



**Centurion**  
**UNIVERSITY**

*Shaping Lives...  
Empowering Communities...*

# Chemistry

## SUB. CODE- BSCC2402

*For B.Sc. 4<sup>th</sup> Semester*

### *(Polynuclear Hydrocarbons)*

#### Module-V

## ***Anthracene: Derivatives***

*By*

*Dr. Rosy Mallik*

*Assistant Professor,*

*CENTURION UNIVERSITY OF TECHNOLOGY AND MANAGEMENT,  
ODISHA*

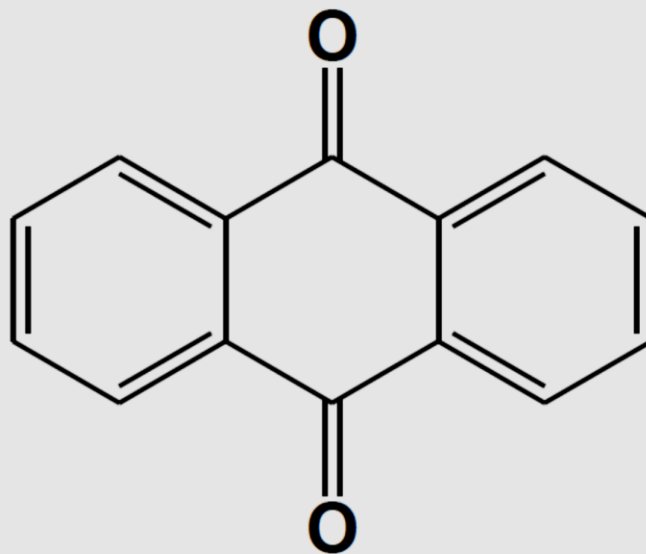
# Derivatives of Anthracene



**Centurion**  
**UNIVERSITY**

*Shaping Lives...  
Empowering Communities...*

## Anthraquinone





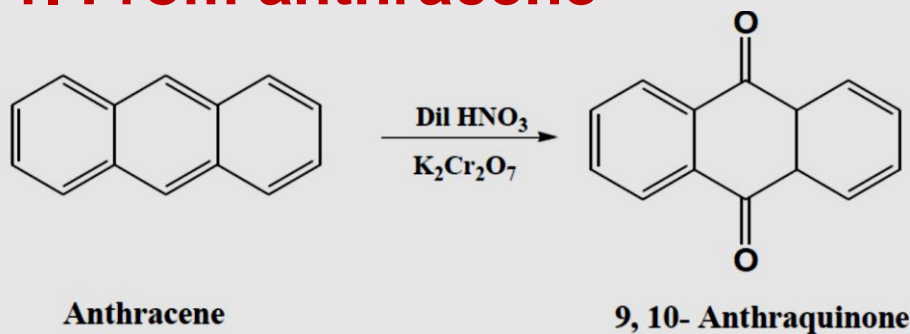
**Centurion**  
**UNIVERSITY**

Shaping Lives...

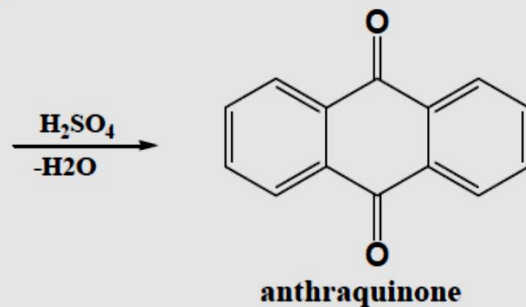
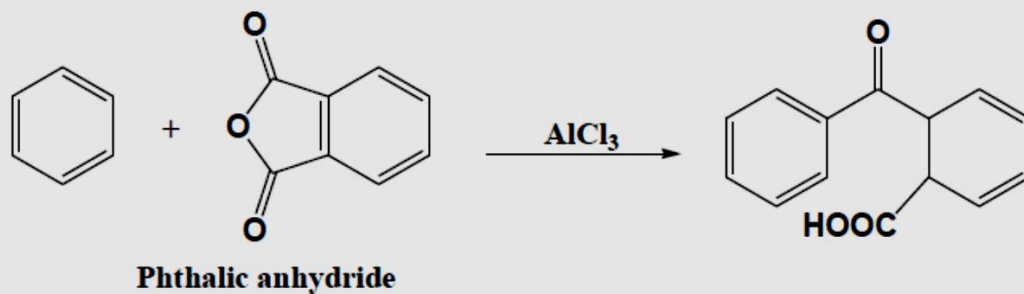
Empowering Communities...

