

**B C**

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**B C**

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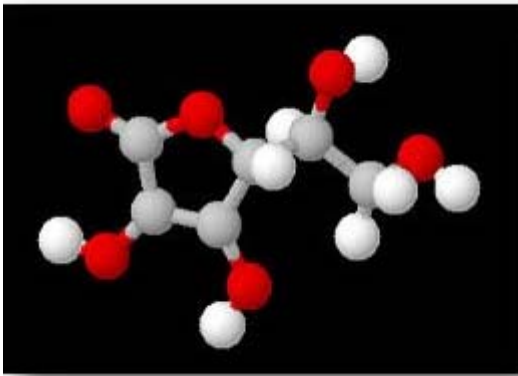
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12.7



"Vitamin C"



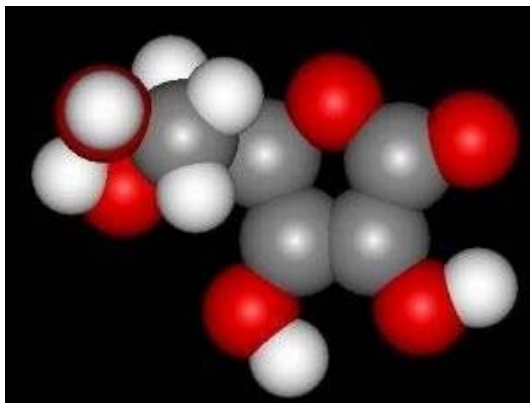
Ascorbic

.Acid

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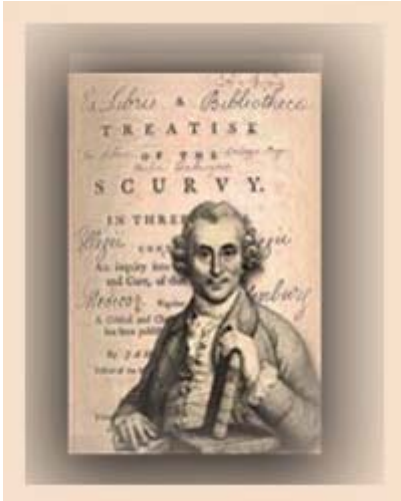


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"anti- scurvy

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**James Lind**

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**James "**

**"Lind**

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**" James Lind" 1753**

**1795**



**1907**

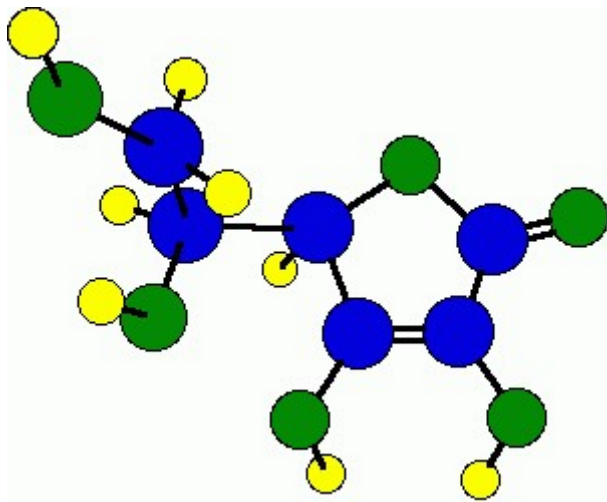
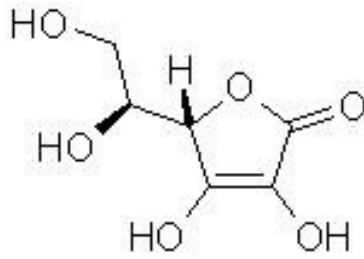
**1928**

**Charles G.King**

**" Albert Szent – Gyrgyi"**

**Haworth Hirst**

**1932**



“ ”

