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Kapvay

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**KAPVAY**

**Generic Name**
Clonidine Hydrochloride

**Uses**
Clonidine Hydrochloride is used to help manage hypertension. It can be used in the treatment of severe pain. Clonidine Hydrochloride can also be used to help manage ADHD.

**Chemical Names**
N-(2,6-Dichlorophenyl)-4,5-dihydro-1H-imidazol-2-amine; 2-(2,6-dichloromethyl)-2-imidazoline; 2,6-dichloro-N-2-imidazolidinylidenbenzenamine; 2-(2,6-dichloromethyl)-1,3-diazocypentene-2)-2-(2,6-dichlorophenyl)-imino)-2-imidazoline.

**Literature Value For The Molar Mass**
267 g/mol C_{16}H_{16}Cl_{8}N_{2}•HCl

**Molecules Per Chosen Dosage**
(0.1 mg)(1 g/1000 mg)(1 mol C_{16}H_{16}Cl_{8}N_{2}/266.55 g C_{16}H_{16}Cl_{8}N_{2})(6.02 \times 10^{23} \text{ molecules C}_{16}H_{16}Cl_{8}N_{2}/1 \text{ mol C}_{16}H_{16}Cl_{8}N_{2})

- 2.0 \times 10^{23} \text{ molecules of C}_{16}H_{16}Cl_{8}N_{2}
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**Functional Groups**
- Aromatic (3) = Hydrophobic
- Amine (2) = Hydrophilic
- Halo (2) = Hydrophilic
- Imine (1) = Hydrophilic

**Water Solubility**
0.48 mg/ml

**Dose Chosen**
0.1 mg

**How Does The Body Take In The Drug?**
Clonidine Hydrochloride is administered orally and should be swallowed whole. Clonidine Hydrochloride is readily absorbed in the gastrointestinal tract.

**How Does The Body Break Down The Drug?**
Clonidine Hydrochloride stimulates alpha2-adrenergic receptors in the central nervous system to inhibit sympathetic cardiosaccelerator and vasomotor centers through centrally acting receptor agonist. These central actions reduce plasma concentrations of norepinephrine which decreases systolic and diastolic blood pressure and heart rate.

**How Does The Body Eliminate The Drug?**
Clonidine Hydrochloride is eliminated 80% through urine and 20% in feces.

**What Does The Body Do With The Drug After The Drug Is Absorbed?**
Clonidine Hydrochloride is metabolized in the liver after the body is done using the drug.

**Trade Names**
Catapres, Catapres-TTS, Dikarlan, Duraclon, Kapvay

**Calculating Molar Mass**
C_{18}(12.01) = 108.09 g/mol
H_{10}(1.01) = 10.10 g/mol
Cl_{8}(35.45) = 106.35 g/mol
N_{2}(14.01) = 42.03 g/mol

C_{16}H_{16}Cl_{8}N_{2}\cdot HCl

**SOURCES**