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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 21673-2008

Water quality requirement for marine shrimp breeding

海水虾类育苗水质要求

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Standardization Administration of the PRC**

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Foreword

GB/T 21673-2008 was issued on 9 April 2008 by the General Administration of Quality Supervision, Inspection and Quarantine and the Standardization Administration of the People's Republic of China, and has been in force since 1 June 2008.

The document is a recommended national standard: the /T in the designation marks it as recommended rather than compulsory.

1 Scope

China's national water quality specification for marine shrimp hatcheries. A hatchery is the narrowest point in the whole shrimp industry: the larvae spend a few weeks passing through several moults, and at that size they have almost no capacity to tolerate a chemical insult that an adult would shrug off. A trace of pesticide carried in on the intake water, a little copper leached from a fitting, a drop in pH, and an entire production run is lost - which is why the tolerances here are far tighter than in the general fishery water standard, several of them at the level of parts per billion. The standard specifies the principal water quality indices and the methods of examination for the water used in breeding marine shrimp, setting requirements for appearance, colour and odour, for pH and salinity, and maximum concentrations for mercury, cadmium, lead, copper, zinc, selenium, arsenic, malathion, benzene hexachloride, petroleum hydrocarbons and cyanide. It applies mainly to the water used in the artificial breeding of penaeid shrimp, and also to the breeding water of other marine shrimp species.

This standard specifies the principal water quality indices and the methods of examination for the water used in breeding marine shrimp.

This standard applies mainly to the water quality for the artificial breeding of penaeid shrimp in sea water, and is also applicable to the breeding water of other marine shrimp.

2 Normative references

The provisions of the following document become provisions of this standard through

reference in it. For dated references, subsequent amendments (excluding corrections) or revisions do not apply to this standard; however, parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent edition. For undated references, the latest edition applies.

GB 11607 Water quality standard for fisheries.

3 Technical requirements for water quality

In addition to complying with the provisions of GB 11607, the water quality for shrimp breeding shall meet the requirements of Table 1. The table lists fourteen items. The first is appearance, colour and odour: the water shall be normal in colour, shall not appear red, white or blue, shall have no off-odour, and no oil film or other foreign matter shall be present on the surface. The second and third are the permitted ranges of pH and of salinity. The remaining eleven are maximum concentrations, in milligrams per litre, for mercury, cadmium, lead, copper, zinc, selenium, arsenic, malathion, benzene hexachloride, petroleum hydrocarbons and cyanide - the heavy metals and the two organic pesticides being the contaminants most often carried in with intake water.

4 Methods of examination

4.1 The examination of the water quality for shrimp breeding is carried out by the methods specified in GB 11607.

4.2 The final result of the salinity determination is calculated by formulae (1) and (2), the first applying when the water temperature is above 17.5 degrees C and the second below it, from the measured ratio and the temperature.