Vehicle Routing Problem (VRP) addresses a problem which identifies routes scheduled for vehicles moving from a distribution center to serve specific customers and returns to the distribution center. Notwithstanding, cost associated with transportation of business have drawn much attention in the past few years owing to the recent rise in fuel prices, therefore this paper study’s the problem of routing in cold chain logistics distribution with the goal of minimizing the total transportation cost. In this paper a single objective model is formulated and then solved by the Particle Swarm Optimization algorithm. A computational experiment is carried by the proposed model to obtain optimal distance and imputed in to the cost function to obtain the optimal cost. We found that an increase in population size and the number of iterations gives better minimization results.

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**Index Terms**

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