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% 54.5041 =

% 4.5781 =

% 40.917 =

% 30 =

%40 =

% 30 =

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**Ascobicap**

**Ascorbic acid**

**Acid Ascorbic**

**Vitamin C**

**Antiscorbic vitamin**

**L-3-Ketothreohexuronic acid**

**Antiscorbutic vitamin**

**Ascorbate**

**Cevitamic acid**

**Vicomin C**

L-lyxoascorbic acid

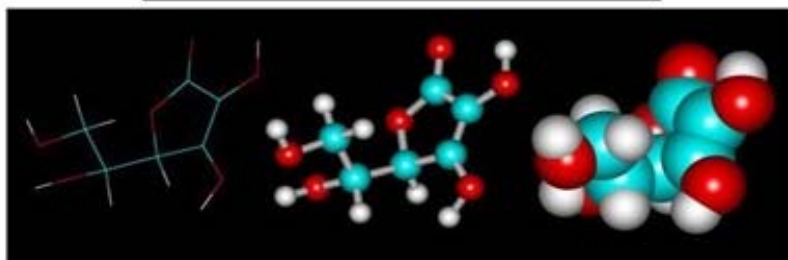
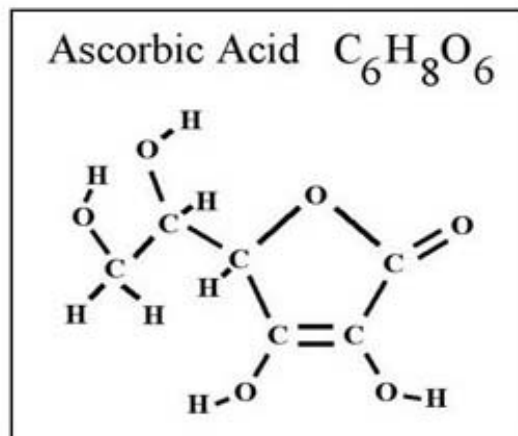
3-Keto-L-gulofuranolactone

L-3-Ketothreohexuronic acid  
lactone

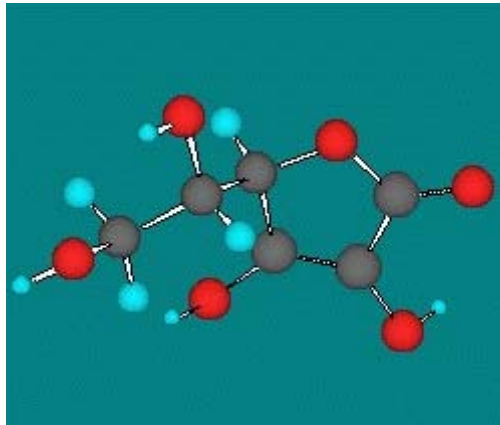
Laroscorbine



$C_6H_8O_6$  :



/ 1761206.



2.1 – 2.6 : pH / 1%

1.65 : 190 – 192 :

33% :

Reichstien process " "

" Hydrogenation" .

pH

" Raney nickel"

"125 – 80 "

"150- 140 "

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" sorbose"

" sorbitol"

"Gluconobacter suboxydans

" Acetonation"

3

20

anhydrous "