# Preparation

## 1. From anthracene



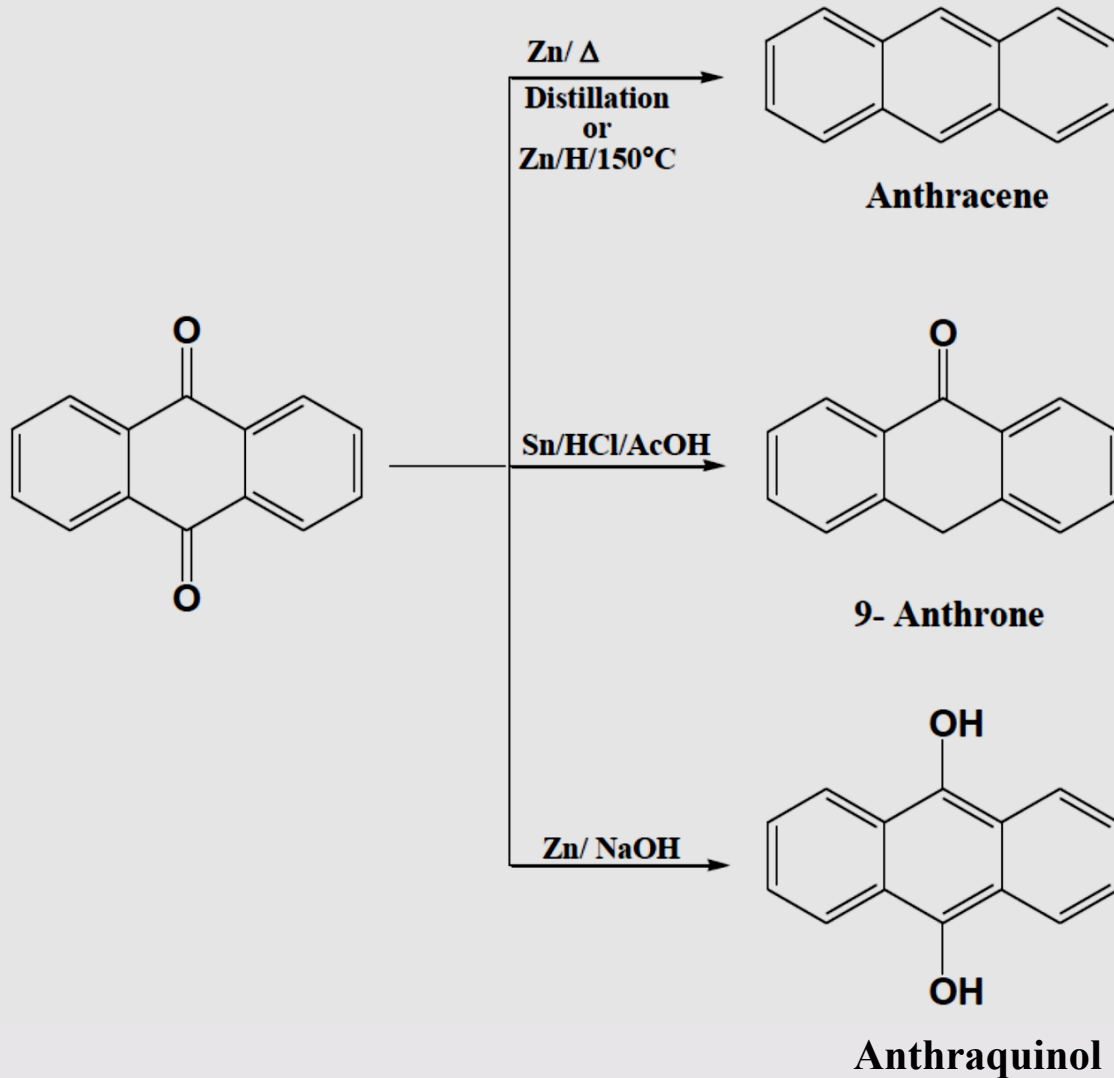
## 2. From benzene and phthalic anhydride





