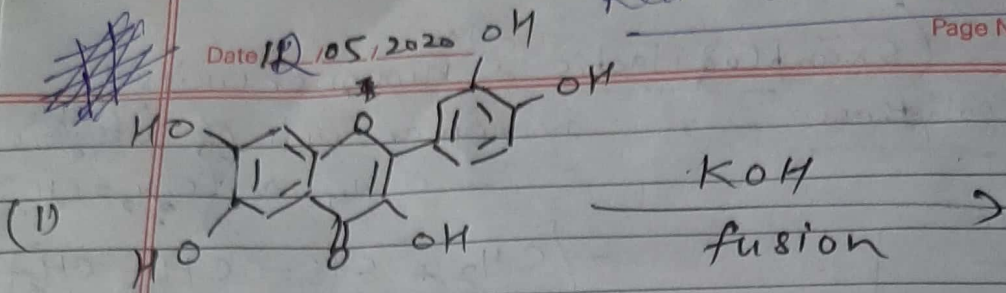


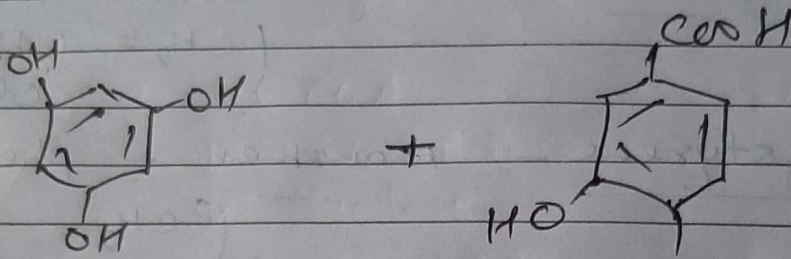
Reacⁿ with KOH

Date 12/05/2020

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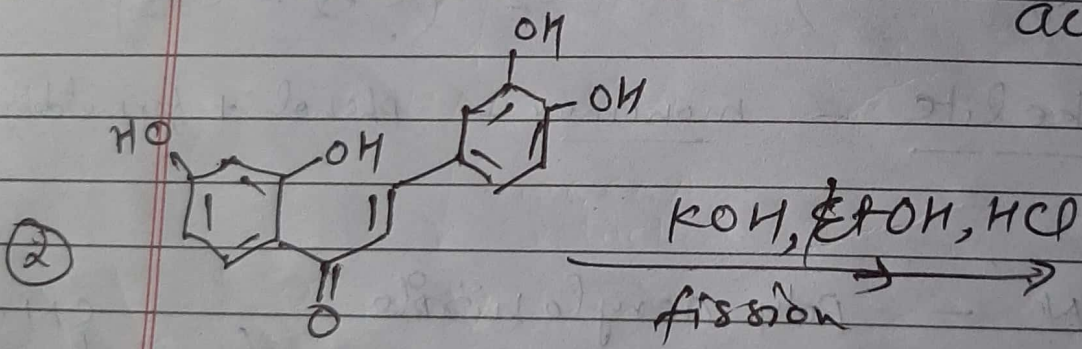


Quercetin

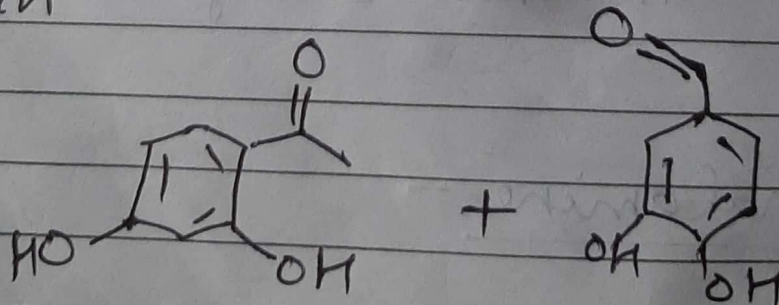


Phloroglucinol

Protocatechuic acid



Butein



2,4-dihydroxyacetophenone

3,4-dihydroxybenzaldehyde

"Happiness is when what you think, what you say, and what you do are in harmony."

