

Report on Chemistry Held on – 12.05.2020

Date of Event	12.05.2020
Name and Type of Event	Chemistry- _Non-academic/Academic
Conducted by	School of Pharmacy
No. Of Participant	50

An Online Webinar conducted by School of Pharmacy, ARKA JAIN University. Faculties and students from different Pharmacy institutions have attended the Webinar. Prof(Dr). P.Sudhir Kumar, School of Pharmaceutical Sciences, Siksha ‘O’ Anusandhan University, Bhubaneswar is the resource person to share his knowledge in this topic on zoom application. He explained about aldehydes and ketones in his session. He taught Occurrence of Ketones and Aldehydes

Combined with other functional group aldehydes and ketone are widespread in nature. Compounds such as cinnamaldehyde (cinnamon bark), vanillin (vanilla bean), Citra (lemongrass), helminthosporal (a fungal toxin), carvone (spearmint and caraway), camphor (camphor trees) are found chiefly in microorganisms or plants. Whereas, compounds such as muscone (musk deer), testosterone (male sex hormone), progesterone (female sex hormone), cortisone (adrenal hormone) have animal and human origin.

Uses of Aldehydes and Ketones

Formaldehyde is the simplest aldehyde whereas acetone is the smallest ketone. There are a number of aldehydes and ketones which find application due to their chemical properties. A few uses of Aldehydes and Ketones are listed below.

1. Uses of Aldehydes

- Formaldehyde is a gas. With 40% solution in water, it forms Formalin which is used in preserving biological specimens.
- Formaldehyde is used in embalming, tanning, preparing glues and polymeric products, as germicides, insecticides, and fungicides for plants. It is also used in drug testing and photography.
- When reacted with phenol, formaldehyde forms Bakelite, which is used in plastics, coatings, and adhesives.
- Acetaldehyde is largely used for the production of acetic acid and pyridine derivatives.
- Benzaldehyde is used in perfumes, cosmetic products, and dyes. It is added to provide almond flavour to food products and also used as a bee repellent.

2. Uses of Ketones

- The most common ketone is acetone which is an excellent solvent for a number of plastics and synthetic fibres.
- In the household, acetone is used as a nail paint remover and paint thinner.
- In medicine, it is used in chemical peeling and for acne treatments.
- Methyl ethyl ketone (MEK), chemically butanone, is a common solvent. It is used in the production of textiles, varnishes, plastics, paint remover, paraffin wax, etc.
- MEK is also used as a welding agent for plastics due to its dissolving properties.
- Cyclohexanone is another important ketone which is primarily used in the production of nylon.

Preparation of Ketones and Aldehydes

Aldehydes and Ketones are obtained from products of many reactions. Some reactions for the synthetic preparation of Aldehyde and Ketone is mention below.

At the end of the session students questions to clear their doubts. The session ended with vote of thanks to Dr. Kumar and felicitated with token of appreciation.