**Centurion**  
**UNIVERSITY**

*Shaping Lives...  
Empowering Communities...*

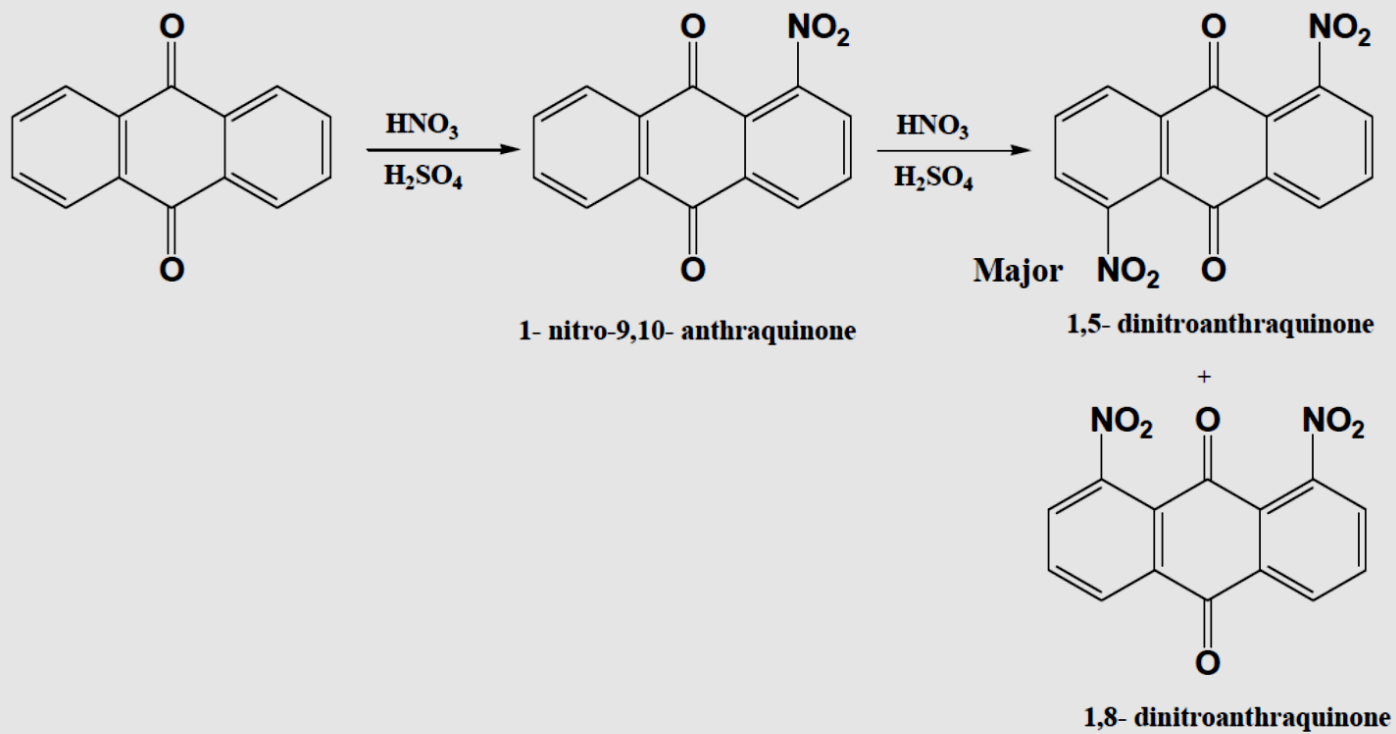




**Centurion**  
**UNIVERSITY**

Shaping Lives...  
Empowering Communities...

