

Antioxidant Activity of *Syzygium Cumini* of Various Geographic Locations

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Abstract Fruits rich in antioxidants, especially berries have therapeutic effect for myriad of diseases including diabetes, arthritis, cancer, etc. This study aimed at evaluation and comparison of antioxidant potential of pulp and seed of *Syzygium cumini* (Jamun) procured from different geographic locations i.e., Kharagpur (K), Rohtak (R) and Ahmedabad (A). Ethanolic extract of pulp (P) and seed powder (S) of three samples were assessed for antioxidant potential (IC_{50}) by 1,1-diphenyl-2-picrylhydrazyl (DPPH) free radical scavenging assay, while aqueous ethanolic (50%) extract of the same was assessed for total phenolic content (TPC). The ethanolic extract of P_K (subscript refers to geographic location) showed relatively prominent antioxidant activity with IC_{50} (mg) values in order of $4.66 (P_K) < 7.04 (P_A) < 8.09 (P_R)$. Similar dominance of Kharagpur seed sample was evident from the order of IC_{50} as: $2.26 (S_K) < 2.48 (S_R) < 3.95 (S_A)$. For TPC (mg Gallic acid/g dry matter), the values were like this: $63.96 (S_K) < 72.83 (S_A) < 74.88 (S_R)$ and $8.48 (P_K) < 9.30 (P_R) < 9.53 (P_A)$. Thus, *Syzygium cumini* procured from Kharagpur could be used as a promising source of natural antioxidants.

Keywords: *Syzygium Cumini*, Antioxidant Activity, IC_{50} of *Syzygium Cumini*, TPC