

“ज्ञान, विज्ञान आणि सुसंस्कार यांसाठी शिक्षणप्रसार”

शिक्षणमहर्षी डॉ. बापूजीसाळुंखे .

Shri Swami Vivekanand Shikshan Sanstha, Kolhapur's

Dattajirao Kadam Arts, Science & Commerce College,

Ichalkaranji. District: - Kolhapur

Department of Chemistry

Date:- 07-10-2022

To,

The Principal,

D.K.A.S.C. College,

Ichalkaranji

Subject: Permission to arrange “Molecule of the week Activity” for M. Sc. II Student

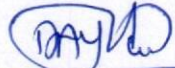
Respected Sir,

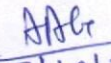
With reference to above subject, Department of Chemistry want to arrange “Molecule of the week Activity” for M. Sc. II students from Monday 10<sup>th</sup> Oct. 2022 onwards. This activity is helpful to increase self confidence self learning ability and interest for subject. So please give us permission to arrange this activity.

Thanking You,

Yours faithfully,

Permission granted

  
07-10-2022

  
07/10/2022  
(Dr. A. A. Ghare)

“ज्ञान, विज्ञान आणि सुसंस्कार यासाठी शिक्षणप्रसार”  
शिक्षणमहर्षि डॉ. आपूजी भाळुंबे

SHRI SWAMI VIVEKANAND SHIKSHAN SANSTHA'S, KOLHAPUR  
Dattajirao Kadam Arts, Science & Commerce College,  
Ichalkaranji

PG DEPARTMENT OF CHEMISTRY

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## Notice

### Molecule of the Week

All students of M.Sc. II (Organic Chemistry) are hereby informed that, as a part of Chemistry Carnival, we celebrating the event 'Molecule of the Week' for the academic year 2022-2023. All are inform to confirm date of the week and submit the matter for the same.

Date: 07/10/2022

*AAg*  
07/10/2022

Dr. A. A. Ghare  
HEAD,

Department of Chemistry,  
Dattajirao Kadam Arts, Science  
& Commerce College,  
ICHALKARANJI.

Date:- 10 October 2022

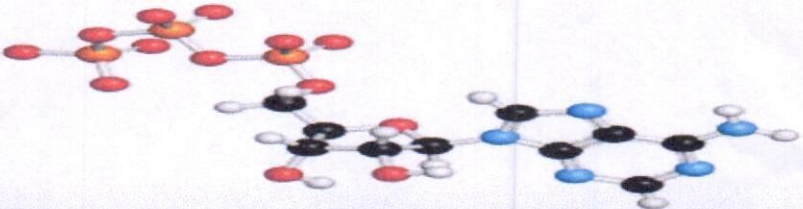
*"Dissemination of Education for Knowledge, Science and Culture"*  
- Shikshanmaharshi Dr. Bapuji Salunkhe  
Shri Swami Vivekanand Shikshan Sanstha's

**Dattajirao Kadam Arts, Science & Commerce College,  
Ichalkaranji, District: - Kolhapur**  
Dist.-Kolhapur- 416 115, M.S. INDIA.  
(Affiliated to Shivaji University, Kolhapur)

