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Inelastic processes of electron interactions with halouracils – cancer therapy agents CHETAN LIMBACHIYA, The M.S. University of Baroda, Vadodara, India, MINAXI VINODKUMAR, V.P. Science College, Vallabh Vidyanagar, India, MOHIT SWADIA, P.S. Science College, Kadi, India — We report electron impact total inelastic cross sections for important cancer treatment agents, 5-fluorouracil (5FU), 5-chlorouracil (5ClU) and 5-bromouracil (5BrU) from ionization threshold through 5000 eV. We have employed Spherical Complex Optical Potential [1, 2] method to compute total inelastic cross sections Q_{inel} and Complex Scattering Potential – ionization contribution (CSP-ic) formalism, to calculate total ionization cross sections Q_{ion}. Electron driven ionization cross sections for these important compounds of therapeutic interest are reported for the first time in this work. In absence of any ionization study for these cancer therapy agents, we have compared the data with their parent molecule Uracil. Present cross sections may serve as a reference estimates for experimental work.

[1] Minaxi Vinodkumar *et al.*. Int. J. Mass Spectrom., **339– 340,** 16 (2013)
[2] Chetan Limbachiya *et al.*, Molecular Physics, **112(1)**, 101 (2014)

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