Abstract

Solar drying (natural convection) of Indian minor fish species, such as prawn (*Macrobrachium lamarrei*) and carp (chelwa) (*Oxygaster bacaila*), has been studied. The hourly data for the rate of moisture evaporation, fish temperature and relative humidity of surrounding air have been recorded for complete drying of fish. These data were used for determination of the coefficients of convective heat and mass transfer. Convective heat and mass transfer coefficients are mainly dependent on the rate of moisture transfer under the drying process, which have been determined as the function of drying time and moisture content of fish. The convective mass transfer coefficient varied from 8·958 to 0.402 μm s^{-1} for prawn and from 7.613 to 0.320 μm s^{-1} for chelwa fish. The empirical rational models have been developed to predict the convective heat and mass transfer coefficients with moisture contents. The goodness of fit of the model described with higher coefficient of determination 0.9996 and low root mean square error 0.05079 for drying of chelwa fish.