

CHEMICALS & METHOD STATEMENTS FOR MARINE SITES

Fish anaesthetics

General Work Method Statement - anaesthetising fish

- Anaesthetic bath is prepared in a small container (10-200 ltr depending on requirements) by mixing anaesthetic stock solution into water to achieve required concentration.
- Tricaine Pharmaq is normally used.
- Fish are immersed in the prepared bath to achieve a level of sedation appropriate to the procedure being carried out (light sedation to full anaesthesia).
- Oxygenation of anaesthetic bath may be required.
- After sedation fish are placed in clean water to recover.
- Fish under anaesthetic or recovering are monitored throughout.
- Discharge of anaesthetic solution is minimised by use of each tank of anaesthetic for multiple batches of fish, and by making up a volume appropriate to the size and number of fish.
- Safety precautions recommended by the manufacturers are taken.

Anaesthetic chemicals:

Trade name:	Benzocaine
Supplier/Manufacturer:	James A Mackie, Alpharma Animal Health
Active Ingredient:	Ethyl-4 aminobenzoate
MSDS sheet:	Supplied
Maximum usage:	50 litres 1-2 times per year, as required
Storage:	Site chemical store
Comments:	10% benzocaine stock solution is made up by dissolving 100g benzocaine powder in 1 litre of acetone

Trade name:	Acetone
Supplier/manufacturer:	James A Mackie
MSDS sheet:	Supplied
Maximum usage:	As required to dilute benzocaine (above)
Storage:	Site chemical store

Trade name:	Tricaine Pharmaq
Supplier/Manufacturer:	Pharmaq
Active Ingredient:	Tricaine methane sulphonate
MSDS sheet:	Supplied
Maximum usage:	200g per month
Storage:	Site chemical store

Trade name:	MS-222
Supplier/Manufacturer:	Pharmaq
Active Ingredient:	Tricaine methane sulphonate
MSDS sheet:	Supplied
Maximum usage:	200g per month
Storage:	Site chemical store

Trade name:	2-phenoxyethanol
Supplier/Manufacturer:	James A Mackie
Active Ingredient:	Tricaine methane sulphonate
MSDS sheet:	Supplied
Maximum usage:	50 litres made up solution pa (alternative to MS222)
Storage:	Site chemical store

Trade name:	Nytox
Supplier/Manufacturer:	Naqua
Active Ingredient:	Tricaine methane sulphonate
MSDS sheet:	Supplied
Maximum usage:	200g per month
Storage:	Site chemical store

Trade name:	Aqui-S
Supplier/Manufacturer:	Scan Aqua AS
Active Ingredient:	Isoeugenol
MSDS sheet:	Supplied
Maximum usage:	200g per month
Storage:	Site chemical store

Trade name:	Benzoak Vet
Supplier/Manufacturer:	A.C.D.se
Active Ingredient:	Benzocaine
MSDS sheet:	Supplied
Maximum usage:	50 litres 1-2 times per year, as required
Storage:	Site chemical store

Cleaning and disinfection

General Work Method Statement (disinfection of equipment)

- All moveable items of equipment must be disinfected before being moved onto or off site.
- Item should be physically cleaned using a cleaning agent such as G101 to remove organic material and dirt. This may involve scraping or brushing, pressure washing (commonly with detergent), steam cleaning or use of a foaming agent to loosen debris.
- Cleaned item should be sprayed or totally immersed in iodophor solution (*e.g.* Iodet) (100 ppm) for a minimum of 10 mins. Alternatives are Tego Hypochlorite (100 ppm for 10 mins) or Virkon (0.5% w/v for 30 mins). Disinfectant can be allowed to dry on the equipment in most cases and should not need to be rinsed off.
- Thorough cleaning and disinfection of tanks and pipework is required, particularly before a new generation of fish is introduced to the site.
- Use of disinfectants and detergents is minimised by use of sprays rather than immersion for large items, and by removal of dirt and organic matter by scraping/scrubbing before disinfection.

Note: Maximum usage quantities are for total amount of disinfectant per site per month – most sites will only use one of these products.

Trade name:	G101
Supplier/Manufacturer:	AutoSmart
Active Ingredient:	Sodium hydroxide, alkyl dimethylamine betaine
MSDS sheet:	Supplied
Maximum usage:	50 litres per site per month
Storage:	Site chemical store

Trade name:	Iodet
Supplier/Manufacturer:	James A Mackie (Agricultural), MacGregor Ind. Supplies
Active Ingredient:	Iodine
MSDS sheet:	Supplied
Maximum usage:	50 litres per site per month
Storage:	Site chemical store

Trade name:	Fam 30 Iodophor
Supplier/Manufacturer:	Evans Vanodine International Plc.
Active ingredient:	Iodine
MSDS sheet:	Supplied
Maximum usage:	50 litres per site per month
Storage:	Site chemical store

Trade name: **Virkon S**
Supplier/Manufacturer: Merck
Active Ingredient: Pentapotassium (bis) peroximonosulphate (bis) sulphate, benzene-sulphonic acid, sulphamic acid, dipotassium peroxodisulphate
MSDS sheet: Supplied
Maximum usage: 50 litres per site per month
Storage: Site chemical store