## Nitration of anthraquinone

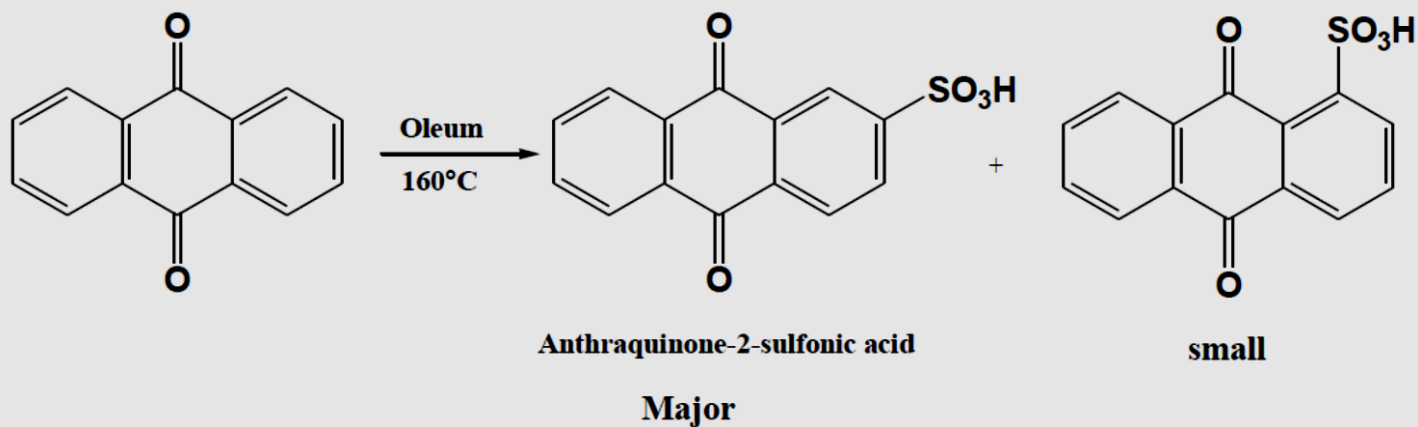




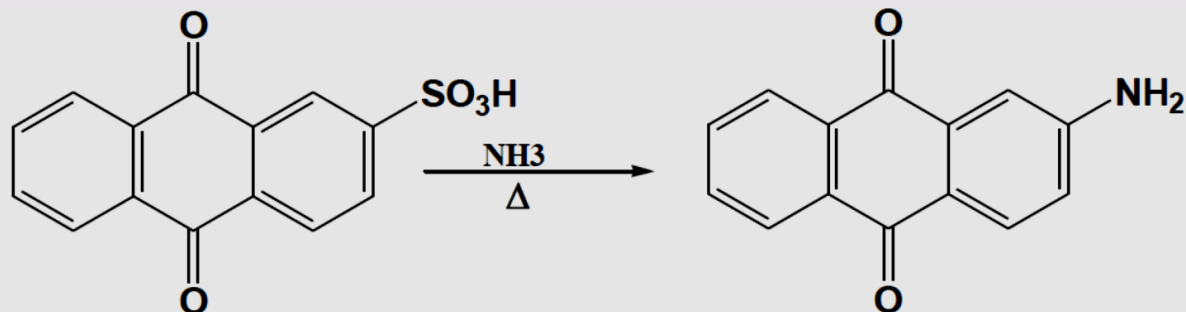
Centurion  
UNIVERSITY

Shaping Lives...  
Empowering Communities...

## Sulphonation of anthraquinone



## Preparation of 2-amino-anthraquinone



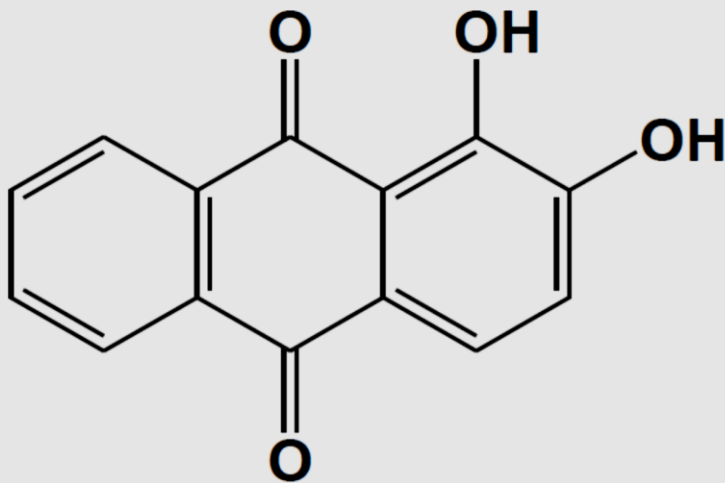


**Centurion**  
**UNIVERSITY**

*Shaping Lives...*

*Empowering Communities...*

# Alizarine



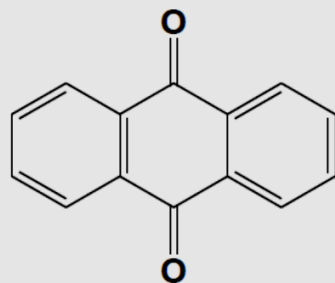
**1,2-dihydroxyanthraquinone**  
**Alizarine**



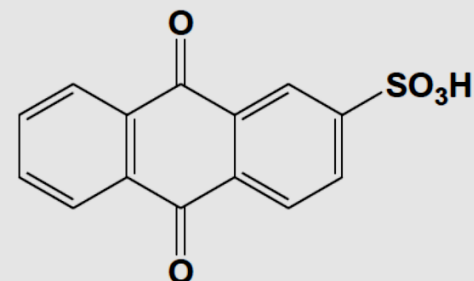
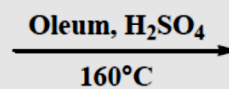
**Centurion**  
**UNIVERSITY**

Shaping Lives...  
Empowering Communities...