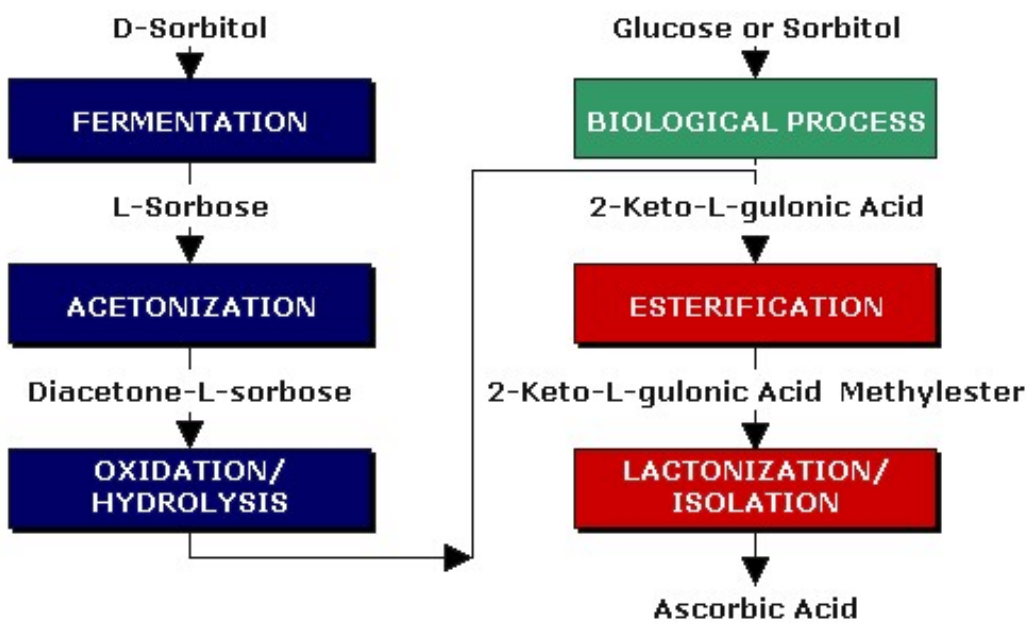
"sodium sulfate

Oxidation to di-acetone 2-ketogulonic acid

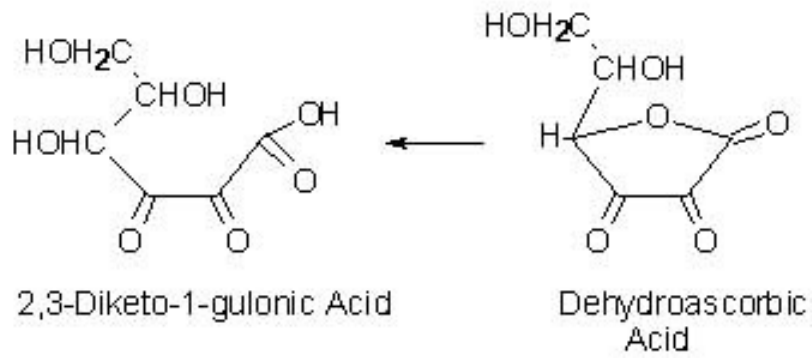
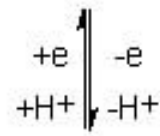
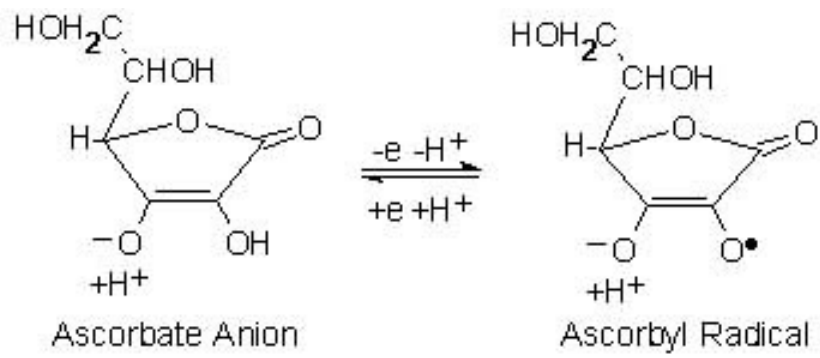
Hydrolysis, rearrangement, & final "

"purification

pH = 2



" ketothreohuronic acid"



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**"William Henry Perkins"**

**1856/ 1272**

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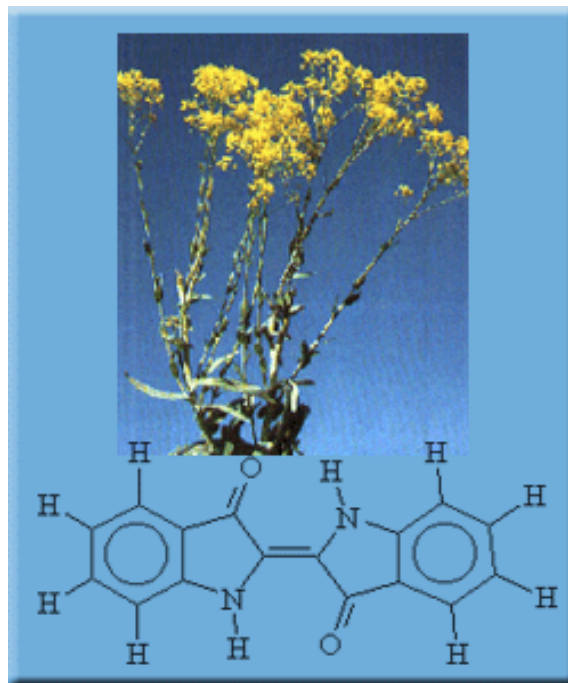
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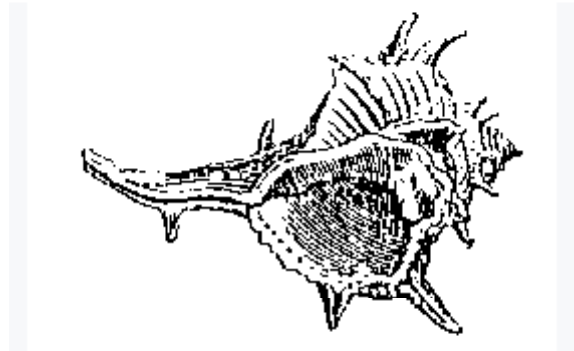
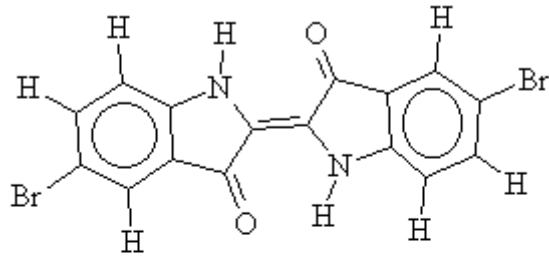
" indigo "



