

LANAT35

Monitor and maintain the health and welfare of zebra fish in a Home Office designated establishment



Overview

This standard covers monitoring and maintaining the health and welfare of zebra fish in a Home Office designated establishment. Included in this standard are the following:

1. Systems - primarily recirculating;
2. Water quality - monitoring and parameters;
3. Feeding regimes;
4. Fish breeding;
5. Larval rearing including water quality and feeding regimes;
6. Juvenile grow out program

This standard is for licensed animal technologists and animal technologists with responsibility for monitoring and maintaining the health and welfare of zebra fish in Home Office designated establishments.

It is essential that you work strictly within the limits of both your personal licence and the relevant project licence at all times.

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Performance criteria

You must be able to:

- P1 monitor system and life support function for zebra fish
- P2 perform routine maintenance on systems ensuring optimal function
- P3 monitor water quality and other environmental parameters to include pH, salinity, conductivity, temperature and nitrate, nitrite and ammonia levels
- P4 effect change if water quality falls outside of set parameters
- P5 monitor and assess the health and welfare of the fish, identify signs of ill health and act appropriately
- P6 ensure a correct feeding regime for all fish, depending on age within the facility
- P7 prepare both live and dry diets for all ages of fish
- P8 effectively set up breeding systems depending on requirements and/or instructions
- P9 monitor and maintain a larval rearing programme, depending on instructions
- P10 monitor and maintain a juvenile grow out programme, depending on instructions
- P11 maintain appropriate levels of hygiene and bio-security
- P12 keep accurate and up-to-date records as required by relevant legislation and the organisation
- P13 conduct all activities within the provision of your personal licence and the project licence
- P14 comply with legislation relating to the care and welfare of animals in a Home Office designated establishment
- P15 carry out all work in accordance with relevant environmental and health and safety legislation, risk assessment requirements, codes of practice and company policies

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Knowledge and understanding

You need to know and understand:

- K1 the principles of life support systems in an aquatic environment.
- K2 the principles of water filtration
- K3 the instrumentation involved in monitoring life support and the calibration requirements
- K4 the effect of pH, salinity, conductivity and temperature on water quality
- K5 the nitrogen cycle and its component parts and the effect on water quality
- K6 the instrumentation involved in water quality monitoring and the calibration requirements
- K7 why certain water parameters are critical to the physiological well being of the fish
- K8 the basic biology of zebra fish
- K9 the basic signs of ill health in zebra fish and the possible causes
- K10 the basic nutritional requirements of zebra fish
- K11 why certain food types are fed at different stages of the life cycle
- K12 the role of dominance hierarchies and the effect on fish mating
- K13 the basic physiological mechanisms of free spawning fish mating
- K14 the different ways in which zebra fish can be mated and in which situations these way may be used
- K15 that zebra fish provide no parental care to offspring
- K16 the physiology of the different stages of the larval fish to juvenile and how this affects the different husbandry required at each stage
- K17 the different physiological requirements of a juvenile compared to either a larval form or an adult and be aware of how this will affect the different husbandry required at this stage
- K18 the importance of maintaining appropriate levels of hygiene and bio-security and how this can be achieved
- K19 appropriate records to be kept and their significance
- K20 the provisions of your personal licence and the provisions of the project licence
- K21 your responsibilities for the care and welfare of animals in a Home Office designated establishment under relevant animal welfare legislation, European directives and UK codes of practice
- K22 your responsibilities under relevant environmental and health and safety legislation, codes of practice and company policies

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