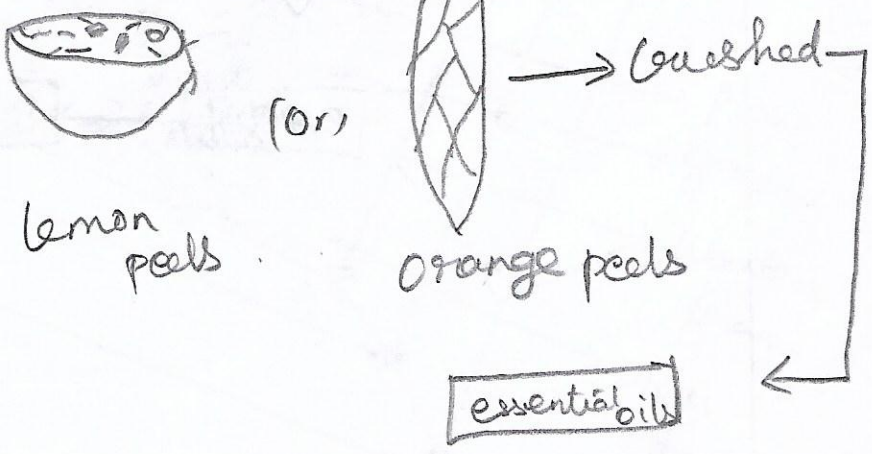
Maceration:-

Maceration is like a enfluerage but the warmed up ~~ofthe~~ plants are like a Solvent extraction added Ethyl alcohol to extracted the essential oils from the plants.



Expression:

Expression is a oldest technique. The plants should be taken and it can be crushed, chopped by hands to extract the essential oils. It is a low cost and cheapest method. It is suitable for the citrus family like lemon and oranges. It peels are crushed to get a essential oils.



Conclusion:

These are the various methods of extraction of essential oils in the perfume industry.

After that it can be blended and aging then it will be a perfected perfumes.

18). Plant & Animal Fixatives.

SYNOPSIS

* Introduction.
* Plant Sources.
  - Bark.
  - Roots & Rhizomes.
  - Flowers.
  - Fruits.
  - Woods.
  - Leaves.
* Animal Sources.
  - Ambarigus.
  - Castoreum.
  - Civet.
  - Honeycomb.
  - Hyraceum.
  - Musk.
* Conclusion.

Introduction :-

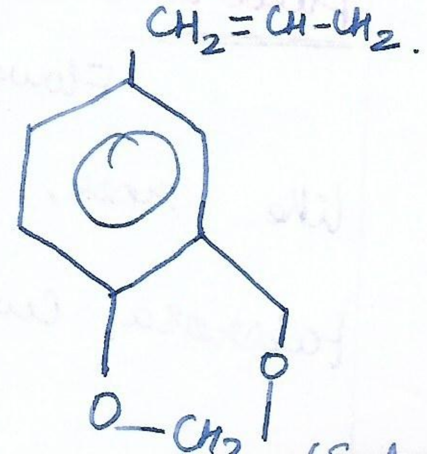
The plant and animal sources are used in perfumes which can be seen in the

Plant Sources:-

In plant sources they are many perfumes can be produced because of the aroma compounds. It can be obtained after the secondary metabolism of plants.

Barks:-

In Barks the perfume can be obtained commonly in Cascarilla and cinnamenon. The bark of Sassafaras contain the main components as safrole which is used as a perfume compound.



Leaves:-

In leaves the perfume can obtained such as the coriander leaf, cinnamenon leafs, rose leaves, Caston leaf, etc.

Fruits:-

Fruits can be used in the perfumes like lemon, lime, orange, apple, strawberry, blackcurrent, cherries, etc.

Flowers:-

Flowers can be used in perfumes like rose, jasmine, lotus, lily, mimosa, tuberosa, cucutta etc.

Woods:

Woods of the plants can be used as a perfume like rose wood, jasmine wood, Sandal wood and the fragrances woods.

Roots & Rhizomes:

Some of the roots and rhizomes are used as perfumes like.

Iris rhizomes,

Vetiver roots,

Rhizomes of the ginger family.

These are the substances from the plant sources for the purpose of using a fixitatives in perfumes.

Animal Sources:

In animal sources some of them are used as a perfume fixatives they are

Ambergris,

Castoreum,

Civet,

Honeycomb

Hyraceum,

Musk

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Ambarigus:-

Lumps of the organic fatty compounds can be caused by the precursors of the male cathale.

Ambarigus is the sperm of the male.

Ambarigus is not confused a yellow colour, in a good jewellery.

Castoreum:-

Castoreum is commonly called as the Sac of the North Americans.

Civet:-

Civet is commonly Called as civet Sac. It is obtained from the family of Viviberra which is related to the mongoose family.

Hyraxeum:-

Hyraxeum is obtained from Hyrax. It is called as "African stone".

Honey comb:-

From the Honey bee it released 2 Substances.

* Honey
* Honey comb.

From Honey comb it is mixed with ethanol to get the Honey wax.

Musk:-

Musk is Obtained from the male deer in the Himalayan forest called "Moschus moschiferous". It is secreated from the gland located between the umbelicus and genitila.

Conclusion:-

These are the fixatives obtained from the Plant & Animal sources.

19). Artificial flavours:-

Synopsis
* Introduction. * Heliotropin. * Vanillin. * Methyl Salicylate. * conclusion.

Introduction:

The flavour which present naturally but it can be synthesized by artificial is called artificial flavours.

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Helitropin:-

Helitropin is indespensible of helitrope. It is sweet odour. It is is the garden variety of helitropin called Helotrophium arbo-escenes.

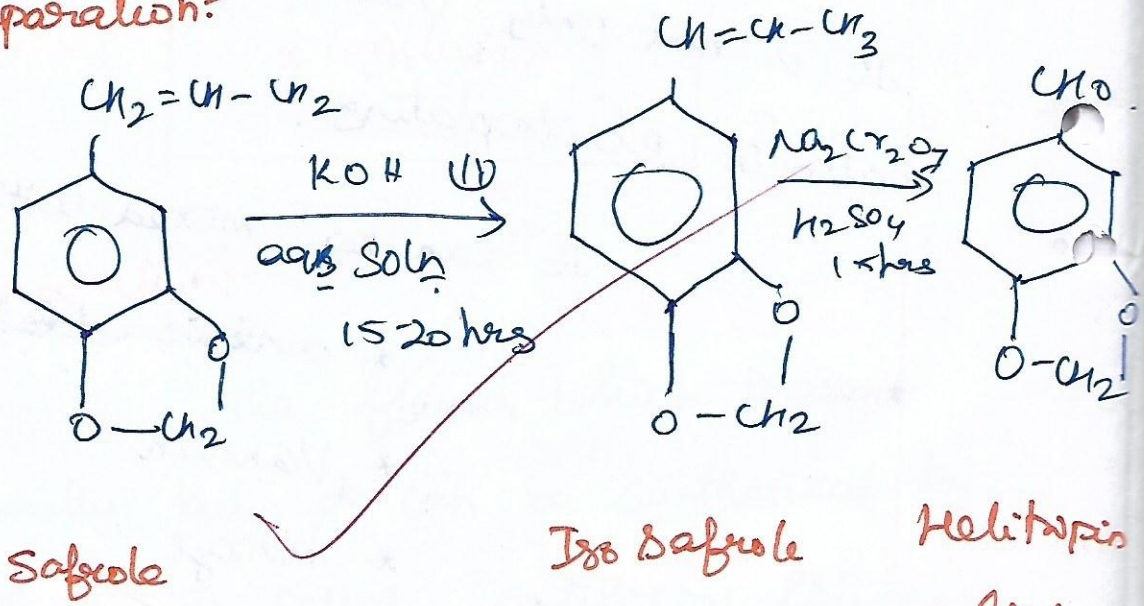
It can be used as a modifiers, in perfumes. It is not only used in perfume but also in electroplating.

It can be mixed with

* anisic aldehyde
* Vanillin.
* benzyl
* Coumarin.
* isoeugenol.

The Helitropin is Synthetically prepared from Iso safrole but the originally prepared from the peppa to the peperic acid by KOH as the alkaline Solution. The aldehyde of methylene ester from the Protocatechic aldehyde.

Preparation:-



Uses :-

It is used in perfume industries.

It is used in electroplating also.

It is used as a modifiers.

Methyl Salicylate :-

It is a organic compound.

It is Symmetrically prepared from the plants wintergreen. Molecular formula is $C_6H_4O_4(CH_2CH_3)$.

Chemical formula $\Rightarrow C_8H_8O_3$

Molecular weight $\Rightarrow$ 152.15 gm/mol

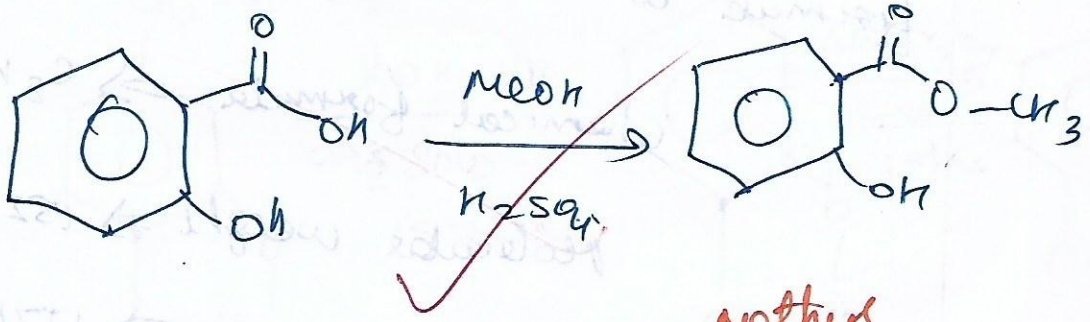
Density $\Rightarrow$ 1.174 gm/cm3

It is Synthetically used in fragrance and food beverages and in liniments.

It is called Methyl 2 hydroxy benzoate. Soluble in organic solvents. It is a methyl ester of Salicylic acid. It is colourless, Volatile liquid and Sweet odour.

Preparation:-

Methyl Salicylate is prepared by esterifying the salicylic acid with MeOH / H_2SO_4



Salicylic acid

Methyl Salicylate.

Uses:-

It is used in perfume & soap industries. and used to release the muscular pain.

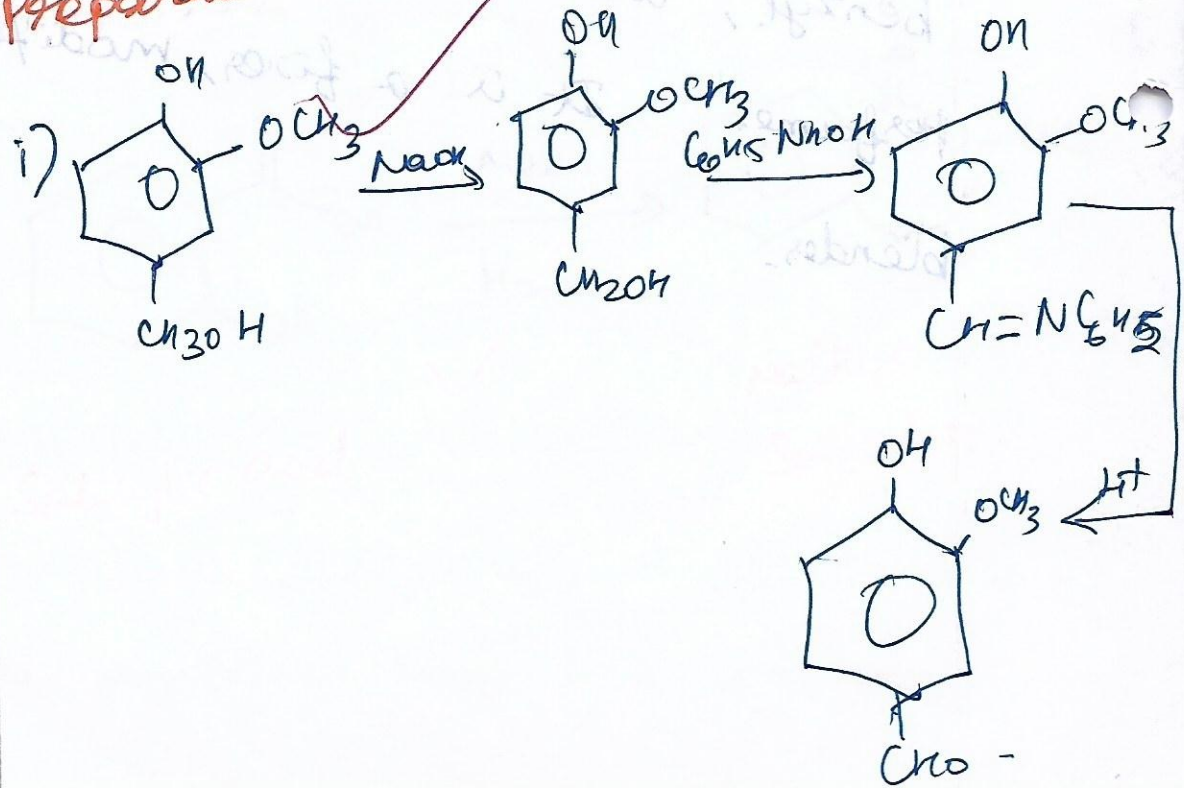
Vanillin:-

It is called 4 hydroxy 3 methoxy benzaldehyde.

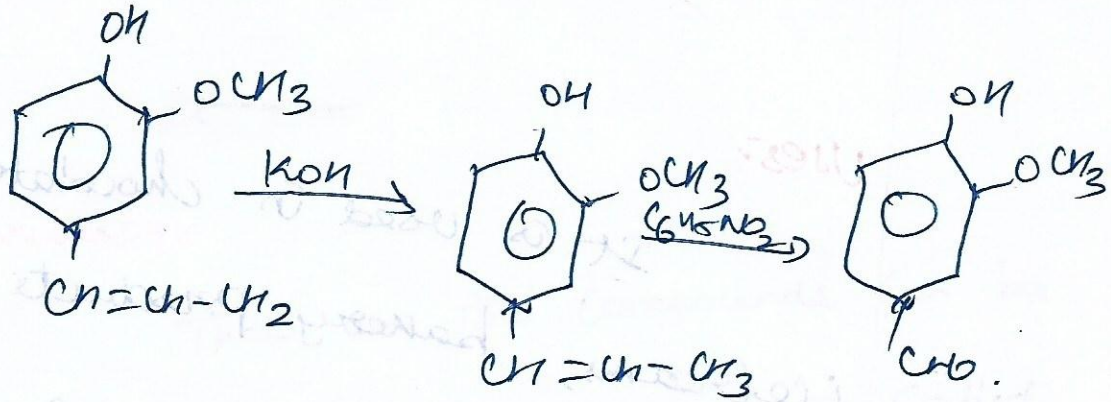
Vanillin is mixed with heliotropin, benzyl, coumarin & isoeugenol in perfume. It is a fixer, modifier and blender.

Eugenol is obtained from the oil of clove is converted into isoeugenol by KOH. and it is oxidized nitrobenzene. The product is in white (or) yellowish white crystalline. In nature, the balsams of peru and tolu on the surface of blooms which is in white crystalline blooms

Preparation:-



ii)



Eugenol is convert into isoeugenol and it produced Vanillin.

phenol is treated with oxime it forms the isomer and it can be treated with phenyl oxime it forms intermediate & it undergoes reduction to form Vanillin.

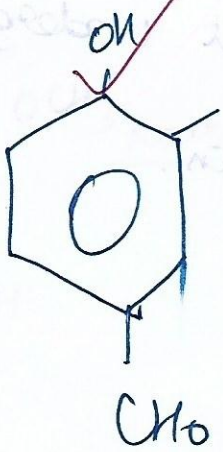
Uses:-

It is used in chocolates, candy, icecreams, bakery products.

It is used in soap & perfume industries.

It is used as the essence for the creams.

The flavour vanilla contains the compound vanillin.



~~It can~~

Conclusion.

These are the compounds can be prepared artificially so it is called artificial flavours.

Name :- P. Divya Priya

Roll NO :- 18A1402

Class :- I. BC (Chemistry)

Sub :- Perfumes & Cosmetics - III

Date :- 1. 2. 19.

P. Divya Priya

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Extraction methods should be written.

Section - C

17. Perfume industry.

* Defined as a Mixture of pleasant smelling substances incorporat -ed into a suitable solvent.

