

### 1.3.1 Identification

**Table 3: Physical and Chemical properties of candesartan(astrazenka inc. 2013)**

Identification	
Name	Candesartan
Accession Number	DB00796 (APRD00420)
CAS number	139481-59-7
Weight	Average: 440.454 Monoisotopic: 440.159688536
Chemical Formula	C <sub>24</sub> H <sub>20</sub> N <sub>6</sub> O <sub>3</sub>
Solubility	Practically insoluble in water
Half life	5-10 hours
Protein binding	>99%
Melting point	157-160 C
logP	4.02
logP	5.05
Logs	-4.8
pKa (strongest acidic)	2.97
pKa (strongest basic)	1.71
physiological charge	-1
hydrogen acceptor count	7
hydrogen donor count	2
rotatable bond count	7
Refractivity	134.92
Polarizability	45.35

\* \* available online at (ChemAxon, ALOGPS).

From table 3 candesartan chemical formula is C<sub>24</sub>H<sub>20</sub>N<sub>6</sub>O<sub>3</sub>

With Clearance: 0.37 mL/min/kg. and Volume of distribution: 0.13 L/kg.

Bioavailability: 15% (candesartan cilexetil), it is highly protein bonded

Candesartan cilexetil is a white to off-white powder with a molecular weight of 610.67. It is practically insoluble in water and sparingly soluble in methanol. With melting point of 157-160 C Candesartan cilexetil is a racemic mixture containing one chiral center at the cyclohexyloxycarbonyloxy ethyl ester group.