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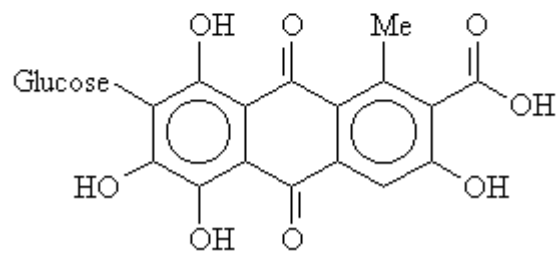
( )

**" Tyrian Purple"**

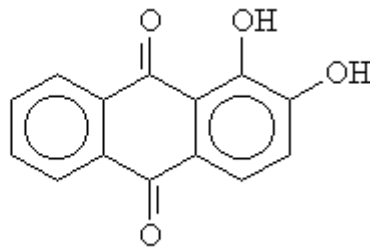


**" cochineal"**

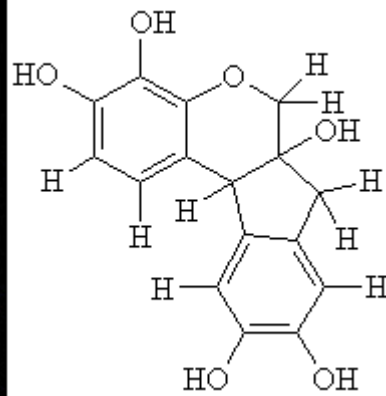
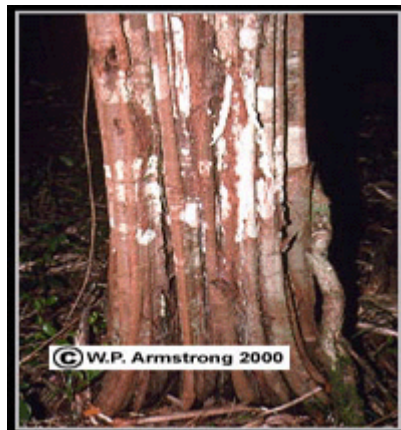
**carminic acid**



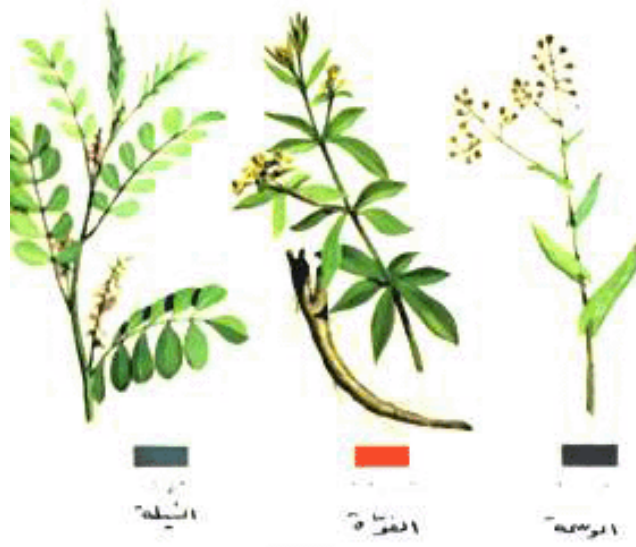
## " Madder"



## " Logwood"



## haematoxylin



## Azo dyes

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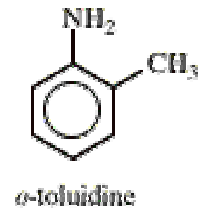
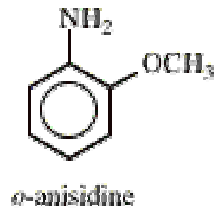
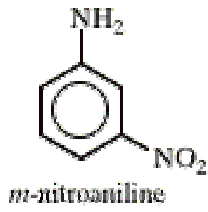
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### Synthesis of diazonium salt