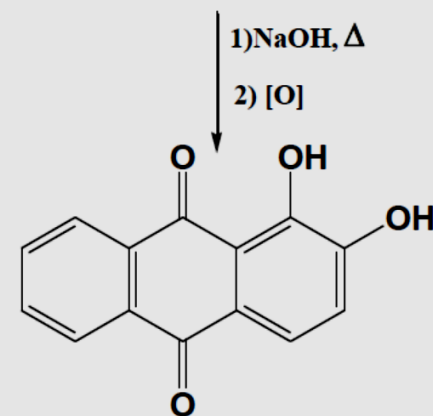
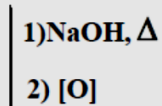
## Synthesis of alizarine



**Anthraquinone**



**9,10-anthraquinone-2-sulfonic acid**



**Alizarine**



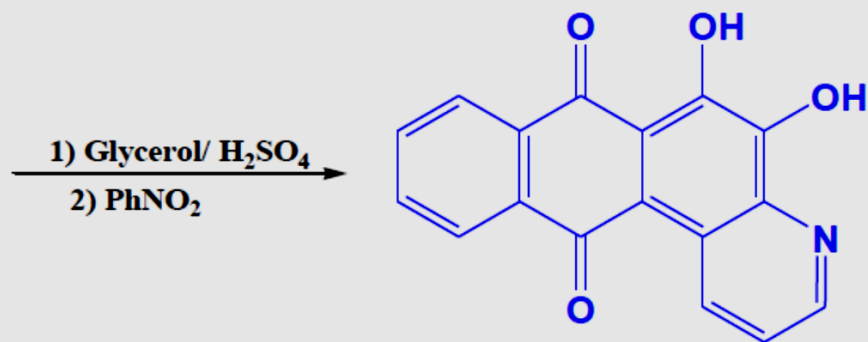
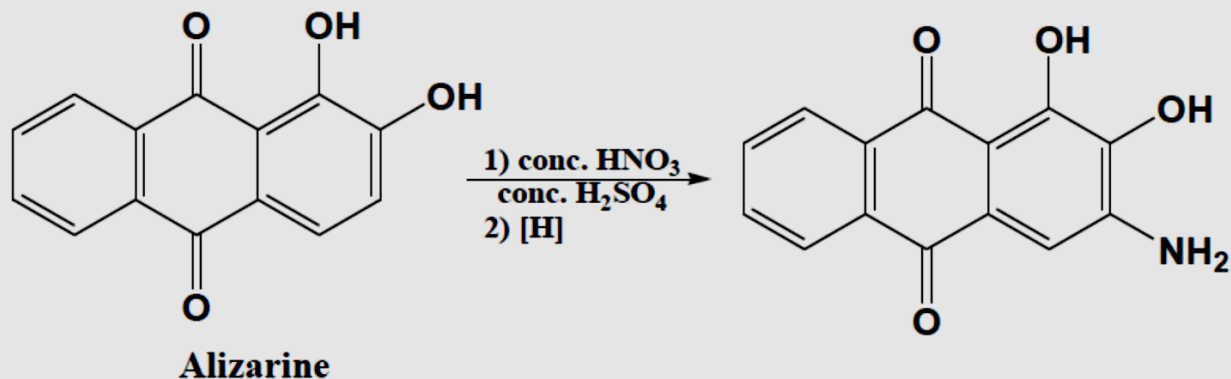


Centurion  
UNIVERSITY

Shaping Lives...

Empowering Communities...

## Synthesis of alizarine blue



Alizarine Blue

Alizarine blue is used for dyeing wool by blue color



**Centurion**  
**UNIVERSITY**

*Shaping Lives...  
Empowering Communities...*

# References

1. K.D Sharma and Y. R. Sharma, Kalyani Publishers, Unit-II page-233;
2. University Chemistry, Vol-IV, Dr. U. N. Dash, Dr. KK. Ojha, Himalaya Publishing house, Unit III, page-304