* The odorous compounds steam volatile oil are products is plant of Metabolism and are found in leaves, fruits, flowers, bark, root, rhizomes. of plants.

* Synttitic compounds having the same odour as natural were discovered avariety of compounds having wide range of fragrances

Of The three ingredients.

* Viz,
* Vehicle,
* Fixative.

and odoriferous substance.

* The most common solvent is ethyl alcohol mixed with more (or) less water.

* Vehicle (or) solvent is needed to keep the odoriperfume substance in solution. The most important requirements of a good solvent are

(a) It must be volatile,

(b) It should be non-irritant to human skin,

(c) It should be inert and almost odourless.

* Fixatives are the substances (or) lower volatility than the perfume oil. All fixatives are classified into 4 groups, viz, animal fixatives, resin fixative essential oil. fixative and synthetic fixative.

18. Explain in detail plant fixatives.

* plants have long been used in perfumery as a source of essential oils and aroma compounds. These aromatics are usually secondary metabolites produced by plants as protection against herbivores. infections as well as to attract pollinators.

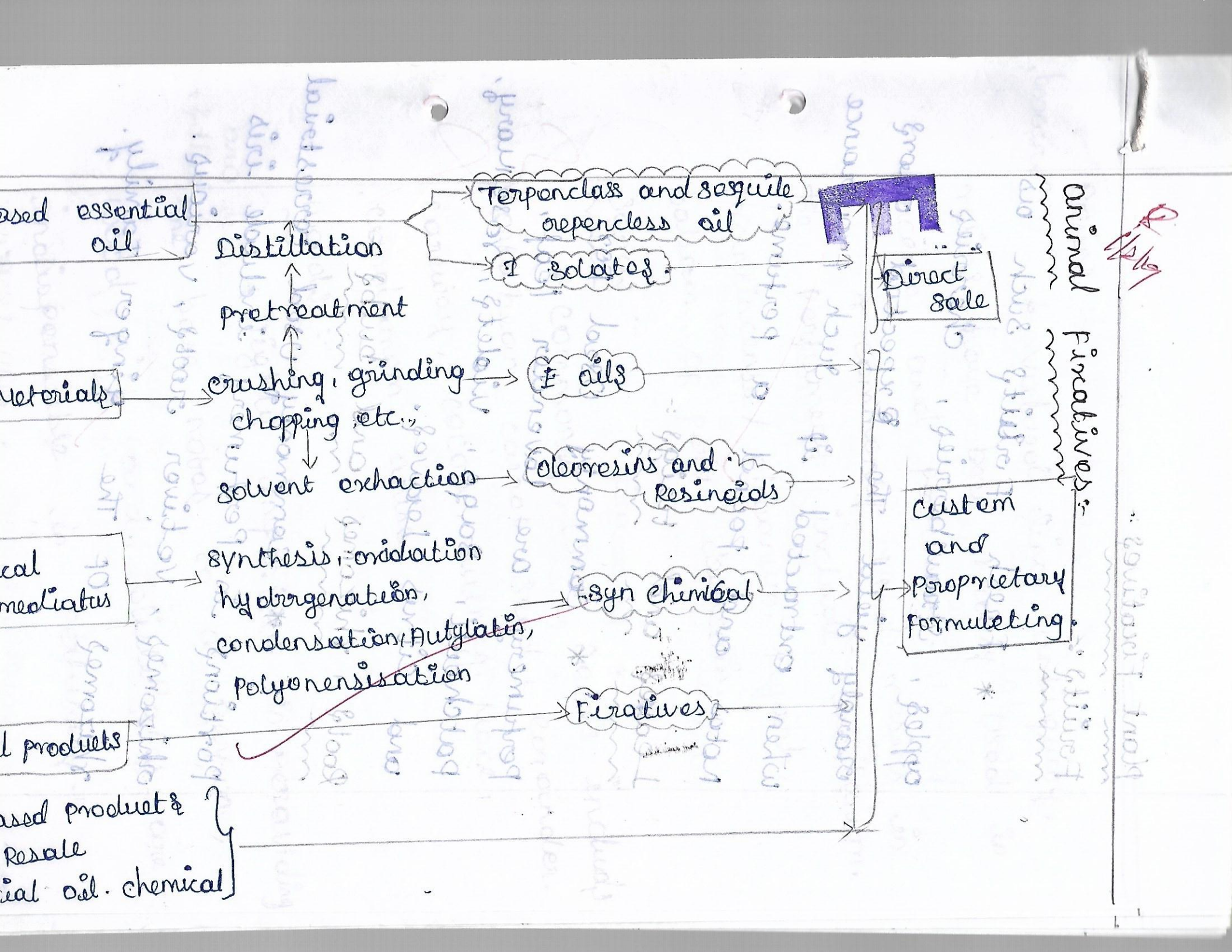
plants are by far the largest source of fragrent compounds used in perfumery.

Bark :-

* Commonly used bark include cinnamon and cascarilla. The fragrant oil is sassafras. Root bark also used either directly its constituent safrole, which is used in the synthesis of other compounds.

Flowers and blossoms :-

* Undoubtedly the largest and most common source of perfume aromatic includes the flowers of several special of rose and jasmine.


sed essential oil
Distillation
Terpenclass and sesquile repencless oil
Isolates
pretreatment
Direct sale
Animal
Firatives
terials
crushing, grinding chopping, etc.,
Oils
solvent exhaction
Oleoresins and Resineols
cal mediatus
synthesis, oxidation hydrogenation, condensation, Autyliation, polyonensisation
syn chemical
Custem and Proprietary Formuleting
Firatives
l products
assd product & Resale
ial oil. chemical

Plant Fixatives :-

Fruits :-

* Fresh Fruits such as apples, Strawberries, cherries rarely yield the expected odors when extracted if such fragrance notes and found a perfume.

Leaves and twigs :-

* Commonly Used for perfumery are lavender leaf, patchouli, Sage, Violets, rosemary and citrus leaves.

Roots, rhizomes and bulbs :-

* Commonly Used terrestrial portions in Perfumery include iris rhizomes, vetiver roots, various rhizomes of the ginger family.

Resins :-

* valued since antiquity, resins have been widely used in incense and perfumery.

* commonly used resins in the perfumery include labdanum, frankincense / olibanum, myrrh, balsam of peru, benzoin.

Seeds :-

* commonly used seeds include tonka bean, carrot seed, coriander, caraway, cocoa, nutmeg, mace, cardamom, anise.

Woods :-

* Highly important in providing the base notes to a perfume, wood oils and distillates are indispensable in perfumery.

* commonly used woods
Sandal wood, rose wood, agarwood, birch, ceder, juniper, pine.

Rom terpenes :-

* orchid scents.

animal fixatives example :-

* Ambergris,
* castoreum,
* Hyraceum,
* Honeycomb,
* Musk.

plant fixatives example :-

* Bark,
* flowers and blossoms,
* fruits,
* leaves and twigs,
* roots, rhizomes and bulbs,
* Resins,
* seeds,
* woods,
* Rom terpenes.

II. Answer the questions :-

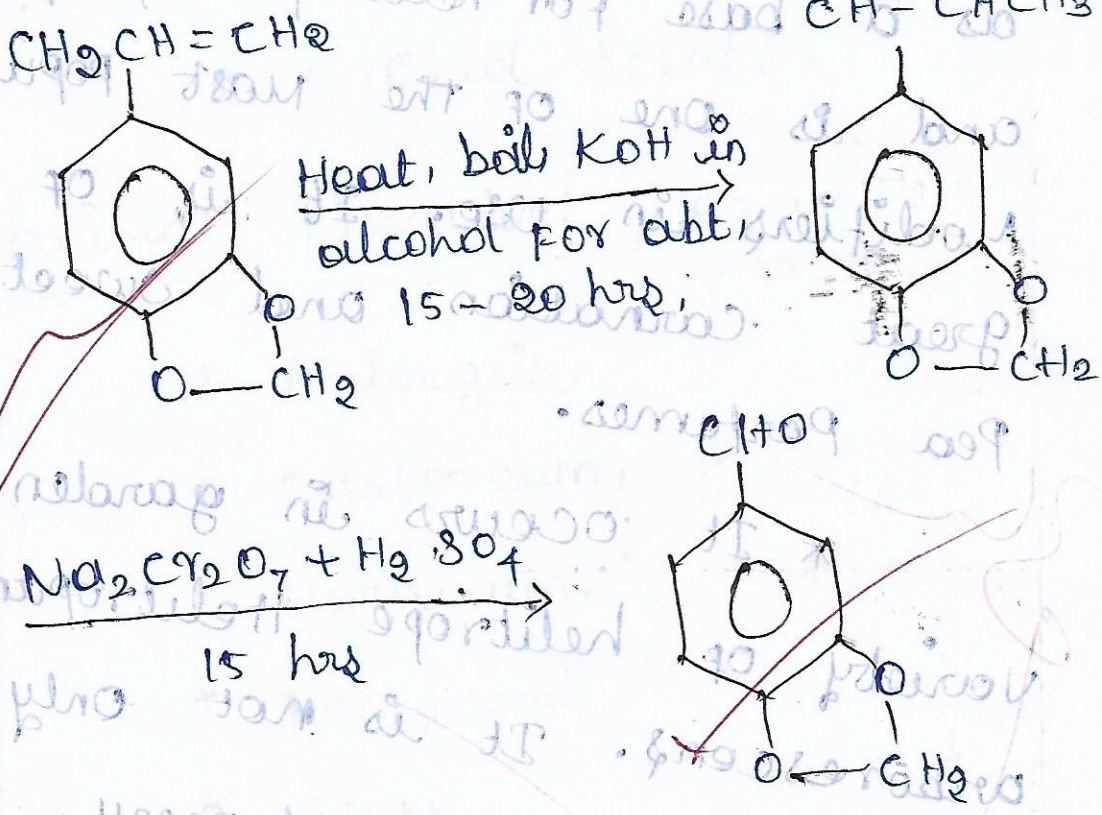
11. Helitropin :-

* Helitropin is indispensable as a base for helitropin perfumes and is one of the most popular Modifiers in use. It is of great carnation and sweet Pea Perfumes.

* It occurs in garden variety of helitrope Helitropum arborescens. It is not only said used in perfumery, but also used in electroplating of Metals.

* Molecular formula - $CH_2O_2C_6H_3CHO$, It is a white

having a delightful odour of cherry pie. This aldehyde is the methylene ether of protocatechuic aldehyde.



15. ~~xxxxxx~~ :-

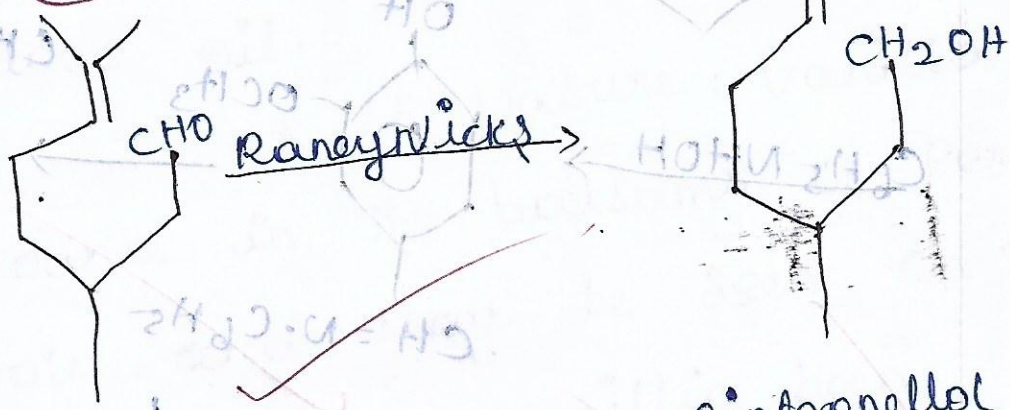
16. rhodinol :-

* Occurs in rose, geranium and citronella oils.

* It possesses the rose like

$-(CH_3)_2C=CHCH_2CH_2-CH(CH_3)CH_2CH_2OH$.

* It is a colorless liquid which is isomeric with rhodinol. It has a sweet rose like odour.



Citronellal

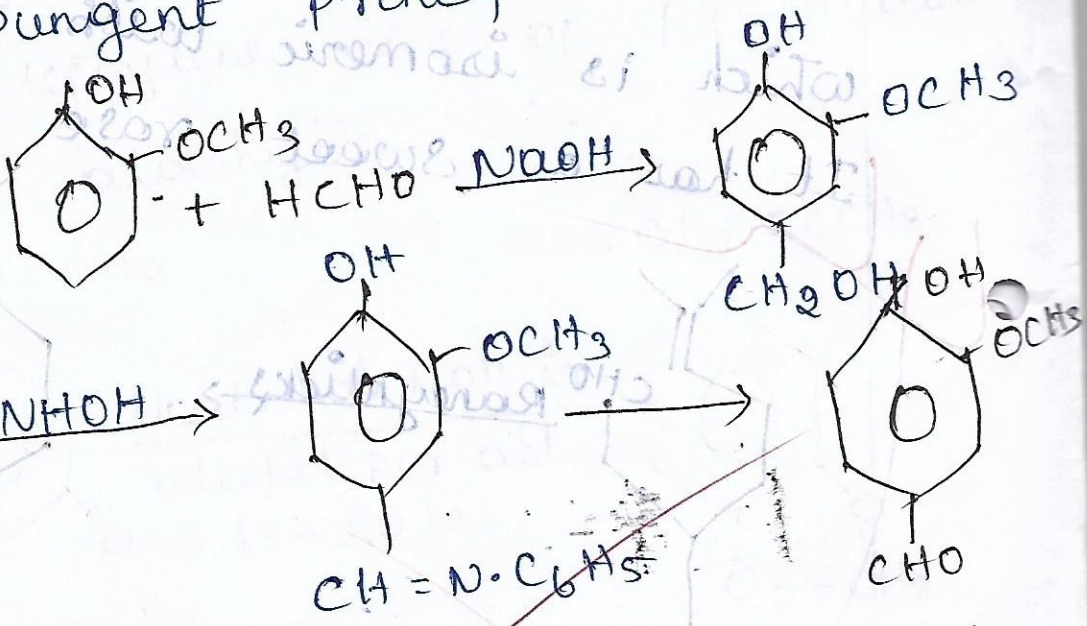
Citronellol

15. Vanillin

* Vanillin is one of the most widely used flavours. It is used as a flavour in chocolate, candy, bakery products, ice cream and perfumery, In addition to its use in the flavour industry.

In serves as a starting materials for the syntheris a the pungent principle of red Pepper.

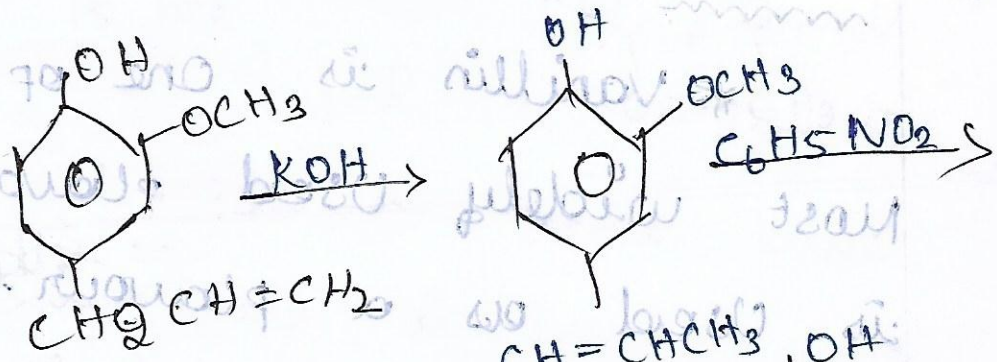
(a)



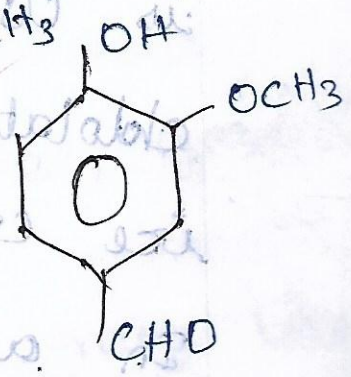
4 hydroxy - 3 - Methoxy benzaldehyde.

Vanillin

(b)



Eugenol



Vanillin

Eugenol which occurs in the oils of cloves. is first isomerised to isoeugenol in the presence of KOH.

* It can be obtained from clove oil.