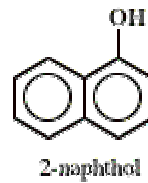
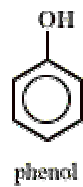
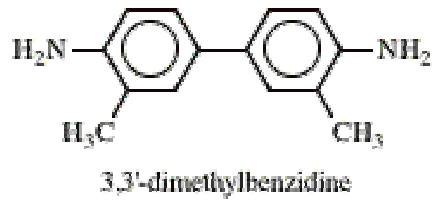
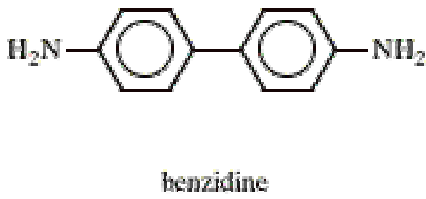


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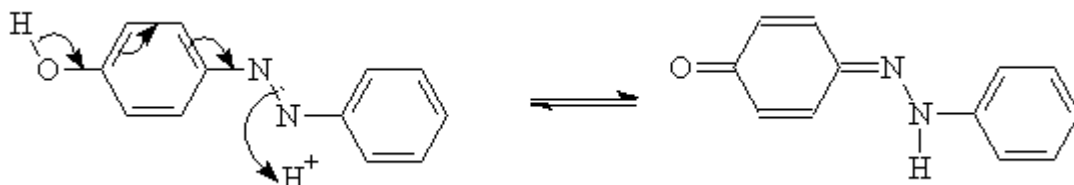
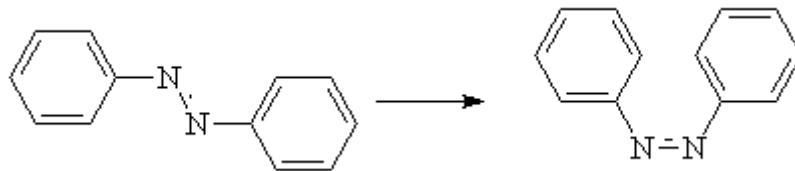
### Amines

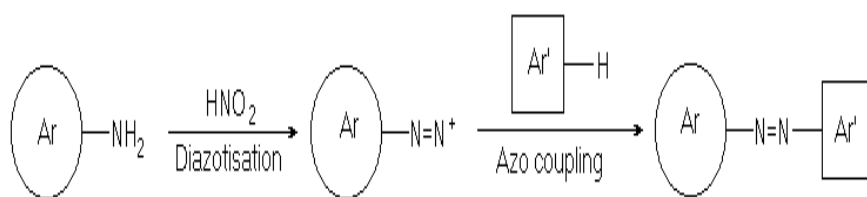


### Diamines

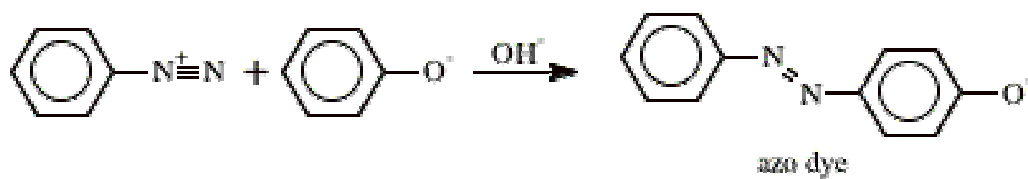


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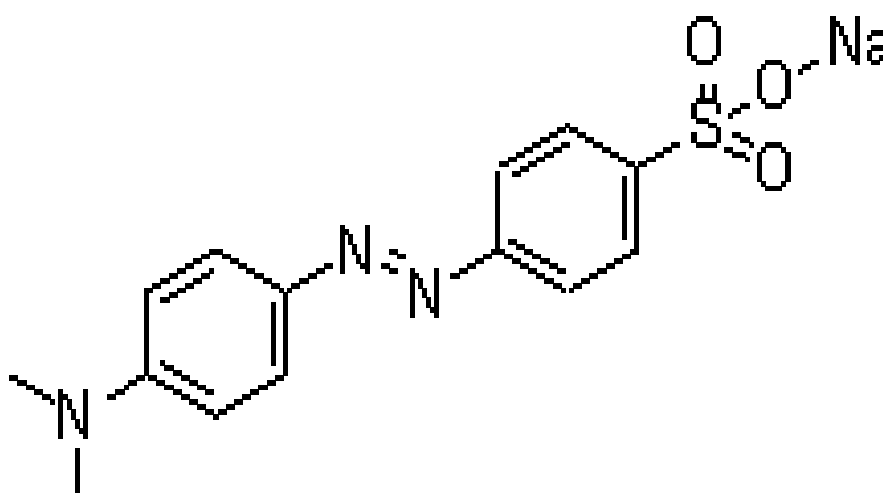