flavonoids

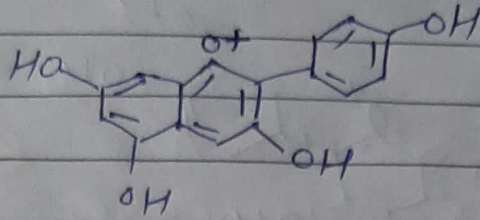
② Cyanidin

~~2020~~ Which type flower of pelargonidin

→ This is an anthocyanidin, a type of plant pigment producing a characteristic orange color used in food & industrial dyes.

"Happiness is when what you think, what you say, and what you do are in harmony." —Mahatma Gandhi



str. of pelargonidin

2-(4-Hydroxyphenyl) chromenylium-3,5,7-triol
or pelargonidin

m. f. $C_{15}H_{11}O_5^+$

It is present in flowers, can be found red geranium causing red color in spathes of philodendron.

② Cyanidin - It is a pigment found in many red berries including grapes, blackberry, blueberry, etc. apple, red cabbage, red onion etc.

It has reddish-purple color through this can change with pH.

pH < 3 → red

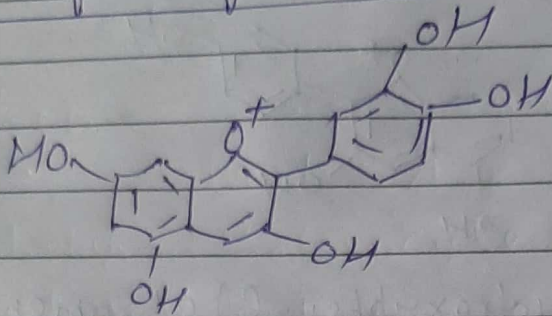
pH 7-8 → Violet

pH > 11 → blue.

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str. of cyanidin

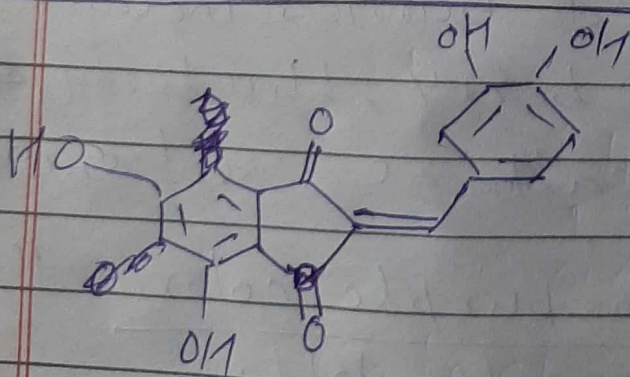


2-(3,4-Dihydroxyphenyl) Chromenylium ~~3,5,7-triol~~
3,5,7-triol)

other name cyanidine

3,3',4',5',7-pentahydroxy
flavylium

m.f — $C_{15}H_{11}O_6$



Aresensidin

m.f = $C_{15}H_{11}O_6$

str. relation b/w anthocyanidin, catechin and flavonol

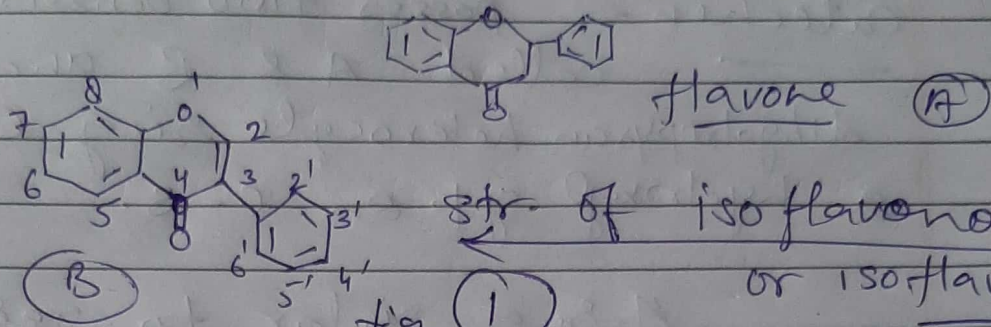


fig. (1) — hydroxy gp at the 3-carbon, b/w the ketone & outer ring and lacking the lactone gp.