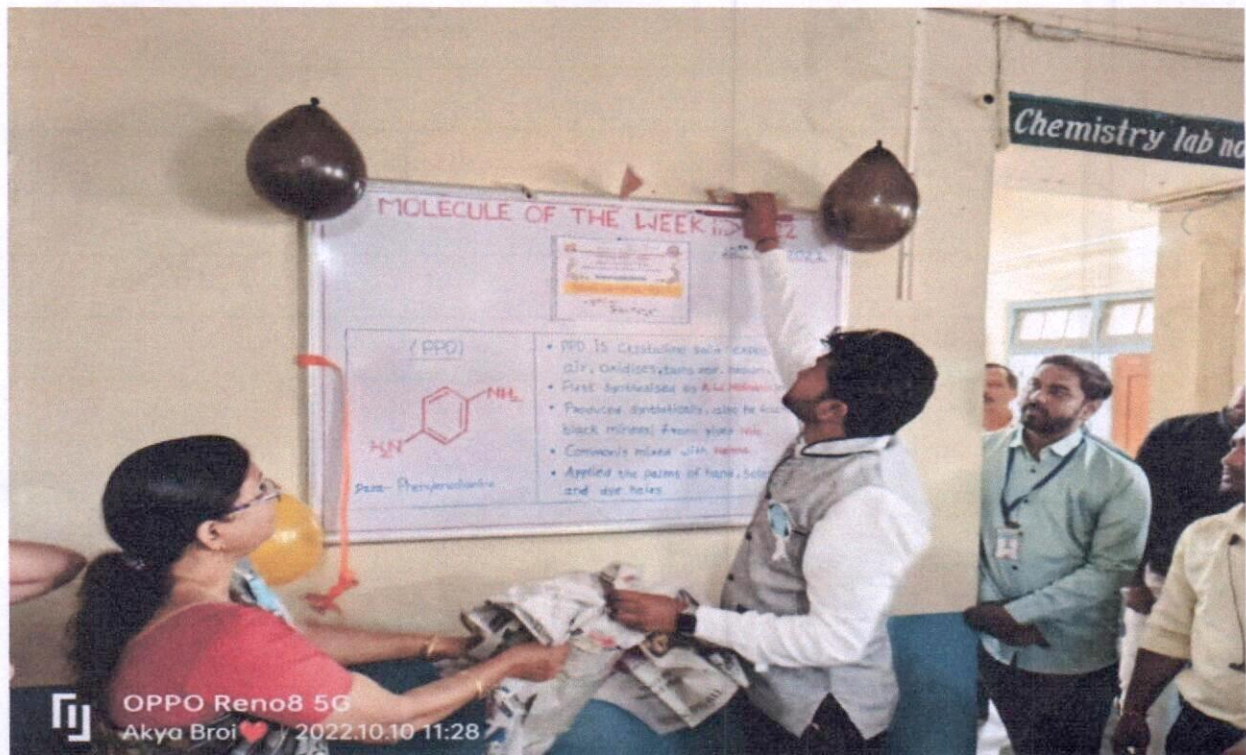
Post Graduate Department of Chemistry

**Departmental Activity**

**"Molecule of the Week"**

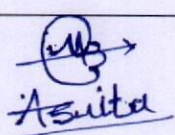
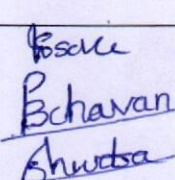
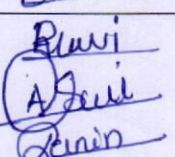
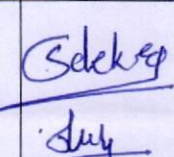
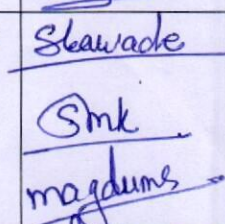
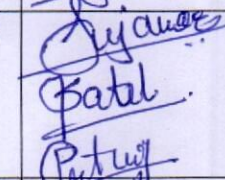
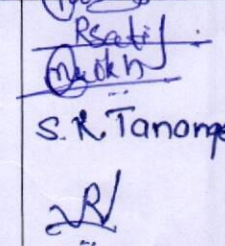


Department staff Inaugurating the function

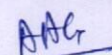


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**HEAD,**  
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Dattajirao Kadam Arts, Science  
& Commerce College,  
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Shri Swami Vivekanand Shikshan Sanstha's  
**Dattajirao Kadam Arts, Science & Commerce College, Ichalkaranji**  
**Molecule of the week Time Table M.Sc-II (Organic Chemistry) 2022-23**