### Coupling Reaction

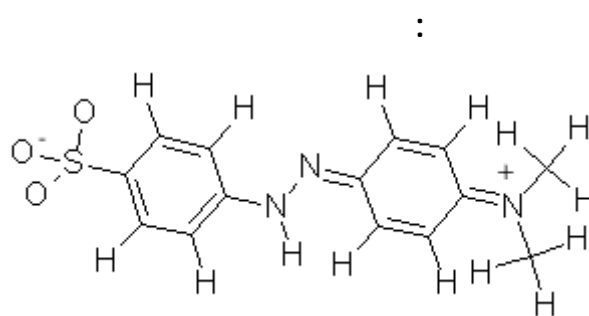
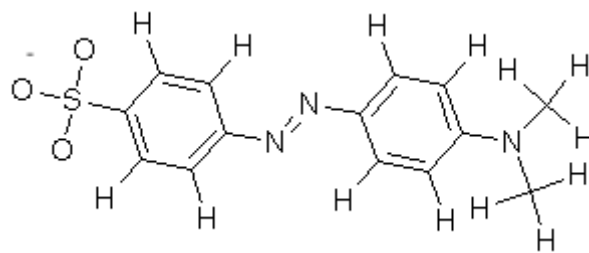


" Methyl Orange "



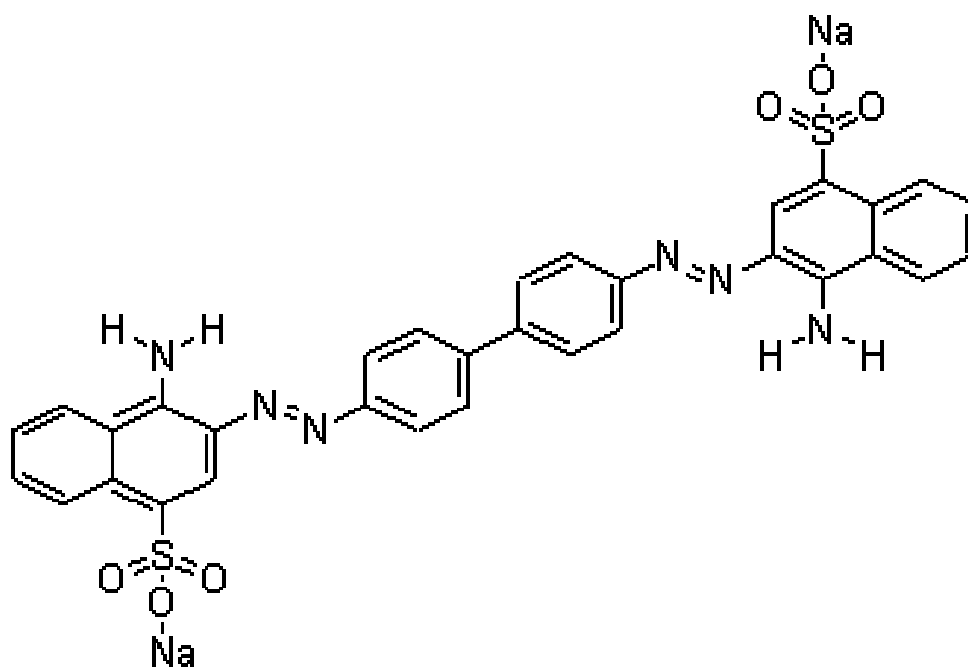
$\text{C}_{14}\text{H}_{14}\text{N}_3\text{NaO}_3\text{S}$

