

### DESCRIPTION:

*piphos*<sup>®</sup> is the fixed dose combination therapy of Dihydroartemisinin & Piperaquine Phosphate used as first-line treatment of uncomplicated malaria. Dihydroartemisinin is the most active metabolite of all artemisinin compounds and Piperaquine Phosphate belongs to the 4-amino- quinoline.

#### CHEMICAL STRUCTURE:

Dihydroartemisinin Piperaguine Phosphate

## COMPOSITION:

# Diphos® Tablet 40mg/320mg

Each film-coated tablet contains:
Dihydroartemisinin Ph. Int. .......40mg
Piperaquine phosphate ...........320mg
Innovator's Specifications

## Diphos® Sachet 15mg/120mg

Each sachet contains:
Dihydroartemisinin Ph.Int. .....15mg
Piperaquine Phosphate ......120mg
Genix Specifications

## PHARMACOLOGY:

Oral Dihydroartemisinin is rapidly & completely absorbed within 1 hrs and achieves peak plasma level within 0.6 hrs after absorption with Cmax of 360 (181-658) ng/ml, AUC24 907 (324-2,289) ng/ml. Elimination half life of Dihydroartemisinin is 3.1 hrs after oral administration.

Piperaquine is rapidly absorbed and achieves peak plasma level within 4-7 hrs after oral administration. Cmax achieves 232 ng/ml within (Tmax) 3hrs. AUC24 of Piperaquine is 13441 ng/ml and elimination half life of Piperaquine is 20-25 days. There is minimal effect of food on the absorption of Piperaquine thus no specific food instructions are required at the time of Piperaquine administration.

## MECHANISM OF ACTION:

Dihydroartemisinin has fastest action on malarial parasite among all artemisinin derivatives by rapidly eliminating blood schizonts and also have strong effect on early and late trophozoites.

Dihydroartemisinin concentrates selectively into cells contracted by parasites and reacts with heam to kill the parasites. This reaction produces poisonous free radicals that can destroy membranes of parasites.

Piperaquine, a derivative of 4-aminoquinoline group, have strong action on blood schizonts and late trophozoites.

Piperaquine inhibits the heamozoin formation & interacts with the heam to form ferriprotoporphyrin-piperaquine complex (FP-Piperaquine complex) which is highly toxic and damage the membrane of all types of malarial parasites and destroy them effectively. Both Dihydroartemisinin and Piperaquine also have strong action on gametocytes which help to prevent the malaria transmission.

#### THERAPEUTIC INDICATIONS:

World Health Organization (WHO) strongly recommends Dihydroartemisinin + Piperaquine Phosphate ( <code>Diphos®</code> ) as a latest ACT option to use as first line treatment for the uncomplicated P. falciparum malaria including multi-drug resistant strains. Dihydroartemisinin + Piperaquine Phosphate is also effective against P. vivax malaria and has strong action on gametocytes. Piperaquine is also used as prophylaxis due to the advantage of its longer half life.

## ADMINISTRATION AND DOSAGE:

Dihydroartemisinin+Piperaquine Phosphate ( <code>Diphos</code>\*) is administered as once daily for 3 days course for the treatment of Malaria. The recommended dose of Dihydroartemisinin is given 4mg/kg/day & Piperaquine Phosphate is given 32mg/kg/day

AGE	DAY-1	DAY-2	DAY-3
>15 year	4 tab	2 tab	2 tab
11-14 year	3 tab	11/2 tab	1½ tab
7-10 year	2 tab	1 tab	1 tab
1-6 year	1 tab	1/2 tab	1/2 tab

#### Sachet dose:

<b>Body Weight</b>	Day-1	Day-2	Day-3
5 to <7 kg	1 Sachet	1 Sachet	1 Sachet
7 to <13 kg	2 Sachets	2 Sachets	2 Sachets
13 to <25 kg	3-3 5 Sachet	s 3-3 5 Sache	ts 3-3 5 Sachets

## Direction For Use.

Pour the granules of sachet into some water and drink.

To achieve high clinical cure rate, the drug should be taken at 0, 6, 24hours and 48 hours

#### ADVERSE EFFECTS:

In several patients treated with Dihydroartemisinin+Piperaquine Phosphate, no severe adverse effects have been reported.

Adverse effects seen are usually light and disappear when the treatment is stopped. The common side effects are nausea, vomiting, stomachache, diarrhea,

headache, dizziness itching pruritus etc.

#### CONTRAINDICATION:

Patients with hypersensitivity to any of Artemisinin's derivative and Piperaquine Phosphate component.

#### PREGNANCY:

Limited data is available to use the Dihydroartemisinin+Piperaquine Phosphate during first trimester. Findings of routine examination were normal, apart from the low birth-weight. However, precautions are very necessary during first trimester. In second & third trimester WHO recommends the use of ACTs including Dihydroartemisinin+Piperaquine Phosphate to treat the malaria.

### LACTATION:

Lactating women should receive standard antimalarial treatment (including ACTs) except for Dapsone, Primaquine and Tetracyclines.

#### INSTRUCTIONS:

Dosage as directed by the physicians. Store below 30°C.

Protect from heat, light & moisture.

Keep all medicines out of the reach of children

## PRESENTATION:

*Diphos*\* Dihydroartemisinin+Piperaquine Phosphate Tablets are available in Alu-Alu blister pack of 1x8's.

*Diphos*<sup>®</sup> Dihydroartemisinin+Piperaquine Phosphate Sachets are available in 1x16's Pack.

ہدایات: خوراک ڈاکٹر کی ہدایت کے مطابق استعمال کریں۔ ۳۰ ڈرکری سینٹی کریڈ سے تم پر رکھیں۔ روشتی، گرمی اورنمی سے محفوظ رکھیں۔ تمام دوائیں بچول کی بچنج سے دور رکھیں۔

or detailed information:

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