* It Nature, Vanillin is found in the balsams of Peru and tolu, and may be seen on the surface of the vanilla bean.

* Vanillin is extensively used as fixer, Modifier and blander. Vabillin has limited application in soap perfumery because it has a tendency to turn the soap brown with age.

13. Draw the flow chart for the preparation of and flavoring Meterials.

I. Answer the questions :-

1. Musk.

2. phenyl

3.

4. Defined as a Mixture of pleasant smelling substances incorporated into a suitable solvent.

5. the odorous compounds steam volatile oil are products is plant of Metabolism and are found in leaves, Fruits, flowers, bark, root, rhizomes, of plants.

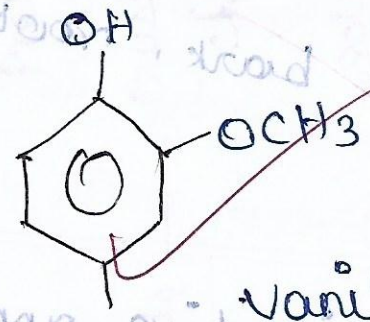
6. Viz, vehicle, fixative and odoriferous substances.

7. Fixatives are the substances (or) lower volatility than the perfume oil. All fixatives are classified into 4 groups. Viz, animal fixatives, resin fixative essential oil fixative and synthetic fixative.

8. Vehicle (or) solvent is needed to keep the odoriperfume substance in solution. The most important re-quirements of a good solvent are

(a) It must be volatile,
(b) It should be non-iritant to humanskin
(c) It should be inert and almost odourless.

9.



Vanillin

10. $\underline{CH_2O_2}\ \underline{C_6H_3}\ \underline{CHO}. \rightarrow C_8H_8O_3$

①

E

Roll no :- 18A1419.

Department :- Chemistry 1st

Subject :- Skill Based - III

Date :- 1. 2. 2019.

Section - A.

I Answer the All questions :-

1. ~~[illegible]~~ Musk.

2. methanal

3. C_6H_5OH.

4. Perfume :-

Perfume is Defind as a mixture of pleasent smelling substance ~~incor~~ incorported into a suitable

5. Odours Compound :-

The odours compound (Steam volatile oil) are ~~[illegible]~~, ~~[illegible]~~ viz., fruits, flower, ~~fixatives~~, Resins, Rezomes, Seeds are the Ordous compound.

6. The ingredients present in perfume :-

viz, fixatives, Odour ~~Compound~~ Substance, Vehicle.

7. fixatives :-

fixatives are substance is Volacity. Then the fragrance oil. All the fixatives are four groups, viz, animal fixatives, resin fixatives essential oil fixatives,

Vehicle and it requirements:

Vehicle (or) Solvent in keep the odoriferous substance in solution.

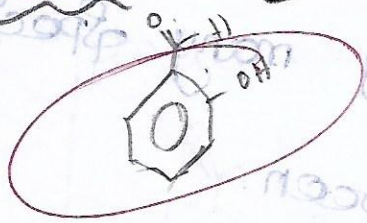
It is most important requirements the good solvent are.

a) It have a volatile.

b) It should be non-irrent of human -skin.

c) It should be inoxt inoles odourless.

9. Vanillin Structure:

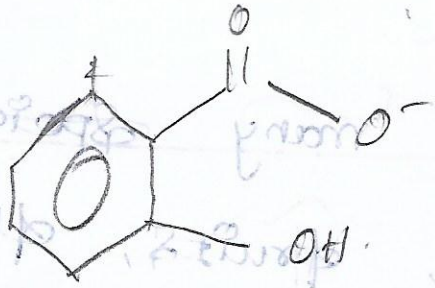


10. molecular formula of methyl salicylate is $C_6H_4(OH)(CO_2CH_3)$

Section - B.

14. Winter green oil :-

* organic compound. - molecular formula $C_6H_4(OH)(CO_2CH_3)$.
* methyl ester of Salicylic acid.
* It is a colourless, visous liquid with a sweet odour.
* It is produced by many species of plant - winter green.
* It is sythecically produced, used as a food, beverages and Intmants.

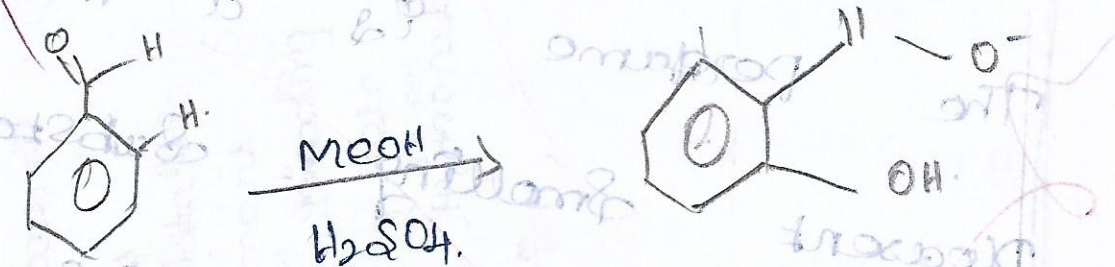


* methyl Salicylate.

methyl 2-hydroo benzene.

* Solveble in Substance Solution.

-> methyl Salicylic is used into Perfumery and H_2SO_4.



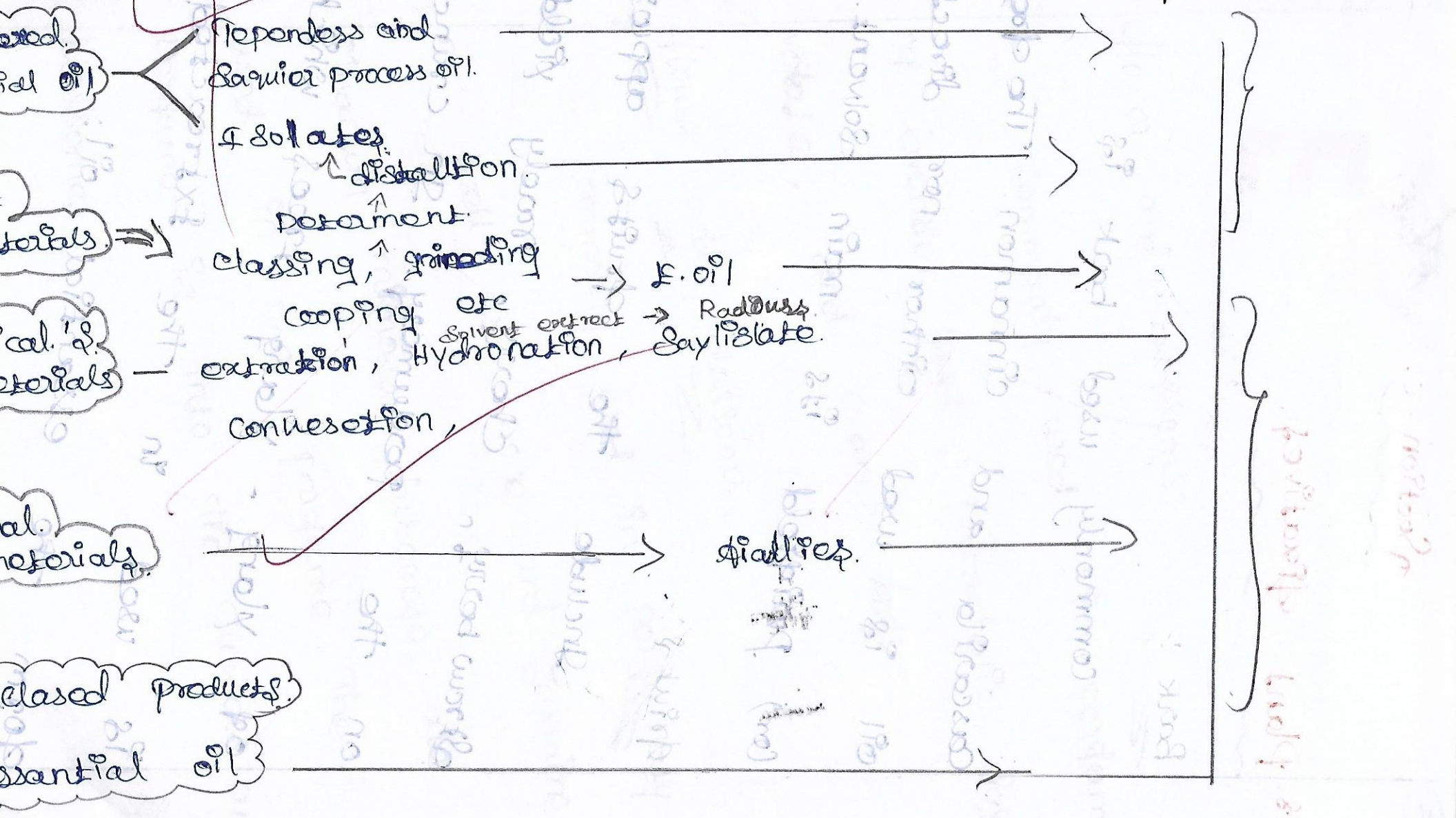
methyl Salicylic.

methyl Salicylate.

2. The difference between artificial and natural flavors:-

There are many spices from perfume. bark, fruits, flower and blossom, Resins, woods, seeds, Rhizomes, root, and bulbs, Rom Scents. This process from the extracted. The natural flavour is used into healthy. The perfume is a mixed pleasent smelling substance incerported into a suitable Solvent. There ingredient in the perfume is viz, odous substance.

13. The flow chart for the preparation of and flavoring materials.



Section - C.

18. Plant fixatives.

Bark :-

Commonly used bark is Cascarila and Cinnamon. The fragrance oil is used either nor directly (or) purified its main solvent.

fruits :-

Include the fruits apples, Straw berry, cherry, rarely yield. on the perfumery. In crunch of ylang - ylang trees. which is used in the Extracted the essential oil:

E

flower and blossoms:-

commonly used in perfumery. of lavender, patacholic, sage, violate, and cranch leaf.

flower and blossoms:-

commonly used in perfumary as well as rose and jasmine othanum, mimosa, tuberose, are used in the perfume. The perfume is into the flowers and blossomes.

leaves and twigs:-

commonly used in perfumery

of the lavender, patachollic,

Sage, voilete, etc...

The perfume is valued in

the "green" smell on the

tomato leaf.

* Rhizomes and root, bulbs

* Resins, Rom secents

This species in the used

from the many perfume.

Rhizomes and bulbs.

Commonly used is a bean,

Seeds :-

Commonly used in a bean, carrot seeds, cocoa, etc. This perfumes is used into a species of seeds.

Animal fixatives :-

Amberis :-

Lumbs of fatty compounds, whose precropes and secretes extracted. used in the This is yellow colour. which is used in the Jewallary.

Castorium :-

obtained form the north. American

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ANNANAGAR,MADURAI-625020
DEPARTMENT OF CHEMISTRY
ASSIGNMENT MARKS ODD/EVEN SEM-2019
I-B.Sc [CHEMISTRY]

TITLE OF THE PAPER: Perfumes & Cosmetics

S.NO	ROLL NO	REGISTER NO	STUDENT NAME	ASSIGNMENT MARK	MARKS
1	18A1401	B8S19601	K.ARUNA	Good cosmetics.	5
2	18A1402	B8S19602	DIVYA PRIYA.P	AB	AB
3	18A1403	B8S19603	GAYATHRI.S	Talcum Powder.	5
4	18A1406	B8S19604	LAVANYA.K	Tooth paste.	5
5	18A1407	B8S19605	LOGA NANDHINI.R.N	Nail polish.	5
6	18A1408	B8S19606	MEENA LOCHINI.D	Hair dye	5
7	18A1409	B8S19607	MUHILARASI.M	Mouth wash	5
8	18A1410	B8S19608	NANDHINI.T	Cosmetics.	5
9	18A1411	B8S19609	PRIYA.M	Cleansing action.	5
10	18A1412	B8S19610	RISVANA PARVEEN.A	Differences	5
11	18A1413	B8S19611	SARANYA.M	Bathing Soap.	5
12	18A1414	B8S19612	SELVA RANI.A	TFM.	5
13	18A1415	B8S19613	SIVA SANGARI.R	Solid & Liquid detergent	5
14	18A1416	B8S19614	SIVAKANCINIMATHI.S	Hair dye	5
15	18A1417	B8S19615	SUMAIYA BARHANA.K	Functions	5
16	18A1418	B8S19616	SWETHA.S	Nailpolish.	5
17	18A1419	B8S19617	SWETHA.S	Tooth paste	5

Sheet No.....

Skill Based - III

By :-

M. Mulilarasi
I^st B.Sc. Chemistry

Toothpaste Ingredients

The list of toothpaste ingredients in commercial toothpaste is a little frightening to say the least. On the labels of many mainstream brands you're likely to find one or more of the following ingredients.

Triclosan:

This is an antibacterial agent and preservative used in some toothpaste. To explain according to the "Environmental working group's cosmetics Database"

Triclosan has been shown to be an endocrine disruptor, a skin irritant and can cause allergic reactions in some cases.

Aspartame and saccharin

These are artificial sweeteners that often show up in toothpaste formulas. Due to the fact that each has been linked to some serious health problems they should be avoided altogether.

Diethyl:

A liquid that keeps the other toothpaste ingredients

from drying out, Sorbitol has laxative effects that can cause diarrhea if too much is swallowed.

Sodium Lauryl Sulfate (SLS)

SLS is a foaming agent and detergent commerical tooth paste brands add to make it foamy. This ingredient is dangerous because the production of SLS results in contamination with a carcinogenic (by product. Studies on SLS have shown it can have many determental much is swallowed.

FD & Blue Dye 1:

That fun colour stripe in your toothpaste ingredients is most likely from a synthetic dye. The "center for science in the public interest" recommends avoiding these artificial dyes in personal care products because of the adverse impact they can have, including hyperactivity in children, allergic reactions, and even cancer [in animal studies]

Fluoride:

This ingredient in toothpaste deserves the attention of an entire article, but putting

It simply, fluoride is a neurotoxin. It is an ingredient in our toothpaste And it alters the body when we use it. Too much fluoride can have some serious effects on the body including but not limited to, fluorosis. you can define fluorosis as the spots and discoloration on teeth. In fact the FDA now requires all manufactures to put poison. warning on all fluoride toothpaste. I'm serious go look at your toothpaste label.

Mouth wash: Mouthwash is a liquid oral product designed to

Freshen breath. certain varieties may also kill bacteria and/or whiten teeth. Mouthwashes are made by combining the appropriate raw materials in large, stainless steel tanks and then filling the product into individual packages. First used by ancient societies, technological advances in chemistry have resulted in steadily improving formulas. In 1998, Americans spent aer $ 652 million on mouth wash

Background:

The need for mouthwash is a reasult of a condition called halitosis, or bad breath. It is estimated that over

half the population occasionally has foul - smelling breath. This typically occurs upon first awakening or after a meal with garlic or onions. It has been found that bad breath is mostly due to bacterial activity in an unclean mouth.

Mouthwashes are designed to eliminate bad breath in two ways. First they relieve it by killing the bacteria responsible for producing the foul odor. The best of these products prevent bad breath for as long as eight hours. The second way that mouthwashes help

reduce bad breath is by masking the odor. This is a much less effective method which lasts no more than 30 minutes.

History:

Products used for freshening breath or cleaning teeth have been in existence for centuries. Many of the ancient societies including the Egyptians, Chinese, Greeks, and Romans had recipes for such preparations. They used a variety of ingredients from edible materials like fruit, honey, or dried flowers to less appealing compounds such as ground lizard, minced mice or

urine. These products were generally ineffective and in some cases were harmful to the sensitive enamel which coats each tooth.

While tooth cleaning preparations steadily improved over the years, it was not until the early 1900s - when the modern toothpaste was developed - that truly effective oral products became available. One of the most famous brands, Listerine was developed during the 1880s and is still sold today.

× ×

Sheet No.....

SKILL BASED - III

- by :
K. Sumaiya Banhara
I. B. Sc. Chemistry.

Detergent :

A detergent is a surfactant or a mixture of surfactants with cleaning properties in dilute solution. These substances are usually alkylbenzene sulfonates, a family of compounds that are similar to soap but are more soluble in hard water, because the polar sulfonate is less likely than the polar carboxylate to bind to surfactants and other ions found in hard water.