Sr. No.	Name of Students	Date	Sign
1	BASTWADE AARTI ANIL BHALERAO ASMITA DEVIDAS BHORE TAHURA KHALIL	10/10/2022	 Asmita
2	BHOSALE SUMITRA SHASHIKANT CHAVAN PRATIKSHA BALASO CHOUGALE SHWETA SANJAY	17/10/2022	 Shweta
3	DALVI RUSHIKESH ARJUN DESAI ATUL GAJANAN DONGARE SACHIN GAJANAN	01/11/2022	 Sachin
4	FAKIR KULSUMBI HARUN GADEKAR SHRUTIKA GANESH GHODAKE SHUBHAM SHIVAJI	07/11/2022	 Shubham
5	KANWADE SHIFAHTAHAMAD JAVED KARADE SOURABH MAHADEV MAGDUM ABHISHEK ASHOK	14/11/2022	 Shifahtahamad
6	MUJAWAR SABIR JAVEED PATIL KAJAL SAMBHAJI PATIL PRASAD UTTAM	21/11/2023	 Sabir
7	PATIL RUTUJA SUBHASH SHAIKH AARJU SHABBIR TANANGE SAKSHI RAJU VANKUNDRE RUSHIKESH JITENDRA	28/11/2023	 S.R. Tanange JR



  
 07/11/22  
 (Dr. A. A. Ghare)  
 HEAD,  
 Department of Chemistry,  
 Dattajirao Kadam Arts, Science  
 & Commerce College,  
 ICHALKARANJI.

Teachers Explaining the students about the Molecule

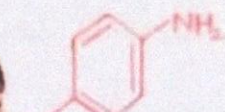


Chemistry lab

### MOLECULE OF THE WEEK >2K22

20th Oct. 2022

(PPA)



Phenylpropranolamine

- PPA is Crystalline solid exposed to air, oxidises, turns red-brown, black.
- First synthesis by A.W. Hofmann in 1863
- Produced synthetically, also be found as black mineral from silver Nitrate.
- Commonly mixed with henna.
- Applied the palms of hand, Soles, feet and eye holes.

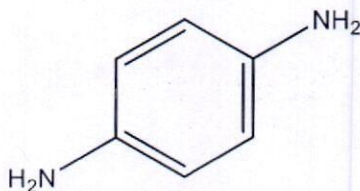


Department of Chemistry,  
KADAM A. S. C. COLLEGE,  
CHALKHARANJI

HEAD,  
Date: \_\_\_\_\_

## Molecule of the Week

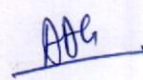
(10<sup>th</sup> Oct to 17<sup>th</sup> Oct 2022)



### Para-Phenylenediamine (PPD)

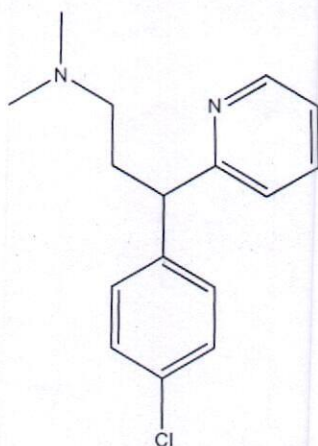
- ✓ PPD is a crystalline solid which on exposure to air it oxidises and turns red, brown, then finally black.
- ✓ It was first synthesised by A.W. Hofmann in 1863.
- ✓ Nowadays, nearly all PPD is produced synthetically, but it can also be found as a black mineral from the banks of River Nile.
- ✓ PPD is commonly mixed with henna which is traditionally applied to decorate the palms of hands, soles and feet and to dye hair a dark red shade, frequently for special occasions such as weddings.