loss of ketone gp its name gets an A in place of an O. flavonoid turns into flavanoid and flavonol turns into flavanol

Anthocyanidin — it is termed as aglycone, does not have sugar at the 3-position. It is found in anionic form, with str. derivatives of flavylium cation. most of anthocyanidin derivatives of 3, 5, 7-

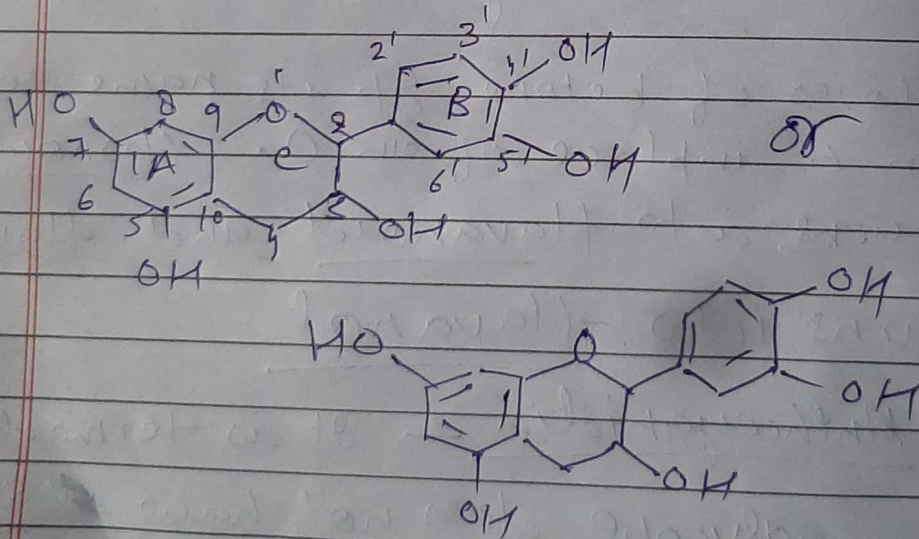
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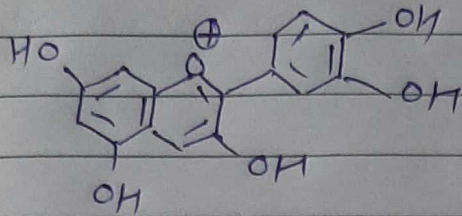
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trihydroxy flavylum chloride

catechin — posses two benzene rings called A & B and a dihydropyran heterocycle ring C with a hydroxy group on C-3.

A-ring similar to resorcinol, B is similar to catechol. There are two chiral centre at position C-2 and 3.

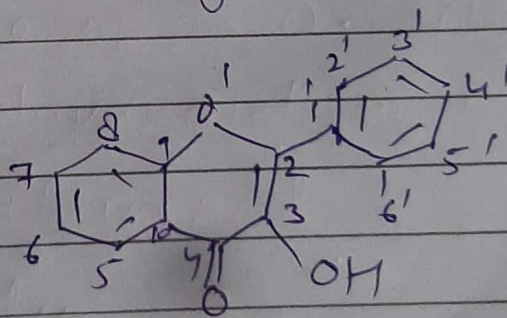
Catechin



Anthocyanin

from above both str., the structural difference in centre ring. they have small charges, a double bond b/w C_2 & C_3 in anthocyanidin & protonated oxygen in same ring.

flavonol



from above str. flavonols have 3-hydroxy flavone backbone. i.e. 3-hydroxy-2-phenyl chromen-4-one.

The diversity stems from the diff. positions of phenolic -OH gp. They are distinct from flavonol such as catechin.