In most household contexts, the term detergent by itself specifically to laundry detergent or dish detergent, as opposed to hand soap or other types of cleaning agents. Detergents are commonly available as powders or concentrated solutions. Detergents, like soaps, work because they are amphiphillic, partly hydrophilic and partly hydrophobic. Their dual nature facilitates the mixture of hydrophobic compounds with water. Because air is not hydrophillic, detergents

are also foaming agents to varying degrees.

Let's you know about Ariel ingredients

Alcohol Ethoxylate (AE) Non-ionic surfactant...

Alkyl or (Alcohol) Ethoxy Sulphate and Alkyl sulphate (AS) Anionic surfactant...

Amine Oxide...

Carboxymethyl Cellulose...

Citric Acid....

Cyclodextrin...

Diethyl Ester Dimethyl Ammonium Chloride (DEEDMAC)...

Ethanol.

function of Detergents

Sheet No.....

Family.	Function	Type	Function
Abrasive	Aids the removal of a variety of soils from various surfaces through mechanical action. Eg: grime, kitchen	-	-
Alkalinity sources	Increases the alkalinity of the product to aid dissolution of dirt.		
Binders	Substances that are added to provide adhesive properties so that the solids stick together Eg: tablets.		
Bleach precursors	Reacts in the wash to form bleach.	Bleach Catalysts	Boots the Performance of the bleach Component of a detergent making it effective at lower temperatures too.

		Bleach Activators	Boosts the Performance of the bleach component of a detergent making it effective at lower T° too
Builders	Reduces the effect of water hardness by removing Calcium and Magnesium	Sodium carbonate	Soda Ash improves cleaning Performance by raising the pH of the wash solution.
Bulking agents.	Added to increase the volume of a Product through dilution, so that it can be applied at the correct Concentration		
	Ingredients that can colour the product.		

Sheet No.....

Corrosion Inhibitors	Added to prevent corrosion		
Enzymes	Enzymes are catalysts that increase the rate of Chemical reaction such as digestion and growth process.	Mannanase	mannanase degrade mannan containing stains, thus ensuring through stain removal and cleanliness.
Viscosity controlling Agents.	Controls the thickness of the product.		
waters	used to dissolve other Ingredients		
pH adjustees.	Added to control the acidity / of products		pH is a measure of the acidity or basicity water has a pH around 7. eg: (cola. pH - 2.5)

Skill Based - III

Assignment

Ingredients of Washing and Bathing Soap

By:-
M. Selvarani
I^st B.Sc Chemistry

Ingredients of washing

→ Every detergent contains many ingredients with long, complicated names. So you have a better idea of what does that, here is a list of the most common Ingredients in detergents. Let's see what should you know about detergent ingredients.

Alcohol ethoxylate (AE):

→ Non-ionic surfactant. Removes greasy stains from your garments.

Alkyl (or alcohol) Ethoxy Sulphate (AES) and Alkyl Sulphate (AS):

→ Anionic surfactant. Two of the most widely used tools for removing stains.

Amine Oxide (AO):

→ Zwitterionic surfactant. used along with other surfactant to remove stains. Can be anionic, cationic or non-ionic.

Carboxymethyl cellulose (CMC):

⟹ A polymer that comes from natural cellulose helps stop stains from returning to the garment they've been removed from.

Citric acid:

⟹ The acid found in lemons and citrus fruits, it's mild and helps to remove bad smells from clothes. It also has a chelating agent.

Cyclodextrin:

⟹ Another chelating agent that removes malodours from the garments.

Diethyl ester Dimethyl Ammonium chloride (DEEDMAC):

⟹ An ammonium compound used in fabric conditioner to keep fabrics smooth.

Ethanol:

⟹ A clear, colourless alcohol used as a solvent in detergents.

Ethylene Diamine Disuccinate (SS-EDDS):

⟹ Developed by P&G as a builder and chelating agent.

Hydrogen Peroxide:

⟹ One of the simplest and most common bleaching agents.

Linear Alkylbenzene Sulfonate (LAS):

⟹ The most widely used anionic surfactant in the world. Remove stains from your garments.

Mono Ethanol Amine (MEA). 2 Amino Ethanol or Ethanolamine:

⟹ An organic amine and primary alcohol used as a solvent and a weak base. Maintains the pH balance in your

Percarbonate:

⟹ Sodium Percarbonate is a bleaching agent used in detergents.

Polyethylene Glycol (PEG) Poly ethylene oxide (PEO) or Polyoxyethylene (POE):

⟹ A Polyether compound used for many things, including as a lubricant and surfactant.

Polyvinyl alcohol:

⟹ A water soluble synthetic polymer, used to make the casing for liquid tabs and dual Aquametic 3 in 1 PODS.

Propylene Glycol:

⟹ An organic compound used as a solvent and enzyme.

Sodium Carbonate:

⟹ The salt of carbonic acid is used as a builder in degergents.

Sodium Disilicate:

⇒ used as a builder in detergents

Sodium Hypochloride:

⇒ A chlorine based bleaching agents.

Sodium Triphosphate (STPP):

⇒ Historically used in detergents as a builder.

Tetra Acetyl Ethylene Diamine (TAED):

⇒ A bleaching activator and oxidizing agent used in detergents and bleaches.

Titanium and Titanium Dioxide:

⇒ The most commonly used white Pigment.

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ANNANAGAR,MADURAI-625020
DEPARTMENT OF CHEMISTRY
SEMINAR MARKS ODD/EVEN SEM-2019
I-B.Sc [CHEMISTRY]

TITLE OF THE PAPER: perfumes and cosmetics

S.NO	ROLL NO	REGISTER NO	STUDENT NAME	SEMINAR MARK	MARKS
1	18A1401	B8S19601	K.ARUNA	Tooth paste	5
2	18A1402	B8S19602	DIVYA PRIYA.P	—	Ab
3	18A1403	B8S19603	GAYATHRI.S	Nail polish.	5
4	18A1406	B8S19604	LAVANYA.K	Functions.	5
5	18A1407	B8S19605	LOGA NANDHINI.R.N	Hairdye.	5
6	18A1408	B8S19606	MEENA LOCHINI.D	Solid & liquid deter	5
7	18A1409	B8S19607	MUHILARASI.M	TFM.	5
8	18A1410	B8S19608	NANDHINI.T	Bathing Soap.	5
9	18A1411	B8S19609	PRIYA.M	Differences.	5
10	18A1412	B8S19610	RISVANA PARVEEN.A	Cleansing action	5
11	18A1413	B8S19611	SARANYA.M	cosmetics	5
12	18A1414	B8S19612	SELVA RANI.A	Mouthwash.	5
13	18A1415	B8S19613	SIVA SANGARI.R	Hairdye.	5
14	18A1416	B8S19614	SIVAKANCINIMATHI.S	Nail polish.	5
15	18A1417	B8S19615	SUMAIYA BARHANA.K	Tooth paste.	5
16	18A1418	B8S19616	SWETHA.S	Talcum powder.	5
17	18A1419	B8S19617	SWETHA.S	Good cosmetics.	5

AMBIGA COLLEGE OF ARTS SCIENCE FOR WOMEN
ANNA NAGAR, MADURAI - 20

(21)

II - INTERNAL TEST

Skill based course - III

Perfumes and Cosmetics

Class: I Bsc Chemistry

Marks: 75

Date: 27.3.19

Time: 3 Hrs

Section - A

Answer all questions:

choose the correct answere

(10x1=10 marks)

1. The surface of the cluster and the formation is called ——
   a) Micelle b) particles c) atom d) Molecule
2. Celle remains as —— solution.
   a) True solutions b) Colloidal c) suspension d) none of these
3. Explain TFM ——
   a) Total Fatty matter b) Transfer c) Total fluid matter d) All.
4. Perfumes also have different classes ——
   a) alcohol b) compound c) floral d) non-of-these
5. Skin Cancer caused ——
   a) Mercury b) Carbon, c) atom d) all.
6. Chemical formula of hydrated Meganisium silicate ——
   a) H_2O b) $Mg_3Si_3O_6$ c) $Mg_3Si_4O_{10}(OH)_2$ d) Mg_3Si_4
7. Pineapple juice contain —— acid
   a) weak b) base c) strong d) Acidic
8. Citrus hybrid is commonly called ——
   a) Sweet b) Butter c) Normal d) Amber sweet
9. The Chemical composition of perfume is made up of —— Compound.
   a) one b) Two c) Three d) Five
10. A perfume consists of —— % of ethyl alcohol
    a) 48-95% b) 62-65% c) 70-95% d) 72-90%

ection - B (5X7 = 35 Marks)

Short Note on Manufacture of perfumery compounds?

(or)

Write a composition of pineapple flavour?

Write a cleansing action of soap?

(or)

Write a solid and liquid detergent function?

Short Note a Ingredients of washing soap?

(or)

Short Note a ingredient of bathing soap?

Write a basic composition of talcum powder?

(or)

Write a basic composition of hair dye?

Write a Manufacture of fruits flavours?

or

Write a basic composition of Mouth wash?

ection – C Any three (3X10 = 30)

a) Write a composition and preparation of Rose

b) Write a composition and preparation of Jasmine.

. Note on Difference Between soap and and detergents

. Explain the characteristics of good cosmetics and demerits of Artificial cosmetics.

. Detail Note a TFM of bathing soap

0. Discuss the preparation and composition of apple flavours.

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ANNA NAGAR, MADURAI-20
DEPARTMENT OF CHEMISTRY
I B.SC CHEMISTRY
II -INTERNAL
INTERNAL MARK LIST

Title of the exam : SB-III perfume and cosmetics

S.NO	ROLL NO	STUDENT NAME	INTERNAL MARKS
1	18A1401	K.ARUNA	43
2	18A1403	GAYATHRI.S	57
3	18A1406	LAVANYA.K	62
4	18A1407	LOGA NANDHINI.R.N	59
5	18A1408	MEENA LOCHINI.D	67
6	18A1409	MUHILARASI.M	58
7	18A1410	NANDHINI.T	60
8	18A1411	PRIYA.M	49
9	18A1412	RISVANA PARVEEN.A	37
10	18A1413	SARANYA.M	65
11	18A1414	SELVA RANI.A	63
12	18A1415	SIVA SANGARI.R	49
13	18A1416	SIVAKANCINIMATHI.S	62
14	18A1417	SUMAIYA BARHANA.K	44
15	18A1418	SWETHA.S	37
16	18A1419	SWETHA.S	39

II Internal.

Answer Key

SB-III perfumes and cosmetics

1. Micelle
2. Colloidal
3. Total Fatty Matter
4. floral
5. Mercury
6. $Mg_3Si_4O_{10}(OH)_2$
7. Week
8. Amber Sweet
9. Two
10. 78 - 95 %

E

Roll No: 18A1408

Dept : I-BSC Chemistry

Date : 27.03.2019

Day : Wednesday

Exam : SB-III.

II-Internal Exam.

Perfumes and Cosmetics.

SECTION-A.

1). Micelle.

2). colloidal.

3). Total fatty matter.

4). floral.

5). Mercury.

6). $Mg_3Si_4O_{10}(OH)_2$.

7). Week.

8). Amber Sweet.

9). Two.

10). 78-95%.

10

66½ / 75

SECTION-B.

13).

a). Washing Soap:

Washing Soap is a compound which is made up of Surfactant or the mixture of Surfactant which are used to clean the dirty from the clothes.

Washing Soaps are also called as detergent Soaps.

Ingredients of Washing Soap:

Alcohol Ethyloxalate [Non ionic substance]

Alkyl Ethyloxy Sulphate & Alkyl Sulphate [Anionic Substance]

Amine oxide.

Citric acid

Carboxylic methyl cellulose. (CMC).

Diethyl ester Dimethyl Ammonium

Ethanol and

cyclodextrin.

All the above compounds are the main ingredients to prepare the Washing Soap.

Washing Soaps are not spoil their efficiency in hard water. Most of the Washing Soaps are non-biodegradable. They don't contain the ionic precipitate. They are prepared from the hydrocarbons of petroleum of a coal tar.

These are the details about Washing Soap.

14).

b). Hair dye :-

Hair dye is a chemical compound which is used for the beauty to hair. If we have a white hair using of this dye we can able to hide the white hair in our head.

Ingredients of Hair dye :-

2 %. Hexeneglycol.

4 %. Diethyleneglycol dimethyl ether.

0.02 %. EDTA

0.04 %. Phenatoxin

5.77 %. Ammonia

2.84 %. Ammonium Chloride.

0.2 %. Sodium Chloride

2 %. Sodium lauryl Sulphate.

1 to 10% of Hydrogen peroxide are increases the pH level of the Hair dye.

From the above compounds are the main ingredients to prepare the hair dye.

Hair dye are the chemical compounds for using these as regularly it may damage our eyesites quickly like before 10 years.

These are the details about the hair dye and its ingredients. Following the ingredients we get 100% hair dye from their own.

15).

b). Mouthwash:

Mouthwash is a chemical compound liquid which is used to remove the germs from the inside of the mouth. Instead of two time Brushing we can use the mouth wash.

Ingredients of Mouth wash:

From about 0.02 to 0.20% of ammonia

An amount of tetra alkyl metals like phenthroate salts are used sufficient to provide 0.05 to 0.5% of organic acids.

Carrier :-

From the P.H of said compound are adjacement about 7.0 - 9.5 %.

A mouthwash containing as a carrier way ethanol / mixture of water at about 60 - 99 % of mouthwash.

The P.H level of the adjaled mouthwash is 7.0 - 8.5 %.

From the above ingredients we can make the mouthwash as Own.

These are the detail about the mouthwash.

12). a) Cleansing action of Soap:-

The molecules of the soap contain Sodium and potassium salts with a long chain Carboxylic acids.

The Carboxylic acids have two ends from that ionic end is dissolved in water and the other end is dissolved in Organic acids.

The molecules are combined to form micelles.

Micelles are also called two end one end is dissolved in oil and the other is dissolved in hydro (water).

E

The Kind of the Soap have two ends.

* Hydrophilic end
* Hydrophobic end.

Hydrophilic end:

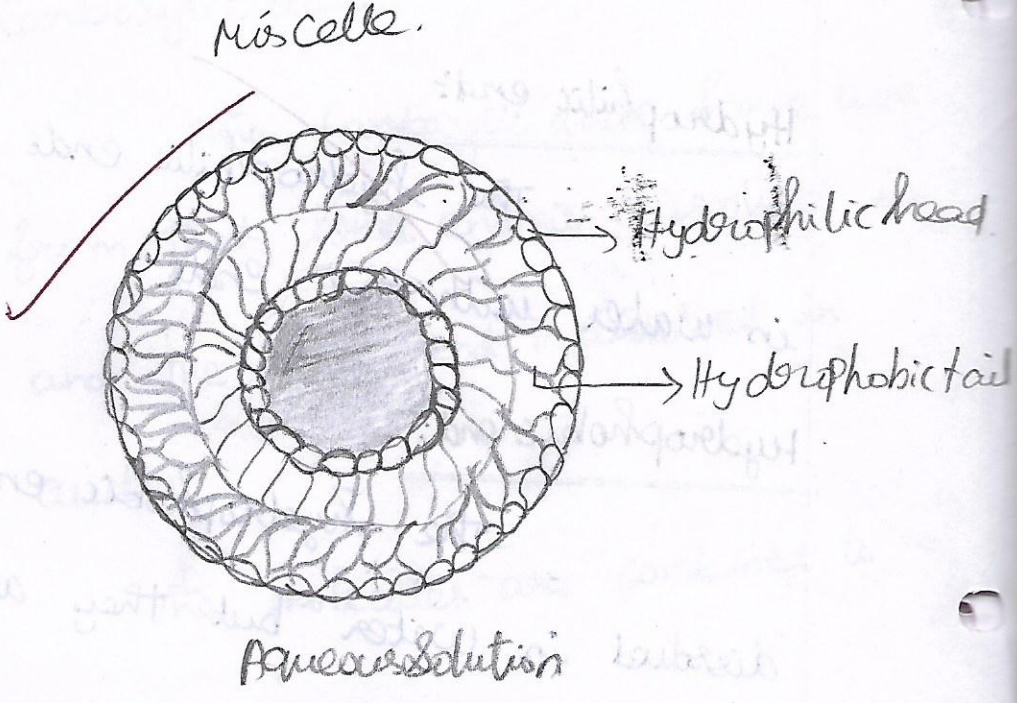
The hydrophilic ends are dissolved in water with the ends.

Hydrophobic end:

The hydrophobic ends are not dissolved in water but they are dissolved in hydrocarbons.

The surface of the cluster and the formation is called micelle. The micelle which remain as a colloidal solution. They are scatter at the light.