  
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## Molecule of the Week

(17<sup>th</sup> Oct to 22<sup>th</sup> Oct 2022)



**Chlorpheniramine**

- ✓ Chlorpheniramine is white crystalline solid having MP= 130 to 135 °C.
- ✓ Chlorpheniramine is antihistamine used to relive symptoms of allergy high fever and common cold.
- ✓ It helps to control the symptoms of cold or allergy but will not treat the cause of symptoms.
- ✓ Side effects of Chlorpheniramine
  - a. Irregular heart beats
  - b. Mood change
  - c. Unusual weakness
  - d. Nervousness
  - e. Problems in breathing

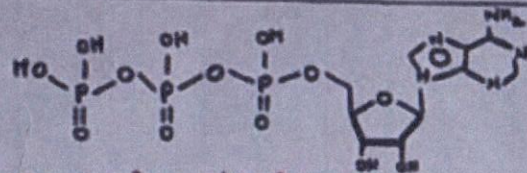


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# MOLECULE OF THE WEEK >>> 2K22

## ☀️ ATP Molecule ☀️

31 Oct 2022



Adenosine 5' triphosphate

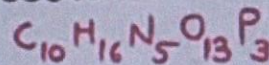
Adenosine 5' triphosphate abbreviated ATP and usually expressed without the 5', is an important "energy molecule" found in all life forms.

Specially it is a coenzyme that works with enzymes such as ATP triphosphate to transfer energy to cells by releasing its phosphate groups

### • Nomenclature:-

Adenosine 5'-(tetrahydrogen triphosphate)

### • Empirical formula:-



### • Melting Point:-

176°C

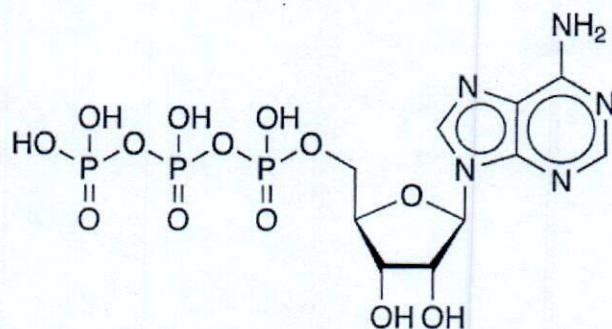
### • Molar Mass:- 507.18 g/mol

### • Appearance:- White powder



## Molecule of the Week

(1<sup>st</sup> Nov. to 5<sup>th</sup> Nov. 2022)



### Adenosine triphosphate (ATP)

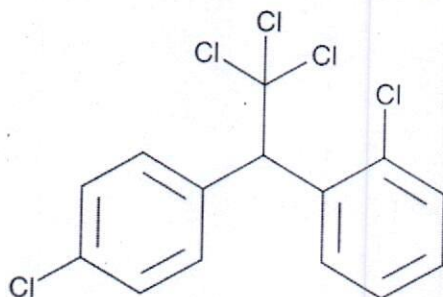
- ✓ Adenosine triphosphate (ATP) is an organic compound that provides energy to drive many processes in living cells, such as muscle contraction, nerve impulse propagation, condensate dissolution, and chemical synthesis.
- ✓ Found in all known forms of life, ATP is often referred to as the "molecular unit of currency" of intracellular energy transfer
- ✓ It is also a precursor to DNA and RNA, and is used as a coenzyme.



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## Molecule of the Week

(7<sup>th</sup> Nov. to 14<sup>th</sup> Nov. 2022)



### Dichlorodiphenyltrichloroethane (DDT) by

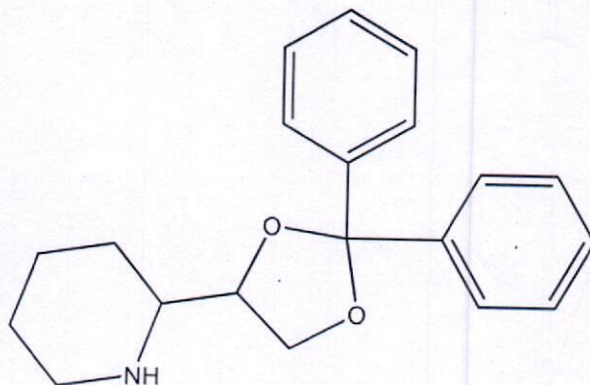
- ✓ DDT was first synthesized in 1874 by the Austrian chemist Othmar Zeidler
- ✓ It is a colorless, tasteless, and almost odorless crystalline chemical compound
- ✓ (DDT) is an insecticide used in agriculture
- ✓ DDT was used in the second half of World War II to limit the spread of the insect-borne diseases malaria and typhus among civilians and troops



