Method of transporting a donor heart includes the use of a preservative solution for storing the heart and the use of cooling components. The donor heart is placed in at least three plastic bags: the first bag is filled with at least 1 liter of cardioplegic solution, tied and placed in two more sterile plastic bags, and placed in a transport container, in which temperature sensors and refrigerants are located in plastic bags, the bottom of the container is lined with refrigerants and the bag with the heart is covered in the form of a sleeve. During transportation in a refrigerated container, the temperature is maintained at 9-10 °C.