The hydrophilic ends are enter to interior of the cluster and the hydrophobic ends are away towards the interior of the clusters.



11).

b). Pine apple :-

Pine apple are sweetest fruits they are edible and multiple fruit of coalesceds berries are also called as Pine apple. They are belonging to the Broliaceae family.

Preparation of pine juice :-

Pine apples are sliced heated at 45°C it getting a juice, mixing it with citric acid and they are filtering with muslin cloth and the filtrated are getting to the Bottling and they should be Pasteurized.

Pine apple

↓

Juice

↓

Heating at 45°C

↓

Mixing citric acid

↓

Filtering Muslin cloth.

↓

Bottling and Crown Crocking.

↓

Pasteurization

[Boiling water for 45 minutes]

These are the manufacture of Pine apple juice.

E

Composition of pine apple:

◊ Pine apple contain the organic acids like,

* Citric acid and
* Maleic acids.

◊ They have essential minerals like

* Ca,
* Mg,
* Mn,
* K.

◊ They contain some salts like,

* Sodium,
* Potassium and
* calcium Salts.

◊ Pine apples are having energy riched fibres and Vitamins like (A, B, C group) etc.

SECTION-C

17). Soap and detergents :

SYNOPSIS
* Introduction.
* Soap.
* cleansing of soap.
* detergent.
* Difference between Soap & detergent.
* Conclusion.

Introduction:

In the following we can see detailed about the soap and detergents and their differences ~

Soap:-

A Soap is a compound of natural oil (or) fatts and is made up of strong alkali acids like Sodium or Potassium to bath. and add perfumes and colourising agents.

Cleaning action:-

The molecules of the Soap contain Sodium and Potassium Salts with a long chain carboxylic acids.

The carboxylic acids have two ends from that one end is dissolved in water and the other end is dissolved in organic acids.

The molecules are combined to form micelles. Micelles are also called two end one end is dissolved in oil and the other is dissolved in water.

The Soap of the kinds have two ends.

Hydro philic end

Hydro phobic end.

The hydrophilic ends are dissolved in water with their ends and the hydrophobic ends are dissolved in hydrocarbons.

The Surface of the cluster and their formation is called micelle. The micelle which remain as a colloidal solution. They are scatter at the light.

Detergent:

A detergent are the Surfactants or the mixing of Surfactants in the dilute Solution.

Difference between Soap & detergents:

SOAP	DETERGENTS.
They contain metal ions in the long chain of fatty acids.	They Contain Sodium ions in the long chain of hydro Carbons.
They are prepared from Vegetable oils and fatty Substance.	They are prepared from the hydrocarbon of petroleum of Coal tar.

SOAP	DETERGIENTS.
They are performed and formed the scums (ie) the insoluble precipitate of Ca^{2+}, Mg^{2+}, Fe^{2+}.	They cannot destroy the efficiency of detergent They are not forming insoluble precipitates.
The ionic end have $-COONa$ compounds.	The ionic end have $-SO_3Na$ $-SO_4Na$ compounds.
They are biodegradable Eg: Sodium Stearate	They are non-biodegradable Eg: Sodium lauryl Sulphate.
They have Na & K long chain.	They have Na & K Sodium long chain.
They take more time to Soluble.	They are easily Soluble in water.
They are efficiency to hard water.	They have no efficiency in hard water.

Conclusion:

From the above are the explained details about Soap and action of Soap, detergents and difference between the Soap and detergents.

18). Cosmetics:-

SYNOPSIS

* Introduction.
* Characteristics of cosmetics.
* Demerits.
  * Skin Infection.
  * Damaging Internal Organs.
  * Damaging Nervous System.
  * Ageing.
  * Ache and pimple.
  * Skin Cancer.
* Conclusion.

Introduction:

In the following way we see detailed about the characteristics & cosmetics & demerits of artificial cosmetics.

characteristics of cosmetics:

cosmetics:

cosmetics are the substance that alter the appearance of the body, face and hair.

characters:

A good cosmetics are tender to soft and it is not giving a problem to our body.

It should be texture, odour and comfort.

The customer are tell the feedback of cosmetics depend upon the physical manufacture.

Demerits:

Using of Artificial cosmetics we can face many problems. Majorly we face the following 6 Problems.

Skin Infection:

If we using the chemical cosmetics regularly it for making irritant, itching and allergies to our Skin.

This is called as Skin infection.

Damaging Internal Organs:

Using the chemical cosmetics regularly at two or three types the chemical should be accumulated through the organs and causes damages in the internal organs.

Damaging Nervous System:

Using of chemical cosmetics regularly at frequent times it penetrate the chemicals into the nervous System and damage it.

Eg: Eyeshade,
Lipsticks and
Kajal.

Ageing:

Using of cosmetics frequently we can able to see the wrinkles and dryness of skin before ageing.

It Create a ageing look at the early time in our life.

Ache and Pimple:

An allergic of chemicals Create the itching, irritation and pimples on the faces or the body.

They are the Symptoms of the allergic on the Skin.

Skin Cancer:

Due to the over usage of the Cosmetics Create Cancer on our Skin.

Mercury and parabens are used to preserved the Cosmetics. But it will be the major reason for causing Skin Cancer.

Conclusion:

These are the detailed about the characteristics of cosmetics and the demerits of the artificial cosmetics.

19. TFM of bathing Soap:

SYNOPSIS
* Introduction.
* Bathing Soap.
* TFM.
* Soap noodles.
* Grade.
* Conclusion.

Introduction:

In the following way we can see the detailed about the TFM of the Bathing Soap.

Bathing Soap :

The Soap which can be used for cleaning our Surface of the body is called Bathing Soap.

The ingredients of bathing and washing Soaps are different.

Based on the composition of the Soap it can be determined the Soap as Bathing Soap or Washing Soap.

TFM :

TFM Stands for Total Fatty Matter.

TFM can be determined the quality of the Soap in the small and large Scale Soap industries.

The retail of the Soap are only noticed by the people. But more than retail we can noticed the TFM rate of the Soap. Because the Soap are Separated based on the TFM Substance. They are Some grade based on TFM.

Soap noodles:-

The Soap noodles are contain the fatty matter for the Sample the fatty materials can be dissolved for the Seperation usually as mineral acids only but mostly hydrochloric acids are used to Separate the fatty Substance

The Soap noodles Contains,

* Olefins
* Steric and
* Palmetric acids.

From that the olefins Contain 92.8%. of TFM. They are Original branded Soap for using by human beings.

Normally, the Soap used by human beings are become 74% of TFM and 14% of moisture Content.

From the washing Soap the maximum TFM is 50%. In this Soap Fillers, eliminants and preservatives are used.

Fillers are nothing but the hard powder which are only soluble in water from two or 5 minutes.

The low branded soaps does not followed this procedure.

Grade :

The TFM which means Total Fatty matter can be divided into three grades. They are,

Grade - I

Grade - II

Grade - III.

Grade -I :

Based on the TFM of the Soap the Grade are seperated and the Values are also seperated to the Grade. According to that Grade -I having 76% TFM. which is considered as the superior of the Soap.

Grade -I ⇒ 76% TFM.

Eg : Power Soap.

Grade -II :

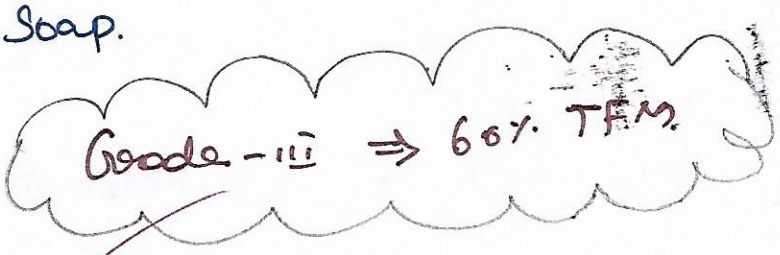
Based on the TFM of the Soap the Values are seperated to Grade. Grade ACcording to that Grade -II having 65% TFM which is considered as the Second position of the Soap.

Grade -II ⇒ 65% TFM.

Eg : Pears.

Grade - III :

Based on the TFM of the Soap the Values are seperated to Grade. According to that Grade - III having 60% TFM which is considered as the third position of the Soap.



Eg: Lifeboy.

Below the Grade - II are not eligible to use the human beings it is used for the pet animals.

Eg: Hamam below 60% TFM..

Hamam Soap contain 58% TFM only. It is not eligible to use the human being it is the animal Soap.

Conclusion:

These are the details about the total fatty matter of the bathing soap.

Shifi 27/3/19

E

II Internal TEST	Ex no : 18A1403 class : 1st B.S.c chemistry Sub : SB - III Date : 27.3.19

Sec - A

I choosing :-

1. Micelle

2. colloidal

3. Total Fatty Mater

4. floral

57/75

S. Gayathri

6. $Mg_3Si_4O_{10}$

7. weak

8. Amber sweet

9. Two

10. 78-95%.

Sec-B

11. b) composition of pineapple flavour:

Pineapple:

Pineapple is a tropical plant, produce by the pineapple is also a coal seeed berries it is also called as Pineapples. the ~~eco~~ economicaly cultivated

preparation of pineapple:

pineapple → Heating (45°c). ←

sugar ← Extract

↓

mixing ← Juice

↓ ↓

~~sulfitration of~~ mulsin cloth

↓

Heats Beverage

↓

pineapple crown and crockten

1 to 10% peroxide of water for (1 hour)

composition of pineapples:

pineapples are most important of sugar (organic acid) citric acid, essential oils, and [Cu, mg, mn] (A, C, B) group of pineapples. the composition of pineapple flavours Sodium, potassium acid, malic

12. a) cleaning action of soap and detergents :-

Soap :-

A substance used with water for washing and cleaning made of a compound of natural oils or fats with sodium hydroxide or another strong alkali and typically having perfume and colouring added.

detergents :

A detergents is a surfactant or a mixture of surfaciant with cleaning properties dilute solution.

Cleaning soap and detergents :

Most of the dirt is of oily nature and oils are dissolved in water. The molecule of soap long chain of hydrogen, sodium, potassium and carboxliy acids. In case of an soap one acids is water and oil and ionic end. second one of acids is water are dissolved hydrogen peraoxide. The soap wash help for we wash cloths. In the soap stucture from micelle. the king of a soap molecule is two different properities :

* Hydrophilic end

Soap :

* They are metal salts of long chain higher fatty acids.

* These are prepared from vegetable oils and animal fats.

* They cannot be used effectively in hard water as they produce sucm. insoluble precipitates of Ca^{2+} + Mg^{2+} + Fe^{2+} etc....

Detergent :

* These are sodium salts of log chain hydrocarbons like alkyl sulphates for alkyl benzena sulphates.

* They are prepared from hydro carbons of petroleum or coal.

* These do not produce insoluble precipitates in hard water.

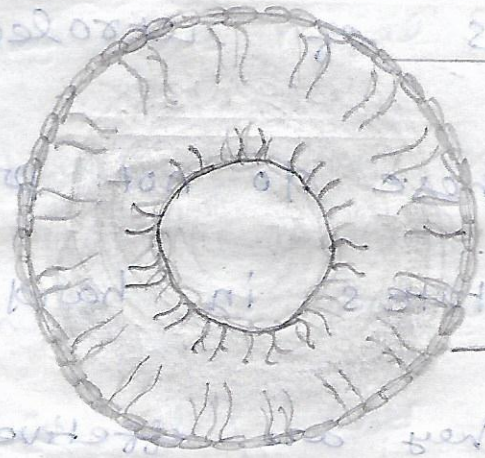
* They are effective in soft hard (or) salt water.

hydrophilic end and hydrophobic :-

The first end of the hydrophilic end is where it is attracted to the whereas, the second end of hydrobopic acid is a water and hydrocarbons are dissolved in water. In the surface of the wash for the

Surface.

Micelle



The molecule soap of hydrophilic heat and hydropobic tale. Soaps are example are sodium stearate detergents ex are sodium Lauryl sulphate

They take time to dissolve in water of soap. They dissolve faster in water of detergents. They are biodegradable.

They are not biodegradable.

7/3/19

E

13. (a) Ingredients of washing Soap :-

* Alcohol ethoxylate (AE) Non-ionic surfactant .....

* Alkye ethoxy sulphate (AES) and

* Alkye sulphate (AS) Anionic Surfactant ....

* Amine oxide Amphoteric Surfactant ....

* Carboxymethye celluose (CMC)

* citric Acid

* cyclodextrin

* Diethye ester dimethye

4/2

14). b) Composition of hair dye :-

* 2 - hexylene glycol
* 0.4 - diethyl glycol monethy / water
* 5.77 - amonium
* 2.84 - amonium chloride
* 2 - Sodium Lauryl chloride
* 0.2 - Sodium chloride
* 2.83 - Heated from Lauryl chloride
* 0.04 - sodium Carbonate
* 0.02 - hydrogen peroxide

15). b) Composition of

Mouth wash :

* An about from 0.02 % to 0.20 % of mouth wash is provided from organic acid.

* Amount of about tetra metal phyrophate of mouth wash is organic 0.2 - 0.4 % acid of $[P_3O_7^{-4}]$.

A carries liquid :-

* where in a mouth wash pH of a produce by a adjust of a carries liquid about

* Mouth wash is a carries of a liquid from the about 60% - 99%

* The PH of adjust of a carries liquid about from 7.5% - 8.5%

* The PH of mouth wash about from 7.5% - 8.5%

---

sec-c

* Alkyl sulphate (AS) Anionic surfactant..
* Amine oxide. Amphoteric surfactant...
* Carboxy methyl cellulose (CMC)
* citric Acid
* cyclodextrin
* Diethyl ester dimethyl Ammonium chloride (DEEDMAC)....
* Ethanol.

Ingredients of bathing soap :-

* 18.5 ounces olive oil - moisturizing
* 12 ounces coconut oil - For good lather.
* 9 ounces palm oil - for a bar
* 1 shea butter - moisturizing
* 5.8 ounces Lye - a.k.a sodium hydroxide
* 13.5 ounces water

Soaps	detergents
*They are Na and K salts of long chain acids.	They are Na and K salts are long chain Sulporuic acids.
*They have ionic part coo Na group	They have ionic part $-SO_3$ Na or $-SO_4$ Na group
*Their performance decreases in hard water	Hard water does not effect their efficiency
*They take time to dissolve in water.	They dissolve faster in water.
*They are biodegradable Ex: Sodium stearate	Some detergents are not biode gradable Ex: Sodium

N Sailli

E

90. preparation and composition of apple flavor :-

composition :-
Malic acid (E2 96) aqua and vegatable oils, sugars arch, citric acid and nicotina tide palmitic acid (E570), purines sodium, palmic acid, and copper zine phophorous flavours and apple flavors. and anti oxidant.

Apple flavour :

An apple ~~flavour~~ an sweet and flavour of apple trees. The apple flavour is cultivated world wide and green genus

preparation of apple

Flavour :

Apple

↓

wash

↓

press → promace

↓

Juice

↓

Add sulfiter and enzyme of water leayest 1 hour

↓

Add nuritent and yeast ferment of ~~water~~

↓

Ruck → less

cider

↓

Adjust of SO_2 blend and proserwative

↓

Filtering reducing of microbial

Bottle

Adjust of SO_2 blend and carbonate

↓

bottle

Apple feawours an sweet.

the preparation of apple feawour of sulphuric acid and proservative.

16. a) preparation of Jasmine :

Jasmine composition :

Soak the flowers overnight in a cheese cloth-lined bowl and cover it with a lid. squeeze with the jasmine pouch of flowers over a saucepan, extract and the Flower-Scented water and simmer over law a heat until you are the Jasmine left with a about a fesporon of liquid.

Jasmine preparation :

Take the essential oils of and over a 10-14 drops into bowl as well.

* Do one last mixing, making sure the ingredients are disposed as throughly as possible.

* The Jasmine flavours Pour the contents of the mixing boil into small and cooking pot A Put the Pot onto the Stove and set in low heat.

* wash the flowers of the petals gently clean off any dirt and sediment with water.

* Sook the Jasmine of put cheese cloth bowl with

Heat the flower - Scented water,

Bottle the perfume.

Jasmine definition:

An old world shrub or climbing plant which is popular as a ornamental and bears fragrant white, pink and yellow feavours.

b) Rose composition:

citranelyol, geraniol, hero), linalcol, phenye ethyl alcohol farnesol, Stearoptene, α-pinene β pinene α-terinene,

Camphene, β - caryo phyllene, neral citronellyl acetate, geranyl acetate, neryl eugenol, geranyl acetate, neryl eugenol, methyl eugenol rose oxide α - dasmascenone, benzeyl alcohol.