327.33



**" Congo red"**

**C<sub>32</sub>H<sub>22</sub>N<sub>6</sub>Na<sub>2</sub>O<sub>6</sub>S<sub>2</sub>:**

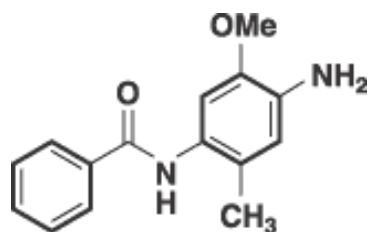


**696.66::**

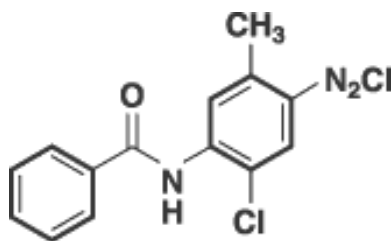
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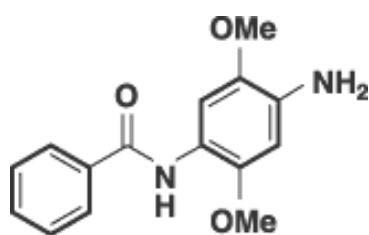
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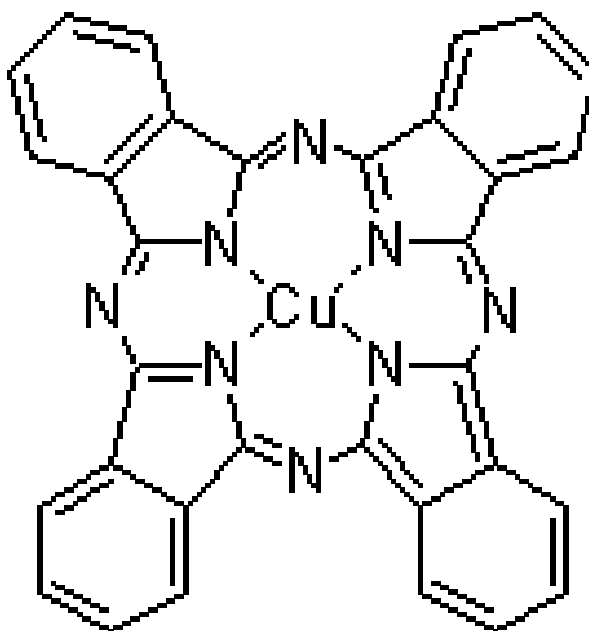
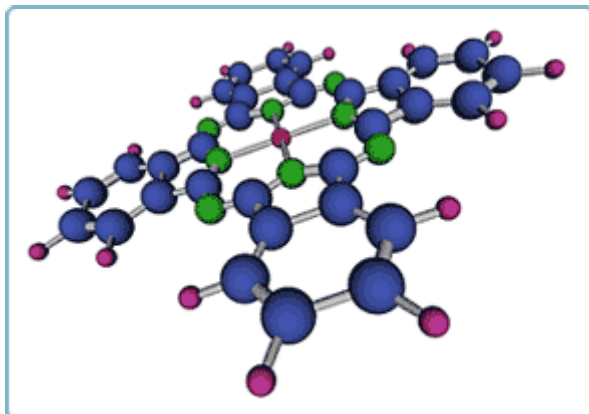
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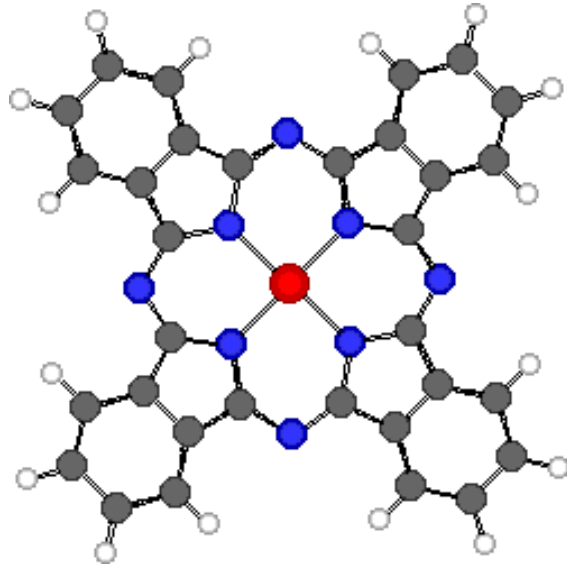


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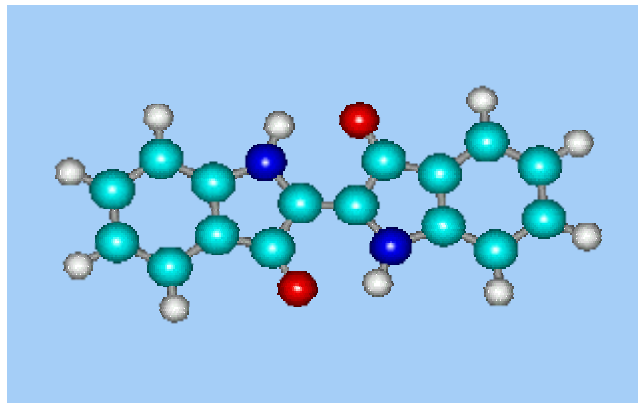