*AAQ*  
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## Molecule of the Week

(14<sup>th</sup> Nov. to 19<sup>th</sup> Nov. 2022)



**Dexoxadrol**

- ✓ Dexoxadrol is a dissociative anaesthetic drug which has been found to be an NMDA Antagonist and produces similar effects to PCP in animal
- ✓ Dexoxadrol, along with another related drug etoxadrol, were developed as analgesics for use in humans, but development was discontinued after patients reported side effect such as nightmares and hallucinations.

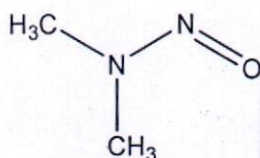
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& Commerce College,  
ICHALKARANJL

## Molecule of the Week

(21<sup>th</sup> Nov. to 26<sup>th</sup> Nov. 2022)



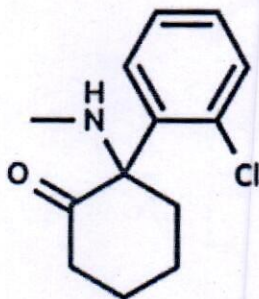
### **N-nitrosodimethyl amine (NDMA)**

- ✓ NDMA was discovered in Zantac through research done by the Valisure laboratory.
- ✓ It is a volatile, yellow oil.
- ✓ A study has shown that NDMA perturbs arginine biosynthesis, mitochondria genome maintenance and DNA damage repair in yeast.
- ✓ In September 2019, NDMA was discovered in ranitidine product form.

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& Commerce College,  
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## Molecule of the Week

(28<sup>th</sup> Nov. to 3<sup>rd</sup> Dec. 2022)



### **Ketamine**

Formula:  $C_{13}H_{16}ClNO$

Molar mass: 237.725 g/mol

M. P.: 92 °C

Ketamine is a dissociative anesthetic used medically for induction and maintenance of anesthesia. It is also used as a recreational drug. It is one of the safest anesthetics, as, in contrast with opiates, ether, and propofol, it suppresses neither respiration nor heart rate. Ketamine is also simple to administer and highly tolerable compared to drugs with similar effects which are flammable, irritating, or even explosive. Ketamine is a novel compound, derived from PCP, created in pursuit of a safer anesthetic with similar characteristics. Ketamine is also used for acute pain management.

*ABG*

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“ज्ञान, विज्ञान आरि सुनंकाव यासाठी शिक्षणप्रकार”  
शिक्षणमहर्षि डॉ. सापूजी साळुंखे

SHRI SWAMI VIVEKANAND SHIKSHAN SANSNTHA, KOLHAPUR'S

**Dattajirao Kadam Arts, Science & Commerce College,  
Ichalkaranji.**

**PG Department of Chemistry**

**Date: 05/12/2022**

**Academic Year 2022-23**

**A Report on Molecule of the Week (M.Sc. II)**

Molecule of the week activity was arranged by Department of Chemistry, DKASC College, Ichalkaranji for M.Sc. II (Organic Chemistry) Students. The activity was conducted from 10<sup>th</sup> October 2022 to 28<sup>th</sup> November 2022. Total 22 students of M.Sc. II actively participated in this activity. Different types of molecules were presented all students. Molecule of the week activity was found to be useful to enhance confidence level, presentation skill and interest for chemistry subject.



*AAg*

*05/12/2022*

(Dr. A. A. Ghare)

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Dattajirao Kadam Arts, Science  
& Commerce College,  
ICHALKARANJI.