Preparation of Rose:

* Gather 30 - 35 % rose petals.
* Put in them in a cup.
* Pour rose petals in a cup.

E

Roll no : 18A1418

Date : 27.3.19

class : I st - chemistry

Exam : Skill Based - III

Section - A

Answer all questions :-

1) micelle

2) colloidal

3) Red fatty matter

4) floral

37/75

S. Swetha

6) $Mg_3Si_4O_{10}$

7) Week

8) Amber Sweet

9) Two

10) 78 - 95 %

Section - B

11. b) composition of pineapple flavour :-

pineapple are an important sugar, organic acid (citric acid) essential mineral (mg, mn, k) fibres and vitamins (A, C, B) groups women nutritions.

4

pineapple juice contained as like acids and malic acid and the sodium potassium salts etc.

14) b) Basic composition of hair dye :-

2 %. hexylene glycol

4 %. diethylene glycol mono ethyl.

5.77% ammonia

2.84% ammonium chloride

2% Sodium lauryl sulfate

0.2% Sodium chloride

12.3% hydrogen peroxide

0.4% phenacetin.

0.2% EDTA

1 to 10% by weight of a peroxide at a pH of about

18A1418

13.b) Ingredients of bathing soap:-

Comparision for sodium tallowate, sodium cocoate, sodium palmate and all of ingredients of bathing soap. (sodium coconut, sodium tallowate, sodium palmate) respectively dye.

Ingrients of soap making :-

18.5 ounces olive oil - maisturizing
12 ounces coconut oil - for good lather,
9 ounces palm oil - for a firm bar.
1 ounces shea butter - maisturizing
5.8 ounces lye - a.k.a sodium hydroxide

Section – c

17. Difference between Soap and detergents

Soap :-

A substance used with water for washing and cleaning made of a compound of natural oils or fats with sodium hydroxide or another strong alkali and typically having perfume and colouring added.

detergents :-

A detergents is a surfactant mixture or a mixture

E

15. b) Basic composition of mouth wash :-

a) from about 0.02 y. to 0.20 %. of a quarternary ammonium compound.

b) an amount of a tetra - alkali and metal pyrophosphate salt sufficient to provide from about 05 y. 5 y. of the $P_2O_7^{-4}$ species.

c) a carrier liquid :-

where in the p^H of said composition is adjusted to the range of from about 7.0 to 9.5 with a mineral or organic acid.

an ethanol / water mixture and is present at a level of from about 10 % to 99 %.

The pH of the composition is adjusted to the range of from about 7.0 to 8.5.

12)a) cleansing action of soap :-

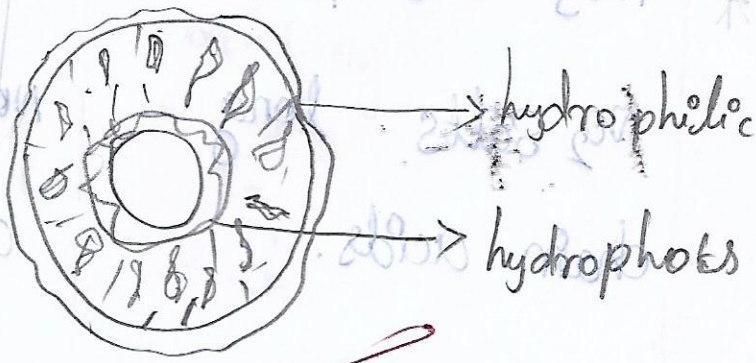
The cleansing soap was there NO_2 and K long chain acids. They are performance in hard water. They take time of cleaning soap. It is biodigradable of cleaning.

EX. Sodium Sulfact.

18A1418

The cleaning soaps action. Of two types they are

* hydrophilic
* hydrophot.



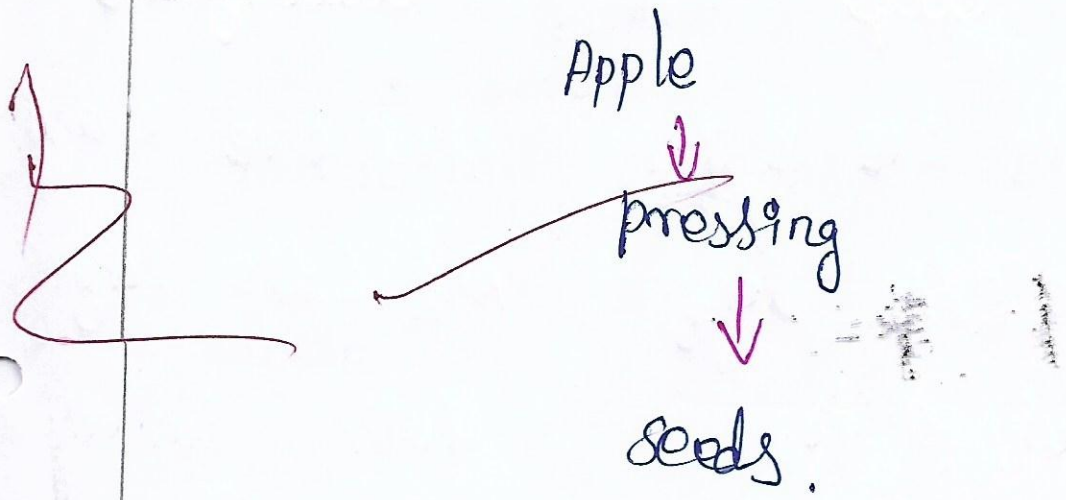
The soap was cleaning agents between dirty and dry cleans washing soap contains kinds of Ingrients they are Alcohol.

17. Difference are Soap and detergent

continue.

Soap	detergents
* They are K and NO_2 Salts long chain acids.	* They are K and NO_2 Salts long chain Sulfuric acids.
* Ion parts - COONa.	* ion parts - SO_3 Na and $-SO_4$ Na ions.
* Their performance decreases hard water.	* Hard water does not effect their efficiency.
* they take time to dissolve in water.	* They dissolve faster in water.

20) preparation and composition of apple flavour:-



020

AMBIGA COLLEGE OF ARTS SCIENCE FOR WOMEN
ANNA NAGAR, MADURAI-28
III-INTERNAL TEST
Skill based Course-III
PERFUMES AND COSMETICS

6/4/19

Class: I Bsc chemistry
Date:

Marks: 75
Time: 3 Hrs

SECTION – A (10 x 1 =10 Marks)

Answer All Questions:
Choose the correct answer:-

1. Perfume is a .....that emits and diffuses a fragrant order
   A) Flours cence B) Substance C) Alcohol D) Flowers
2. Perfume comes from the latin from 'per' meaning
   A) Through B) Fumum C) Smoke D) All
3. Artificial perfume examples.....
   A) Castor B) Musk C) Ambergris D) None of these
4. The soap made a compound .....
   A) Natural oils B) Sodium hydroxide C) A and B D) none of these
5. Potassium salts of long chain.....
   A) Carboxylic acids B) Methane C) Alcohol D) Ethane
6. This the soap molecules form structures called.....
   A) Micelles B) Ionic C) Hydro carbons D) All
7. Ingredients of washing soap.....
   A) CMC B) Citric acid C) Sodium hydroxide D) a and b
8. Demerits of artificial cosmetics.....
   A) Skin infection B) Acne C) Pimples D) a , b and c
9. Fruits classification .....
   A) Berries B) Drupes C) Pomes D) All
10. Composition of mouth wash.....
    A) Ammonium B) Pyrophoqhare salt C) None of these D) a and b

Section – B (5 x 7 = 35 Marks)

Answer All Questions:-

11. Define perfumes plant and animal source
    (OR)
    Characters is ties of good vehicle fixatives and its types
12. Preparation and use of methyl anthranilate and methyl salicylate
    (OR)
    Preparation and use of coumarin and heliotrope
13. Rose and jasmine composition and preparation
    (OR)
    Only composition of apple and pineapple flavors
14. Difference between soap and detergents
    (OR)
    Cleansing action of soap
15. Demerits of artificial cosmetics
    (OR)
    Composition: Nail polish, Mouth washes

SECTION – C (3 x 10 = 30 Marks)

Answer any THREE Questions:

16. (a) Eatration of essential oils by distillation
    (b) Enflurege and solvent extraction methods
17. Preparation and use of phonyl ethanol , citronellol vanillin.
18. Composition and manufacture of perfumery compounds – Rose and Jasmine
19. (a) TFM of bathing soap
    (b) Functions of ingredients in detergents
20. Composition only.
    (a) talcum powder (b) face crème (c) Nail polish (d) Hair dye (e) Tooth past

Model Exam

Answer key

1. Substance
2. All
3. Castor
4. A and B
5. carboxylic acids
6. Micelles
7. a and b
8. a, b and c
9. All
10. a and B

AMBIGA COLLEGE OF ARTS AND SCIENCE FOR WOMEN

ANNANAGAR,MADURAI-625020

DEPARTMENT OF CHEMISTRY

ASSIGNMENT MARKS ODD/EVEN SEM-2019

I-B.Sc [CHEMISTRY]

TITLE OF THE PAPER: Perfume & Cosmetics

S.NO	ROLL NO	REGISTER NO	STUDENT NAME	MARKS
1	18A1401	B8S19601	K.ARUNA	31
2	18A1402	B8S19602	DIVYA PRIYA.P	42
3	18A1403	B8S19603	GAYATHRI.S	31
4	18A1406	B8S19604	LAVANYA.K	54
5	18A1407	B8S19605	LOGA NANDHINI.R.N	58
6	18A1408	B8S19606	MEENA LOCHINI.D	54
7	18A1409	B8S19607	MUHILARASI.M	49
8	18A1410	B8S19608	NANDHINI.T	45
9	18A1411	B8S19609	PRIYA.M	27
10	18A1412	B8S19610	RISVANA PARVEEN.A	34
11	18A1413	B8S19611	SARANYA.M	53
12	18A1414	B8S19612	SELVA RANI.A	49
13	18A1415	B8S19613	SIVA SANGARI.R	28
14	18A1416	B8S19614	SIVAKANCINIMATHI.S	32
15	18A1417	B8S19615	SUMAIYA BARHANA.K	32
16	18A1418	B8S19616	SWETHA.S	29
17	18A1419	B8S19617	SWETHA.S	a

Roll NO : 18A408

Dept : I-BSc chemistry

Date : 06.04.2019

Day : Saturday

Exam : Skill Based-II.

Model Exam.

Perfumes and Cosmetics.

SECTION-A

1). Substance.

2). Fumum.

3). Musk.

4). A and B.

5). Carboxylic acids.

6). Micelles.

7). a and b.

8). a, b and c.

9). All.

10). Ammonium.

58/75

SECTION - B.

11. **Vehicle (or) Solvent:**

Perfume:

Perfume is a substance that emits and diffuses a fragrant odour which are incorporated to the plants and animals sources like flowers, leaves, petals, bark, Amber, musk, Castor etc.

Generally, The main ingredients of the perfume are,

* Vehicle (or) Solvent.
* Fixatives and
* Odoriferous Compound.

Without these ingredients the perfume cannot be made.

Vehicle (or) Solvent:

The Vehicle (or) Solvent are the compounds to make a perfume.

These Vehicle have some characteristics.

The main characteristics of the vehicles are

i). It must be Volatile

ii). It should not be irritant to the human skin.

iii). It must be inert and non-odour compounds.

Because if the solvent emits the own odour then the ingredients doesn't exhibit to come their fragrance.

Fixatives:

Fixatives are the agent to fix the fragrance of the sources.

Fixatives are Four types, namely,

* Animal Fixatives,
* Plant Fixatives,
* Resin Fixatives and
* Resource Fixatives.

Fixatives are also one of the ingredients of the perfume.

C

6/4/19

12). Methyl Salicylate :-

* Methyl Salicylate is a Organic Compound.

* Its is the ester of Salicylic acid.

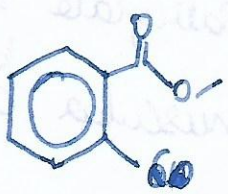
* It is a volatile liquid & viscous nature.

* It is Soluable in Organic Solvents like Ethanol (C_2H_5OH), Methanol (CH_3OH).

* It is natural prapared from the Plants of Wintergreen.

* It is mostly occurs in Cooling places like Switzerland, Canada etc.

Structure :-



Methyl Salicylate. (or)

Properties:

Chemical formula : $C_8H_8O_3$.

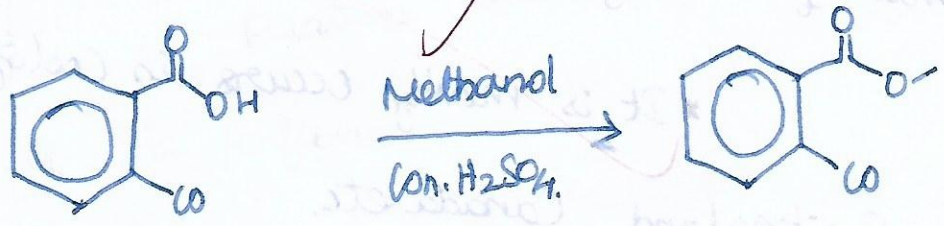
Molecular weight : 152.51 gm/m

Density : 1.174 cm^3.

Molecular formula : $C_6H_5CH_2(OH)CO_2CH_3$.

Preparation:

* Methyl Salicylate is prepared by esterifying the Salicylic acid with Methanol and Con. H_2SO_4.



Uses:

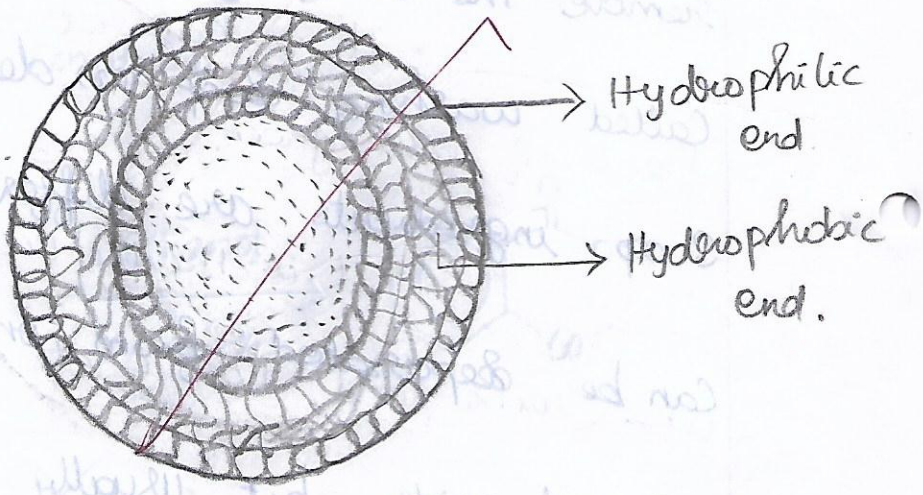
* Methyl Salicylate is mainly used for releasing the muscular and joint pain of the bones and muscles.

14). Cleansing action of Soap:-

Soap are commonly prepared from the natural oils and sodium hydroxide. Soap are used to washing the dirties from the clothes and remove the dirties from our body. The Soap which remove the dirt from body is called bathing Soap. The soap which remove the dirty from the clothes are called washing soap (or) detergent. Both the Soap ingredients are differ. The natural oils can be separated from only the mineral acids but usually hydrochloric acids are used.

The fatty substance have two ends. one end is dissolved in water and the other end is dissolved in Organic substance.

The clusters of the fatty molecules substance are form a micelle. micelle are the colloidal substance.



micelle in aqueous solution.

Bsc
6/4/09

Soap Kinds have two ends. They are

i). Hydrophilic ends.

ii) Hydrophobic ends

Hydrophilic ends are dissolved in water and Hydrophobic ends are dissolved in organic substances.

Hydrophilic ends are towards the interior position but Hydrophobic ends are away from the interior position.

15). Demerits of Artificial cosmetics:

Cosmetics:

Cosmetics are used to alter the appearance of the hair, nail, face and our body. In the artificial cosmetics the chemical substances which causes many problem to our body. some of them are,

* Damaging of Internal organs,
* Damaging of nervous system,
* Skin Infection,
* Ache and pimples,
* Skin Cancer

6/7/19

Skin Infection:

For the continuous applying of cosmetics it causes the infection which means it create an irritation, itching etc. This is called as skin infection.