## PHthalocyanine dyes .





**Indigo:**



**" Isatis tinctoria" Woad"**

**((Indigofera tinctoria Indigo"**

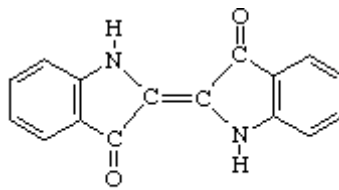
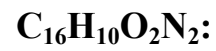


" India "

" indicon "

Indigo " "

Indoxyl-Beta-D-glucopyranoside:



Indigo

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1915

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1840

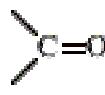
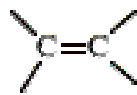
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1897

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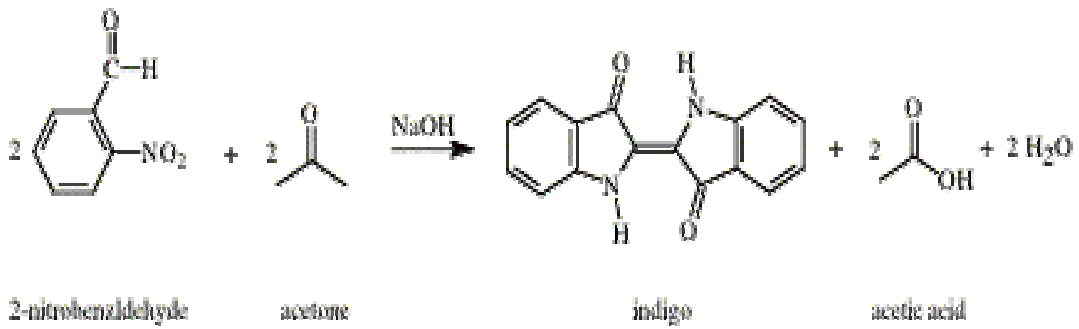
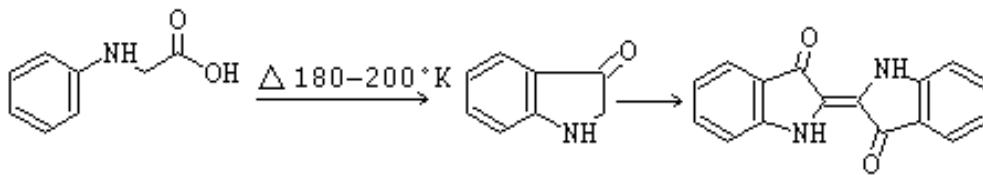
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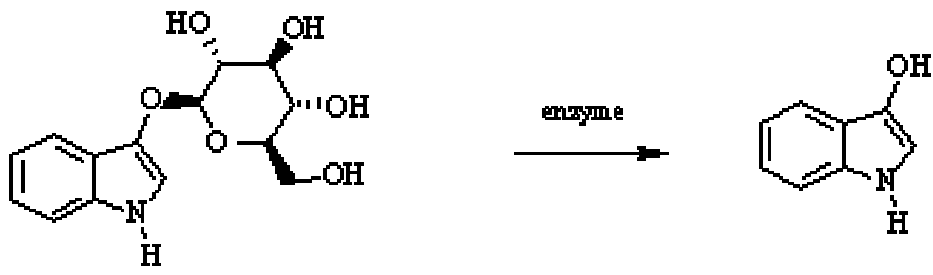
chromophores



auxochrome

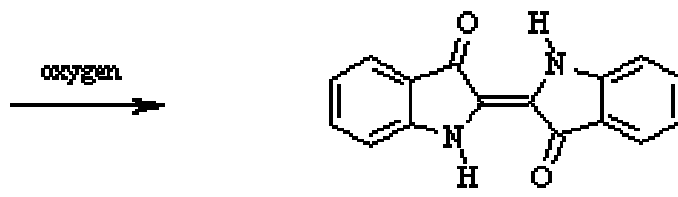






Indican  
Indoxyl- $\beta$ -D-glucopyranoside

Indoxyl



Indigo

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(FD&C Blue 2     "

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