Vol. 3: 363–364, 1980 | MARINE ECOLOGY – PROGRESS SERIES
Mar. Ecol. Prog. Ser. | Published December 15

SHORT NOTE

Availability of Reference *Artemia** Cysts

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ABSTRACT: Biometrical, biochemical and food-value characteristics of *Artemia* nauplii vary with the source of the cyst material. In order to facilitate intercalibration and/or comparison of research conducted with cysts from different sources, homogeneous cyst material can now be obtained from the *Artemia* Reference Center (State University of Ghent, J. Plateaustraat 22, B-9000 Ghent, Belgium). The reference cysts have been tested extensively for hatching characteristics, biometrics, fatty-acid content, pesticide contamination and effectiveness as larval food for various crustaceans and fishes.

Cysts of the brine shrimp *Artemia* sp. are now commercially available from natural sources in Argentina, Australia, Brazil, Canada, France, India, People's Republic of China, Spain, Thailand and USA (Sorgeloos, 1980a). Literature data (see reviews by Kinne, 1977 and Sorgeloos, 1980b), personal communications with fish and crustacean mariculturists and detailed biological and biochemical analyses of the interdisciplinary research program 'International Study on *Artemia*' (ISA; more details in Sorgeloos, 1980b) indicate that the biometrical and biochemical characteristics of *Artemia* nauplii as well as their food value for various predator larvae vary greatly from one *Artemia* source to another. Furthermore, it has been noted at repeated occasions that the exact geographical origin of some commercial cyst sources is not always specified exactly.

In view of the difficulty of intercalibration and/or comparison of research experiments with different sources of brine shrimp, the participants of the Workshop 'Characterization of *Artemia* Strains for Application in Aquaculture', held at the occasion of the International Symposium on the Brine Shrimp *Artemia salina* L. (Corpus Christi, Texas-USA, August 1979) (Simpson et al., 1980), agreed that the ISA-team should explore the possibility of making available a certified or standard *Artemia* source as reference material. This objective has been realized: a homogenous stock of *Artemia* cysts has been acquired and is kept at the *Artemia* Reference Center in Belgium. The origin of the 'Reference *Artemia* Cysts' (RAC) will not be disclosed for obvious commercial reasons.

The Reference cysts have been tested extensively by the ISA-laboratories for their hatching characteristics, biometrics, fatty acid content, pesticide contamination and effectiveness as larval food for *Rhithropanopeus harissii, Mysidopsis bahia, Menidia menidia* and *Pseudopleuronectes americanus*. The RAC-nauplii are small in size, a good source of poly-unsaturated fatty acids (20 : 5ω3), low in chlorinated hydrocarbons and they support good growth and maximal survival for the fish and crustacean larvae tested so far.

Small samples of the RAC-stock are available from the *Artemia* Reference Center for use as calibration material for any type of fundamental or applied *Artemia* research.

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* The binomen *Artemia salina* L. is taxonomically no longer valid (Bowen and Sterling, 1978; Bowen et al., 1980). In view of the important genetical differences between parthenogenetic strains of brine shrimp (Abreu-Grobois and Beardmore, 1980), species definition in the genus *Artemia* has become unclear. As a result, the editors of the 'Proceedings of the International Symposium on the Brine Shrimp, *Artemia salina* L.' (Corpus Christi, Texas-USA, August 20–23, 1979) suggest that, unless the exact species can be identified (20 bisexual strains have been classified so far into 5 sibling species by Bowen et al., 1978) and until speciation in brine shrimp is better understood, only the genus designation *Artemia* should be used (Persoone et al., 1980)

** 'Bevoegdverklaard Navorser' at the Belgian National Science Foundation (N.F.W.O.)

0171-8630/80/0003/0363/$ 02.00

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