Skin Cancer:

In the artificial cosmetics Mercury and parabans can be used to preserve it.

The chemical substances like mercury and parabans are causes the skin cancer.

Ache and Pimples:

For Using of unfavourable cosmetics it will start to Create allergies which causes the pimples and ache to our Skins.

Damaging of Internal Organs:

For the daily use of artificial cosmetics the chemical substances penetrates through the internal Organs and it can be damaged.

Damaging of Nervous System:

For the usage of cosmetics the chemicals which present in the cosmetics can damage the nervous System:

Example: Nail polish, Kajal, Mushara, threading

SECTION - C.

16).

a). **Distillation:-**

SYNOPSIS
* Introduction:
* Distillation.
* Steam distillation.
* Maceration.
*. Conclusion.

Introduction:

In the following way we can see about the distillation methods for the extraction of essential oils.

Distillation:

The essential oils from the plant and animal sources can be extracted through the distillation method.

Distillation method means the plants can be crushed and boiling their parts then the gas vapours are collected through the tubes is called Distillation.

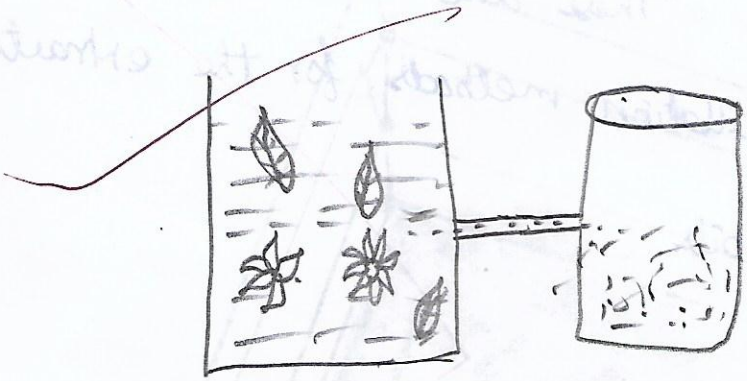
There are many types of distillation.

* Steam distillation.
* Solvent Extraction.
* Enfleurage.
* Maceration and
* Extraction.

6/4/19

Steam distillation:

In this distillation the plants are boiled well and the vapours comes out from the plants are connected to the collecting tubes. Here the vapours are collected. Then the collected vapours are in ethyl alcohol it gives perfume.



Steam distillation.

Maceration:

It was likewise enfleurage and steam distillation but the warm can be reject. The grease and steams are distilled. Then the solvent like ethanol can be used to extract the essential oils.

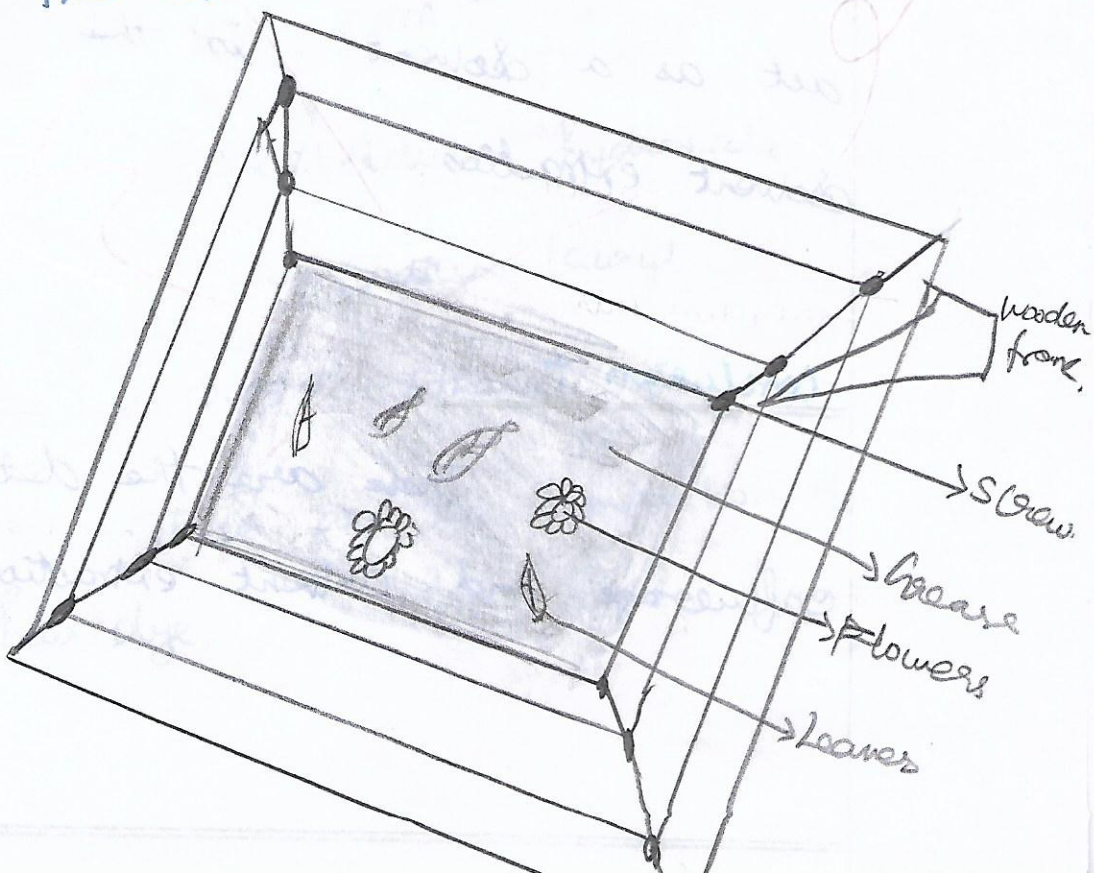
Conclusion:

These are the details about the distillation methods for the extraction of essential oils.

b). Enfluerage and Solvent Extraction:

Enfluerage:

During Enfluerage the plants can be placed in between the wooden frame with grease. Heating the frame and the grease until the plants can be boiled. Now the ethyl alcohol can be used to extract the essential oils.



Solvent Extraction:

In Solvent Extraction the plants can be vapourised and the ethyl alcohol is used to extract the essential oil from the plant Sources.

Ethyl alcohol or ethanol are act as a solvent in the Solvent extraction.

Conclusion :

These are the details about enfluerage and Solvent extraction.

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20.

d). Hair dye :-

Composition :-

0.02 %. Ammonium.

0.04 %. Ammonium hydroxide.

12 %. Hydrogen peroxide.

2 %. EDTA.

0.2 %. Sodium hydroxide

2 %. Sodium lauryl

0.05 %. Ethanol.

These are the Composition of hair dye.

19).

a). TFM of Bathing Soap.

Both the Bathing Soap and washing Soap have the TFM.

"Total Fatty Matter". [TFM].

TFM can be determined the quality of the Soap.

The fatty matters contain the molecules which can be Separated by mineral acids usually hydrochloric acid.

Hydrophilic & Hydrophobic ends are presented in the Soap.

According to the TFM Grade can be Separated.

Grade-I ⇒ 75% TFM

Grade-II ⇒ 70-75% TFM

Grade-III ⇒ 65% TFM.

Below these Grade the Soap cannot be able to use the human. It is only for the pet animals.

Normally, the Soap contain 97.8% of TFM and 2.5% of moisture content.

The Soap noodles contain the TFM and the noodles can be determined the rate of TFM.

Grade - I :

The Soap which contain 75% TFM is considered as Grade - I.

Ex: Nilla - 76%.

Grade - II :

The Soap which contain 73-80% TFM is considered as Grade - II.

Ex: Pears - 73%.

Grade - III :

The Soap which contain 65% TFM is considered as Grade - III.

Ex: Lux - 65%.

Below Grade :

The Soap which contain below 65% TFM doesn't use for human.

Ex: Hamam - 62%.

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b). Functions of ingredients :-

The Soap can be prepared by the natural oils and Sodium hydroxide.

The Soap which remove the dirt from body is called Bathing Soap.

The Soap which remove the dirt from clothes is called washing (or) detergent.

But Both the bathing and washing Soaps have the different ingredients.

detergents can be Solid & is liquid form.

Soap takes more time to dissolve in water than compared to the detergent.

It doesn't effect to the warm waters.

The molecules of detergents having Carboxylic chains.

When compared to bathing Soap it becomes very hard and it contains Na & Ca^{2+}

Detergents are having more chemical Substances when compared to the bathing Soap.

Conclusion:-

These are the details about TFM of bathing Soap and functions of detergents.

ROLL.NO : 18A1417

Dep : I. B.sc (chemistry)

Date : 6.4.19

Exam : perfumes and Cosmetics.

Section - A

Answer :

1. Substance
2. All
3. castor
4. A and B
5. carboxylic acids
6. Micelles
7. citric acid
8. a, b and c
9. Drupes
10. Ammonium

32/75

Section - B

11. Characters is dies of good Vehicle fixatives and its types:

* It should be a good odars.
* It should not be another compounds.

types of fixatives:

* Animal fixatives
* Synthetic fixatives
* viz and Vehicle fixatives
* Plant fixatives.

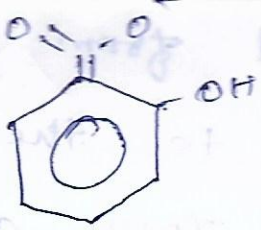
12. Preparation and use of methyl anthranilate and Methyl salicylate:

Methyl ~~anthranilate~~ salicylate:

* Oraganic Compound

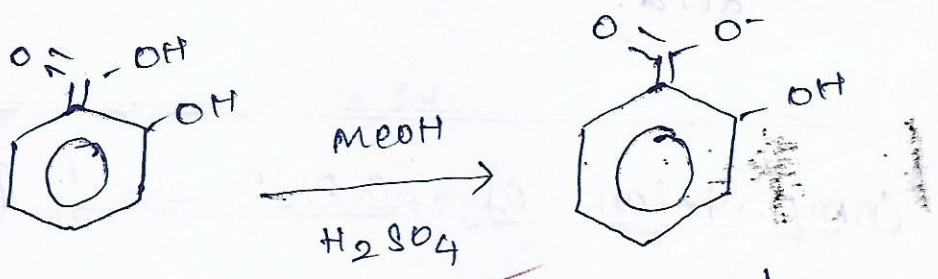
Molecular formula $(C_6H_4OH).(CO_2CH_3)$

* Insolvable in ~~O~~organic solvents.
* Methyl Ether is Methyl salicylate.
* It is colourless, sweet



Methyl Salicylate.

Prepared from the Methonal React to H_2SO_4 of salicyclic acid changes and to form a Methyl salicylate.



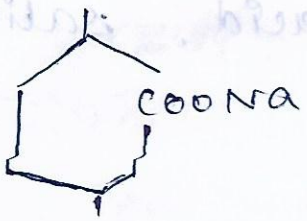
Salicyclic acid

Methyl salicylate.

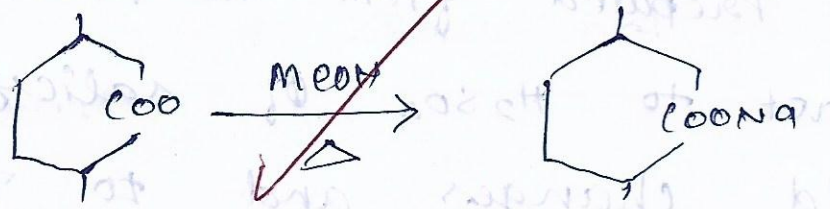
Methyl anthranilate :

⇒ Methyl ether is Methyl anthranilate.

⇒ Orangic Compound Molecular formula. ($C_6H_4O_2.Na$)



Prepared from the anthranilate acid react to the methnal and H_2SO_4 to form a Methyl anthranilate.



Anthranilate acid.

Methyl anthranilate.

13. Composition of apple and pineapple flavors:

Composition of apple:

Apple is contains citric acid, malic acid, potassium, Vegetable oils, ugas, sodium, Iron, Zin, copper, calicum, Apple contains most of citric acid. Oxalic acid, salicylic acid.

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Composition of pineapple flavors :

* Pineapple are important source is ugas, orangic compounds (citric acid) essential oils (Mg, K, Na, I) vitamines (A, B, D, C), minarals.

* Pineapple juice like week acids citric acid, Malic acids and Sodium, pottasium calcium salts etc.

3

15. Composition :

Mouth Washes :

* from about 0.02% to 0.20% ammonium salts form about the itera akalin metals amount of the Mouth wash.

* amount form tete-akalin metal pyprosulphate salt sufficents

14. Difference between soap and detergents.

Soap	Detergents.
They are Na and K salts are long chain acids.	They are Na and K salts are long sulphonic acids.
The ionic parts $-COONa$ acids.	The ionic parts $-SO_3Na$ and $-SO_4Na$ acids.
They are biodegradable.	Some detergents are not biodegedable
Ex: Sodium Saalate	Ex: Sodium Lauryl Sulphate.
They take time dissolve in water.	faster then dissolve in water
Hard water	Hardwater not

Section - C.

1b. (a) Extration of essential oils by distillation :

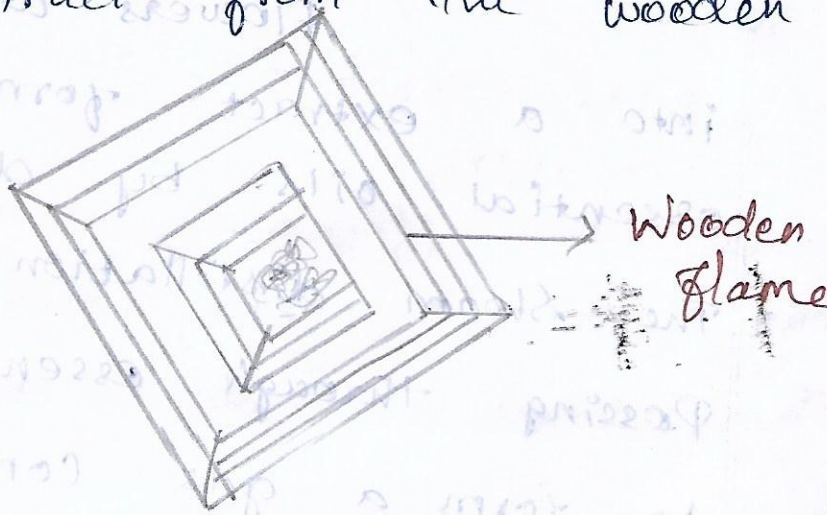
(i) Steam distillation :

Flowers are put them into a extract form the essential oils by distillation. The Steam distillation steam is Passing through essential oil to form a gas convent to essenence of liquid essence. These Method are the called Steam distillation form the Extration of essential oils by distillation

(b) Enfluerege and Solvent Extraction

Enfluerege:

Plant Meterial process through glass sheet with grace on the the extract from the wooden flame



Enfluerege.

This Method is process through Press the Wooden flame extract a Plant Meterils extract form the Perfume of essential oils.

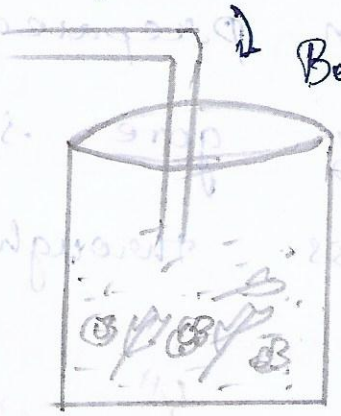
Solvent Extraction:

Plants are put them into a large rotating tanks or

6

6/4/19

Petroleum ether. These are poured over the flowers.



Solvent Extraction.

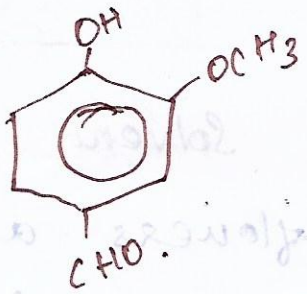
The flowers are covered to the alcohol. Heat is using only the Evaporate on the alcohol and rises. Once burnes fully tured off Tigher Concerration of essential oils.

These Method of the is the solvent Exatration and Influege of the essential oils of the distillation Methods.

