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## **ROUTING SYSTEM FOR INFECTIOUS HEALTHCARE-WASTE TRANSPORTATION IN TUNISIA: A CASE STUDY**

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### **Abstract**

Healthcare waste management is one of the most important environmental problems in the world and particularly in Tunisia, because of the potential environmental hazards and public health risks. The collection of infectious healthcare waste is a highly visible and important service that involves large expenditures. This study discusses the off-site transport problem of infectious healthcare waste from the 12 hospitals in the governorate of Sfax (Tunisia) to a planned steam sterilization disposal centre. This problem of transportation is modelled as capacitated vehicle routing problem (CVRP). Experimental results are reported for the proposed real-life case study from using the solver CPLEX 9.0 software as an interactive optimizer tool. The robust proposed solution method can be considered to be important for a licensed company or for the Sfax municipality for healthcare-wastes transportation system and for CVRP practitioners.

*Key words:* capacitated vehicle routing, exact optimization, infectious healthcare waste, off-site transport

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