

# Schedule I – Fish

## 1. Condition

Water quality is a key determinant of fish welfare. To assess it, levels of ammonia and nitrite must be checked first. Only if such measurements exceed the recommended standards below, or there is an unexplained problem, is there any need to proceed further. Minimum water standards must be:

### Cold Water Species

Free Ammonia	max 0.02mg/l
Nitrite	max 0.2mg/l
Dissolved Oxygen	min 6mg/l
Nitrate	max 50mg/l above ambient tap water

### Tropical Freshwater Species

Free Ammonia	max 0.02mg/l
Nitrite	max 0.2mg/l
Dissolved Oxygen	min 6mg/l
Nitrate	max 50mg/l above ambient tap water

### Tropical Marine Species

Free Ammonia	max 0.01mg/l
Nitrite	max 0.125mg/l
Nitrate	max 100mg/l
pH	min 8.1
Dissolved Oxygen	min 4.0 mg/l

#### Guidance

It is virtually impossible to determine the quantity of aquatic organisms to be kept in a system purely on a weight or number of aquatic organisms per unit, volume, or water surface area. The variation in holding system used, the quality of husbandry and the types of aquatic organisms stocked vary so greatly that it would render any such system too complicated to be practical or too simple to be useful. The maintenance of water quality standards can be used to determine working stocking densities. The water quality standards should not be met at the expense of a correct feeding regime. Exceptions to these standards might occur e.g. when aquatic organisms are diseased, after transport or other stress. However in these cases appropriate remedial actions e.g. treatment,

acclimatisation or isolation should be undertaken. Sea water holds less oxygen than fresh water. The recommended level is 5.5 mg/l so extra care is needed to ensure that levels do not routinely fall below this.

## 2. Condition

Water quality must be checked regularly and records kept of all tests. Centralised systems must be tested weekly. 10% of individually filtered tanks or vat must be tested weekly. On aquaria or vats in which visual inspection indicates unusual behaviour or deaths, water quality inspections should be undertaken.

#### Guidance

One test is representative of all the water in the system of centralised systems. Standalone systems must each be tested. Poor water quality is often the underlying cause of problems presenting as disease or mortalities.

## 3. Condition

Holding systems must be cleaned and checked regularly.

#### Guidance

Aquaria must be checked daily and cleaned as often as is necessary to maintain good hygiene standards, consistent with the rate of stock turnover and consequent stocking densities.

## 4. Condition

No aquatic organisms should be exposed to excessive light or heat, or lack of adequate warmth.

#### Guidance

No fish or other aquatic organism should be subject to rapid fluctuation in light (lights should be on dimmers if automated), temperature and chemical composition of their water, other than for the controlled treatment of disease or as part of a controlled breeding programme. There are in excess of 4000 fish species in trade and thus the acceptable conditions may vary substantially and often counter intuitively. In case of doubt expert advice should always be sought.