D-43: Effect of processing, packing and storage on the hatching quality of Sri Lankan Artemia cysts

M M Kuruppu[1], S U K Ekaratne[2]
([1]National Aquatic Resources Agency, Crow Island, Colombo 15, [2]Dept of Zoology, Univ of Colombo, Colombo 3)

Artemia are widely used as larval feed in fish and shellfish hatcheries where cysts are stored until they are hatched. The quality of *Artemia* cysts purchased by the end-user is, therefore, of considerable importance for the success of commercial hatcheries.

Cysts of the Sri Lankan strain of *Artemia parthenogenetica* were processed according to 3 methods as dry, semi-dry and wet (in brine) preparations. Cysts from each processing method were subjected to 2 packing treatments (bottling and vacuum-packing in pouches). Each of these 6 combinations of processed and packed cysts were stored under 2 temperatures (room temperature of 29 $\pm$ 1.5°C and refrigeration at 4 $\pm$ 1°C) for a period of 1 year and keeping quality of cysts were tested, as hatching percentage of cysts, at 3 monthly intervals.

Vacuum-packed dry cysts stored at room temperature had the highest hatching percentage of 88.3% at the end of one year, followed by vacuum-packedrefrigerated dry cysts (87.2%). From among dry cysts the lowest hatching percentage which was 47.4% was in refrigerated glass-bottled cysts. Thehatching percentage of semi-dry cysts varied from 63.0% (cysts in glass bottles at room temperature) to 69.6% (vacuum-packed cysts at room temperature). Of the wet cysts, the hatching percentage was higher (49.8%) in those packed in glass bottles and stored at room temperature than in refrigerated cysts (47.4%). Dry condition, vacuum-packing and storage at room temperature were the best methods of processing, packing and storage, respectively, for ensuring acceptable hatching quality of Sri Lankan *Artemia* cysts.