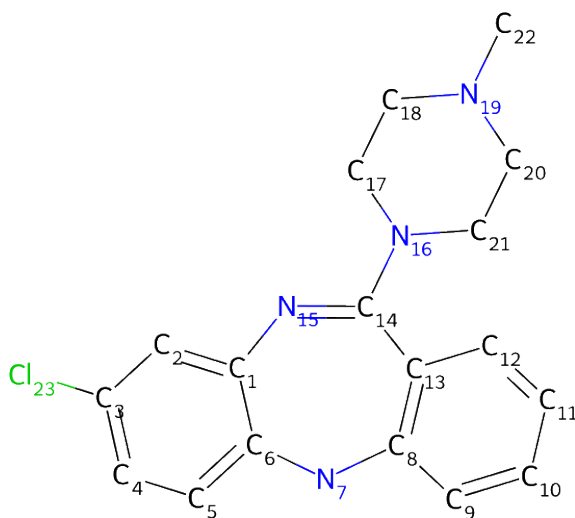


C-oxidation BDE Energy Report for: 089_clozapine-out

This report covers the results for bond dissociation enthalpies (BDE) and solvent accessible surface area (SASA) calculations performed for 089_clozapine-out. Oxidation propensity is established using C-H BDE. The lower the C-H BDE values the higher the propensity for C-oxidation. Details for the density functional theory (DFT) calculations and overall workflow are explained at the end of this document.

BDE and SASA



Atom	BDE (kcal/mol)	Propensity	SASA (Å ²)
C2	115.04	Low	19.50
C4	114.09	Low	29.84
C5	111.86	Low	25.91
C9	112.78	Low	26.05
C10	112.07	Low	35.90
C11	113.09	Low	35.52
C12	111.7	Low	14.42
C17	92.77	Moderate	15.10
C18	91.89	Moderate	19.66
C20	91.53	Moderate	20.28
C21	90.75	Moderate	19.52
C22	93.0	Moderate	27.36

Missing Sites:

None

Risk Scale:**Calculation Details**

Conformational search calculations were performed only for the base ground state molecule. The lowest energy conformer was selected to generate radicals and run optimization DFT calculations. DFT calculations were performed using Gaussian with B3LYP level of theory and 6-31G(d,p) basis set. The BDE protocol was adapted from: *Lienard, P., Gavartin, J., Boccardi, G., & Meunier, M. (2015). Predicting drug substances autoxidation. Pharmaceutical research, 32, 300-310.*