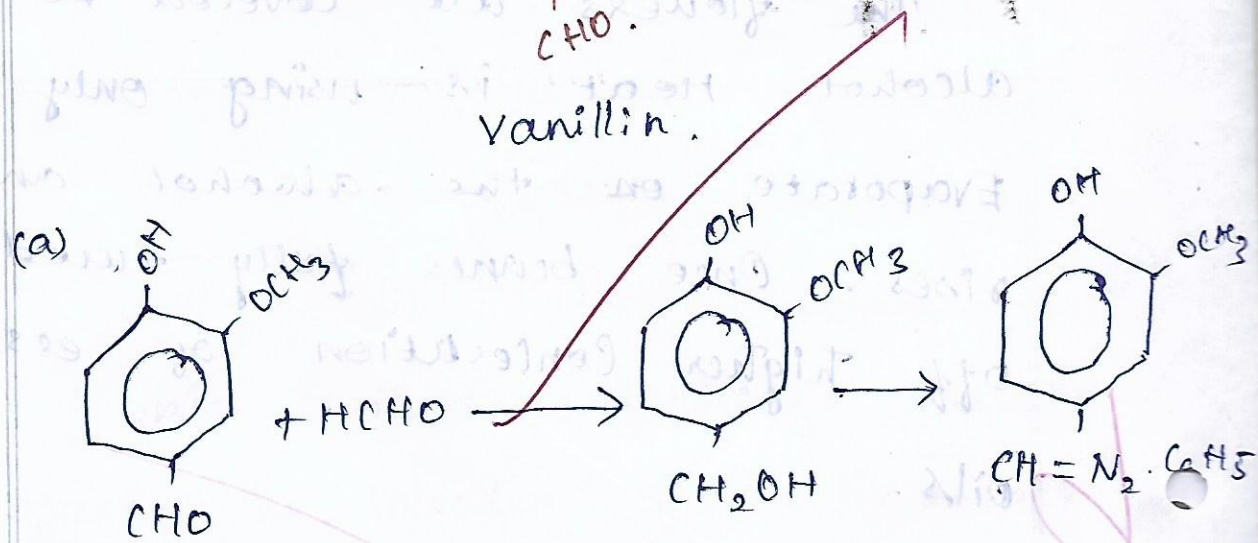
17. Preparation and use of citronellol

Vanillin :

Vanillin prepared form the Eugonal of gore smelling agents. It is proccess through form the Vanillin.



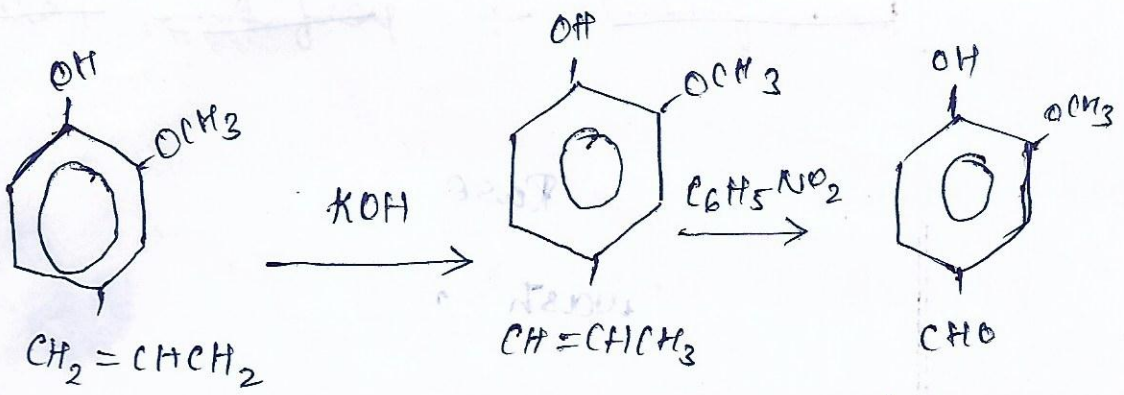
Vanillin.



4, Methoxy, 3-hydroxy benzadihyde.

Vanillin.

(b)



Vanillin.

uses :

* Colouring agents.

* used for Ice cream and cholate.

---

18. Composition and manufacture of Perfumery compounds :

Rose :

Rose is smilling agents. It is kinds of many thing. Perfumery odoras. Compounds. kind of Colours.

Preparation of Rose :

⇒ Gather of 30 to 35 Rose Betals.

⇒ Put them into a bowl.

6/4/19

Exam No : 18A1412

Model Examination

Class : 1st year

Section : B.Sc Chemistry

Cosmetics And Perfumes

Subject : Perfumes

Date : 06/04/19

I. Choose the correct answer

1) Substance

2) Furnum

3)

4) A and B

5) Carboxylic acids

6) Micelles

7) A and B

8) Skin infection A, b and c

21
15

9) All ✓

10) pyrophophare salt. ✓

II. Answer all Questions :

11) Define perfumes? plant and animal source ?

Perfume is defined as the varieties of flavouring smell. The perfumes are produced from fruits, plants, vegetables, oils etc. perfumes is divided into two types they are the natural perfumes and synthetic perfumes. The perfume is used to feel good to us. The perfumes are in many flavours. The perfumes

plant and animal sources the perfumes have the more or less amount of flavour in this plant and animal sources. The perfumes are in the animal some part of things used in the perfumes to make or colour or flavour then the plant sources are like that. But the plant sources have many varaities are used to like colouring, flavouring, smelling etc. The plants and animal sources produce many varieties of kinds in plants perfumes.

Theses are the plant and animal sources

14] Difference between soap and detergents ?

The soap is used remove the dirty and stain things. The soap like a detergents like powder. The soap reacts with the clothes or anything have stain that like use soap they remove that dirty. The soap was very much useful to us. They cleaning. and detergents is used to remove the bacteria, fungi etc. The soap is very useful thing

6/4/19

C

to us. The ~~fits~~ soap and detergent

reacts as a cleaning substances. That

detergent like a powder. it used to

clean the bacterial, fungi etc. They doesn't

use the and they have a bacterial

itches, fungal ~~bad~~ activities are

increases so the diseases are caused

to affect the body. The cleaning

action of soap and detergents is

used to clean the dirtyness of

bacterial and fungal activities. They have

a bacterial itches and irritating skins

this caused diseases in our body the

detergent is used to avoid

15] Demerits of artifical Cosmetics?

In the artifical cosmetics have more chemical substances so the cosmetics are affect the skin parts. The artificial cosmetics are more differ from the natural cosmetics and the natural cosmetics are good to health. The artifical cosmetics are of eg: lip stick, foundation, skin cream, face cream it all has chemical substance. Once we apply the cream to face it show instant glow. we regularly use that cream we

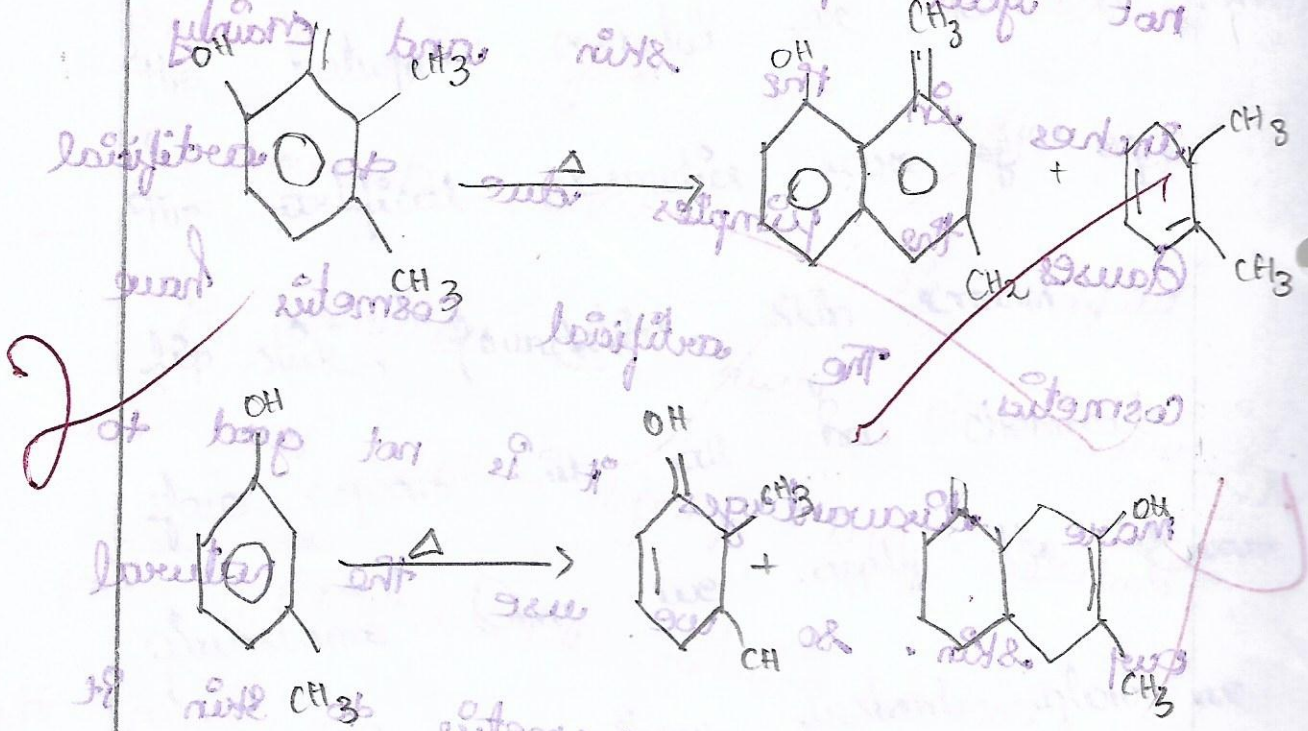
should not stop immediately. Because they affect our skin. Our face like a dull and show in pimples. But the nature is not like that whenever want to use that time alone we will use. The artifical cosmetics are not good for skin. sometimes it causes Inches in the skin and mainly causes the pimples due to artificial cosmetics. The artificial cosmetics have more disvantages it is not good to our skin. so we use the natural products of the cosmetics to skin it cause only the good thing to skin.

Section - C

III. Answer the following :

17] Preparation and use of Phonyl ethanol, Citronell Vanillin :

Phonyll ethanol :



(a) TFM of bathing soap

The TFM - Total Fatty Matter is in the soap and detergents. the mainly, TFM is important to the soap. The Soap and detergents in the knowing of grade of otherless. The ingredients in the soaps are glycerine, wanted flavour, oil, colouring agent, etc. The soap have a grade account in the TFM. The 76% of the soap is grade 1. to the TFM. The total fatty matter in the soap and detergents the important portion of soap. The TFM is used know

[b] Functions of ingredients in detergents.

The functions of ingredients in detergents to add all the wanted materials to make a detergent powder and we that the ingredients in detergents clothes. The ingredients are also wanted the TFM of grade soap or detergent.

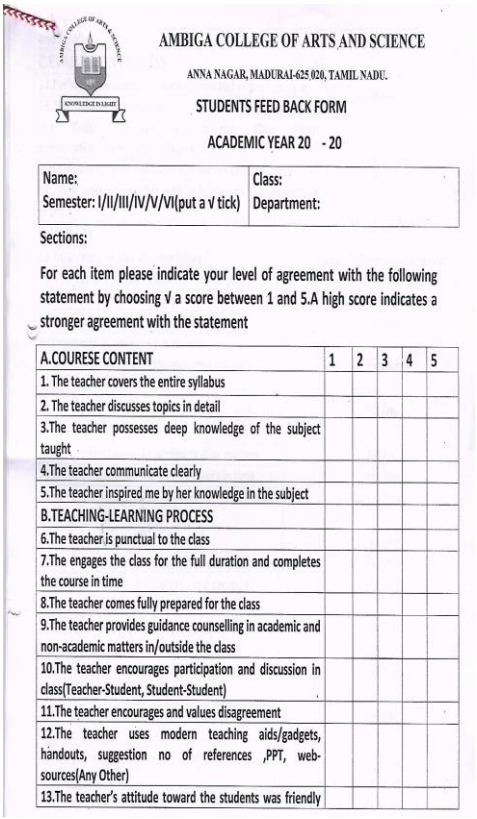
BSC CHEMISTRY

SUBJECT: Perfumes & Cosmetics

REG NO	NAME	I_1	I_2	M	AVG	ASSIGNMENT		SEMINAR		Total
						A_1	A_2	S_1	S_2	
B8S19601	K. Aruna	16	43	31	43+31=10 5 = 7.4	5	4	3	4	16
B8S19603	S. Gayathri.	36	57	42	9.9	5	4	4	5	20
B8S19604	K. Lavanya	41	52	31	9.3	5	4	5	4	19
B8S19605	R.N. LogaNandhini	56	59	54.	11.5	5	4	5	4	21
B8S19606	D. Meenalochini	70	67	58.	13.7	5	4	5	4	23
B8S19607	M. Muthulakshmi	46	58	54	11.2	5	4	5	4	21
B8S19608	T. Nandhini	32	60	49	10.9	5	4	5	4	21
B8S19609	M. Priya	32	49	45	9.4	5	4	4	3	18

REGNO	NAME	I_1	I_2	M	AVG	ASSIGNMENT		SEMINAR		TOTAL.
						A_1	A_2	S_1	S_2	
38819610	A. Risvana Parveen.	20	37	27	6.4	5	4	4	3	15
8S19611	M. Saranya	41	65	34	10.6	4.5	5	4.5	4	20
8S19612	A. Selva Rani	37	63	53	11.6	5	4.5	4.5	4	21
38819613	S. Siva Kanchanimathi	37	62	49	11.1	5	4	5	4	21
8819614	R. Siva Sankari.	28	49	28	7.7	5	4	5	4	17
38819615	K. Sumaiya Burhana	36	44	32	8	5	4	5	4	18
38819616	S. Swetha	26	37	29	6.6	5	4	4.5	4	16
38819617	S. Swetha.	14	39	9	5.3	5	4.5	4.5	4	14

STUDENT FEEDBACK FORM



AMBIGA COLLEGE OF ARTS AND SCIENCE

ANNA NAGAR, MADURAI-625 020, TAMIL NADU.

STUDENTS FEED BACK FORM

ACADEMIC YEAR 20 - 20

Name:	Class:
Semester: I/II/III/IV/V/VI(put a √ tick)	Department:

Sections:

For each item please indicate your level of agreement with the following statement by choosing √ a score between 1 and 5.A high score indicates a stronger agreement with the statement

A.COURESE CONTENT	1	2	3	4	5
1. The teacher covers the entire syllabus					
2. The teacher discusses topics in detail					
3.The teacher possesses deep knowledge of the subject taught					
4.The teacher communicate clearly					
5.The teacher inspired me by her knowledge in the subject					
B.TEACHING-LEARNING PROCESS					
6.The teacher is punctual to the class					
7.The engages the class for the full duration and completes the course in time					
8.The teacher comes fully prepared for the class					
9.The teacher provides guidance counselling in academic and non-academic matters in/outside the class					
10.The teacher encourages participation and discussion in class(Teacher-Student, Student-Student)					
11.The teacher encourages and values disagreement					
12.The teacher uses modern teaching aids/gadgets, handouts, suggestion no of references ,PPT, web-sources(Any Other)					
13.The teacher's attitude toward the students was friendly and helpful					
C.EVALUATION PROCESS					
14.Periodical assessments were conducted as per schedule					
15.The teacher uses non-traditional methods of evaluation like Quiz, Seminars, Assignments, Class room presentation/participation(Any other)					
16.Question paper covers all the topics in the curriculum					
17. The teacher was fair and unbiased in the evaluation process					

D.LIBRARY	Regular/Occasionally/Never
18.How often do you visit the libray	Yes/No
19. Are there required number of title in your subject available in the library.	Yes/No
20.Are you satisfied with the cataloguing and arrangement of books in the library	Yes/No
21.are you satisfied with the available Reading space in the Library	Yes/No
22.Are the Library Staff co-operative and helpful	Yes/No
E.ADMINISTRATION	Yes/No
23.Is the office helpful in administrative matters	Yes/No
24.Do you receive the Mark Statements in time	Yes/No
25.Are there enough clean class rooms available in the department	Yes/No
26.Are the toilets cleaned properly	Yes/No
27.Are you provided with enough drinking water	Yes/No
28.Are you happy with eatables/food served in the present canteen	Yes/No
29.Is there a Student Amenity Centre(Canteen)in your Campus	Yes/No
30.Do you think that your grievances are Redressed when complain/suggestion box is used	Yes/No
31.Do you have the functioning of a placement cell in our college	Yes/No
32.Are you using computer in proper working conditions	Yes/No
33.Are you have the Scholarships Private/Govt/Etc	Yes/No