

Abstract

In addition to being a source of protein, fish is an important source of local and foreign currency earnings in Kenya. A substantial amount of fish production is exported. Approximately 30 per cent is exported to the European Union, the United States, and countries in the Middle East, but nearly half of the total annual fish harvest in Kenya goes to waste due to poor processing and preservation. Measures must be taken to ensure the fish industry is protected and waste is minimized, since the livelihood of over 500,000 people depends on fish as a source of proteins and employment. Therefore, it is necessary to implement appropriate and affordable processing and preservation techniques for fish at the artisanal landing sites in order to reduce the wastage and spoilage of fish during oversupply, and to enhance long storage. This paper presented studies that were conducted to determine the effect of brining on the drying rate of tilapia in a solar tunnel dryer. The paper discussed the materials and methods, including a description of the solar tunnel dryer system; the brining process of fish; the fish drying process; and data analysis. It was concluded that limiting the amount of salt used in brining, and subsequently dehydrating fish with a solar tunnel dryer achieves a more stable and suitable dried fish product than osmotic dehydration or solar drying process separately.