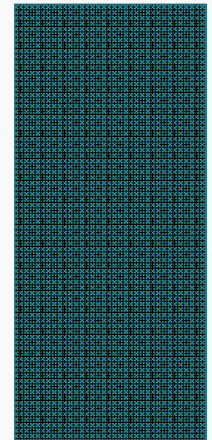


HYPOGLYCEMIC AGENTS



DEFINITION

The drug which lower the blood sugar level and are used in the treatment of diabetes mellitus known as hypoglycemic agents.

CLASSIFICATION

I. Hormones :

e.g. Insulin and its derivatives.

II. Oral Hypoglycemic Agents :

1. *Sulphonyl Urea Derivatives* : e.g Chlorpropamide , tolbutamide ,
Glibenclamide.

2. *Biguanide Derivatives* : e.g. Phenformine , Metformin

III. Plant Sources : e.g . Gaur Gum

INSULIN

Insulin is a protein hormone secreted by beta cells of islets of Langerhans of pancreas .

Sources :Commercial sources of insulin is pancreas of ox & Pig

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Properties :

- i. It is white powder
- ii. It is slightly soluble in water.
- iii. It dissolves in dil. Solution of mineral acids
- iv. It is also solution in alkali hydroxide in which it is hydrolyzed.
- v. It is inactivated by proteolytic enzymes.
- vi. It is sensitive to heat and light.

INSULIN

Storage :

It is sensitive to heat and light . Hence it should be stored in temp between 2 – 8 ° C and should not allowed to freez. Insulin injection is stored in multiple dose container .

Uses:

- i. It is used to control Diabets Mellitus .
 - ii. It is used to regulate carbohydrate metabolism .
 - iii. It is used to treat hyperkalamia.
- It is used to treat sever ketosis.

INSULIN

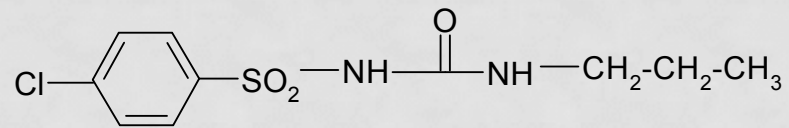
Official Preparations :

1. Insulin injection
2. Neutral Insulin Injection BP
3. Globin Zinc insulin injection BP, IP
4. Isophane insulin injection BP, IP
5. Biphasic insulin injection BP
6. Protamine zinc insulin injection BP , IP
7. Insulin zinc suspension (Crystallin) BP , IP
8. Insulin Zinc suspension BP, IP

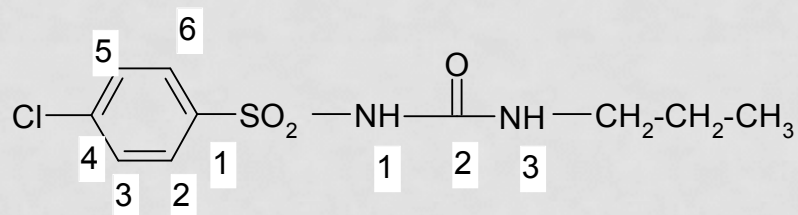
Brand Name: Longact , Lentard , Insugen , Mixtard . Lupisulin.

CHLORPROPAMIDE

It is Sulphonyl Urea derivatives .



CHLORPROPAMIDE



C.N. 1(P-chlorobenzene-sulphonyl) 3-propylurea

CHLORPROPAMIDE

Properties :

1. It occurs as white crystalline powder .
2. It should be odorless & tasteless .
3. It is practically insoluble in water but soluble in alcohol.
4. It is soluble in solution of alkali hydroxides.

Storage :

It should be stored in well closed air tight light resistant container , keep in cool place.

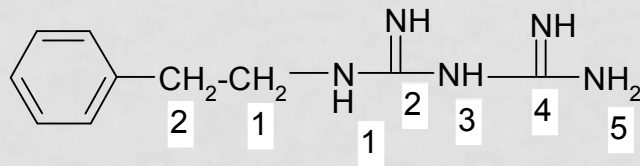
Uses:

It is used to treat non insulin dependent diabetics Mellitus .

Preparation : Chlorpropamide tab IP,BP

Brand Name : Diabense , Diabetol , diabetin

PHENFORMINE



C.N. 1 (2-phenyl ethyl) biguanidine

PHENFORMINE

Properties :

- i. It occurs as a white crystalline powder
- ii. It is bitter in taste
- iii. It is soluble in water and alcohol .

Storage : Should be stored in well closed air tight container

Uses :

1. It is used to treat Diabets Mellitus
2. It is used to decrease blood sugar level in cortison induced hyperglycemia.
3. It decreases blood cholesterol in maturity onset diabets.

Preparation :

Phenformin tablet IP

Brand Name : DBI, Chloroformin.