

Effect of processing, packing and storage on the hatching quality of *Artemia* cysts

M.M. Kuruppu¹ and S.U.K. Ekaratne²

¹ National Aquatic Resources Agency, Crow Island, Colombo 15

² Department of Zoology, University of Colombo, Colombo 3

The availability of *Artemia* in the form of cysts having off-the-shelf accessibility makes it an important larval feed in fish and shellfish hatcheries. The hatching quality of *Artemia* cysts purchased by the end-user is of great importance for successful maintenance of commercial hatcheries. Hatching quality of cysts is related to the drying, preservation and storage methods used in the industry by *Artemia* producers. This work reports the effect of different techniques of preserving and storage of *Artemia* cysts on their shelf-life. Samples of dried, semi-dry and wet cysts were either bottled or vacuum-packed in pouches and either stored at room temperature or were refrigerated. The hatching percentage of these cysts was determined every three months for a period of one year. Dried cysts vacuum-packed and stored at room temperature had the highest hatching percentage of 88.3% at the end of one year followed by dried cysts (87.2%) vacuum-packed and refrigerated at 4°C. Among dried samples the lowest hatching percentage was in cysts packed in glass bottles and refrigerated. The hatching percentage in semi-dry cysts varied from 63.0% in cysts packed in glass bottles and stored at room temperature to 69.6% in vacuum-packed cysts stored at room temperature. Of the wet cysts, the hatching percentage was higher (49.8%) in those packed in glass bottles and stored in room temperature than in refrigerated cysts (47.4%). Among the processing methods, the method of drying is superior to keeping cysts in a semi-dry or wet condition. Vacuum-packing and storage at room temperature was found to be superior to the other methods of packing and storage.