

Title of the Practice: Awareness on Paracetamol

Objectives: It is an opportunity to teach the chemistry students to know about what types of drugs they are taking in the campus to feel healthy.

Context / Introduction:

Generic name: Paracetamol

Brand names: Paradol, Calpol, Tylenol, Alvedon

Dosage forms: effervescent tablets, intravenous injection, orally disintegrating tablet, oral capsule.

Uses: Paracetamol is an analgesic and antipyretic drug that is used to temporarily relieve mild-to-moderate pain and fever.

It is commonly included as an ingredient in cold and flu medications. ~~and is~~

It is also used for the relief of:

- Headache
- Migraine
- Backache
- muscle pain
- mild arthritis
- Toothache
- Sore throat
- Sinus pain
- Fever

Side effects: Skin rashes, itching, Swelling of the throat, tongue or face, Shortness of breath, mouth ulcers, Liver problems

Dosage: 1 or 2 tablets upto 4 times a day for 18 yrs to adults.

Chemical theory of Paracetamol:

IUPAC ID: N-(4-hydroxyphenyl)acetamide

N-(4-hydroxyphenyl)ethanamide

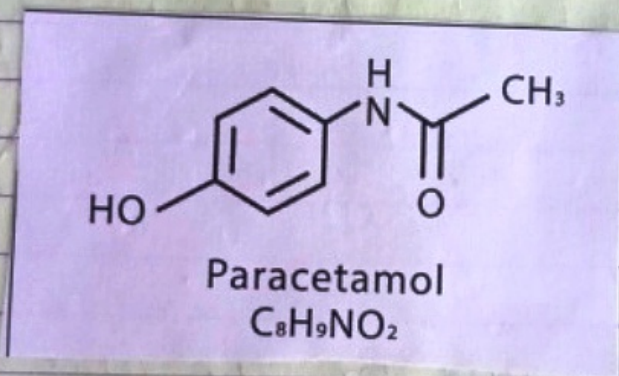
Formula: $C_8H_9NO_2$

Onset of action: Pain relief onset by route \rightarrow 37 minutes

Paracetamol is a non-opioid analgesic and antipyretic agent used to treat fever and mild to moderate pain. It is a widely used over the counter medication.

It is also called acetaminophen or p-hydroxyacetanilide.

The word 'paracetamol' was coined by Frederick Stearns & Co in 1956.



Problems encountered:

Science students are able to know the chemical nature of the tablet in a detailed manner.

Non-Science students are not able to ~~know~~ understand the chemical nature.

Evidence of Success:

Students are able to know the uses, dosage, side effects, onset of action of a chemical they are using in their daily life.

Title of the practice: Awareness on Cetirizine
Objectives: It is an opportunity to teach the students about the cetirizine tablet and its chemical nature

Introduction:

Generic name: Cetirizine

Brand name: Zyrtec

Dosage form: oral dose

Uses: Cetirizine is an antihistamine used to relieve allergy symptoms such as watery eyes, runny nose, itching eyes/nose, sneezing, hives and itching.

⇒ It works by blocking a certain natural substance (histamine) that your body makes during an allergic

side effects:-

Drowsiness, tiredness and dry mouth may occur stomach pain may also occur, especially in children.

If any of these effects last or get worse, tell your doctor or pharmacist promptly.

Precautions:

Before taking cetirizine, tell your doctor or pharmacist if you are allergic to it; or to hydroxyzine, levocetirizine, you have any other allergies which can cause allergic reactions or other problem.

Chemical theory of cetirizine:

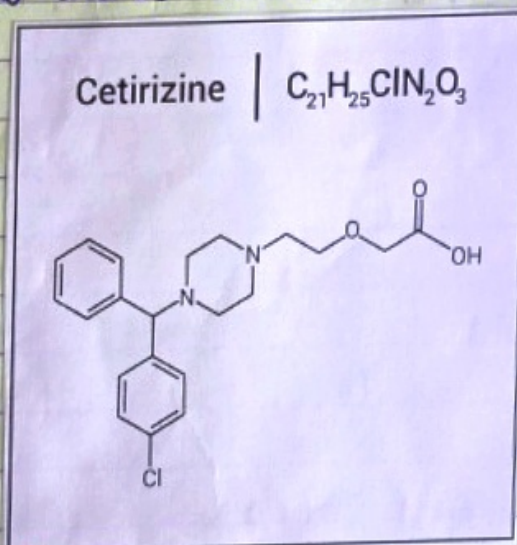
IUPAC name: [2-(4-(4-chlorophenyl) phenyl)methyl]-1-piperazine[methoxy]acetic acid.

formula: $C_{21}H_{25}ClN_2O_3$

onset of action: 20-42 minutes Elimination half-life,
Mean 8.3 hours.

Cetirizine, sold under the brand name Zyrtec and others, is an antihistamine medication used to treat allergies. It is taken by mouth. It starts working within an hour and it lasts for about a day.

It works as well as other antihistamines like diphenhydramine.



Problems encountered:

Science students are able to know the chemical nature of cetirizine in a detailed manner. Non-science students are not able to understand the chemical nature of the cetirizine.

Evidence of Success:

Students are able to know the uses, chemical theory of cetirizine, onset of action they are using in their daily life.