Trade name: **Virasure**
Supplier/Manufacturer: Fish Vet Group
Active Ingredient: Potassium monopersulphate, sulphamic acid, sodium alkyl benzene sulphonate, sodium chloride
MSDS sheet: Supplied
Maximum usage: 50 litres per site per month
Storage: Site chemical store

Trade name: **Aqua Des**
Supplier/Manufacturer: Aquatic Hygiene Ltd
Active Ingredient: Hydrogen peroxide, acetic acid, peracetic acid
MSDS: Supplied
Maximum usage: 50 litres per site per month
Storage: Site chemical store

Trade name: **Somplex Fatsolve**
Supplier/Manufacturer: Diversey
Active Ingredient: Sodium alkylbenzenesulphonate
MSDS: Supplied
Maximum usage: 2.5 litres per site per month
Storage: Site chemical store

Trade name: **Tego Hypochlorite**
Supplier/Manufacturer: Tego Hygiene, MacGregor Industrial Supplies
Active Ingredient: 1-alkyl-1,5-diazapetane
MSDS: Supplied
Maximum usage: 5 litres per site per month
Storage: Site chemical store
Comments: Used for cleaning & disinfection

Trade name: **Tego 2000**
Supplier/Manufacturer: Diversey
Active Ingredient: Amines, n-C10-16-alkyltrimethylenedi-, reaction product with chloroacetic acid
MSDS: Supplied
Maximum usage: 50 litres per site per month
Storage: Site chemical store

Trade name:	Hamid Chloramine T
Supplier/Manufacturer:	Axcentive
Active Ingredient:	Sodium p-toluenesulfonchloramide
MSDS:	Supplied
Maximum usage:	50 litres per site per month
Storage:	Site chemical store
Comments:	Used occasionally for cleaning & disinfection

Trade name:	Fresh Lime
Supplier/Manufacturer:	MSL Ltd
Active ingredient:	Quarternary ammonium chlorides
MSDS sheet:	Supplied
Maximum usage:	50 litres per site per month
Storage:	Site chemical store

Trade name:	Starfish
Supplier/Manufacturer:	MSL Ltd
Active ingredient:	Alcohol ethoxylate
MSDS sheet:	Supplied
Maximum usage:	Bilge cleaner discharged in trace amounts only
Storage:	Site chemical store

Trade name:	Cutlass
Supplier/Manufacturer:	MSL Ltd
Active ingredient:	Sodium hydroxide
MSDS sheet:	Supplied
Maximum usage:	Degreaser – discharged in trace amounts only
Storage:	Site chemical store

Trade name:	Blade
Supplier/Manufacturer:	MSL Ltd
Active ingredient:	2-butoxyethanol
MSDS sheet:	Supplied
Maximum usage:	Degreaser – discharged in trace amounts only
Storage:	Site chemical store

Antibiotics

Work Method Statement for all antibiotics

- Antibiotics would be used for treating bacterial infection and only on veterinary prescription
- Antibiotics will be supplied as a medicated feed prepared by one of the Feed Mills in accordance with a veterinary written direction (VWD)
- The medicated feed will be fed to the fish in accordance with the VWD
- Medicine use will be accurately recorded and kept on file
- Safety precautions recommended by the manufacturers are taken.

Antibiotics which might be used:

Trade name:	Vetremox
Supplier/Manufacturer:	Pharmaq Ltd
Active Ingredient:	Amoxycillin trihydrate 100%
MSDS sheet:	Supplied
Maximum usage:	As required
Storage:	Brought on site only as required for immediate use

Trade name:	Aquatet
Supplier/Manufacturer:	Pharmaq Ltd
Active Ingredient:	Oxytetracycline hydrochloride 100%
MSDS sheet:	Supplied
Maximum usage:	As required
Storage:	Brought on site only as required for immediate use

Trade name:	Branzil
Supplier/Manufacturer:	Pharmaq
Active Ingredient:	Oxolinic acid 100%
MSDS sheet:	Supplied
Maximum usage:	As required
Storage:	Brought on site only as required for immediate use

Trade name:	Florocol
Supplier/Manufacturer:	Schering-Plough Animal Health
Active Ingredient:	Florfenicol 50%
MSDS sheet:	Supplied
Maximum usage:	As required
Storage:	Brought on site only as required for immediate use

Trade name	Sulfatrim
Supplier/Manufacturer	Novartis Animal Vaccines
Active Ingredient	Trimethoprim and sulfadiazine 1:5 50%
MSDS sheet	Supplied
Maximum usage	As required
Storage	Brought on site only as required for immediate use

Trade name	Baytril Oral Solution
Supplier/Manufacturer	Bayer plc
Active Ingredient	Enrofloxacin
MSDS sheet	Supplied
Maximum usage	As required for cleaner fish
Storage	Brought on site only as required for immediate use

Bath Lice Treatments

Working Method Statement for bath treatments supplied as separate attachment

Trade name:	Alphamax/AMX
Supplier/Manufacturer:	Pharmaq
Active Ingredient:	Deltamethrin
MSDS sheet:	Supplied
Maximum usage:	In accordance with SEPA regulations.
Storage:	Brought on site only as required.
Trade name:	Salmosan/Salmosan Vet
Supplier/Manufacturer:	Fish Vet Group
Active Ingredient:	Azamethiphos
MSDS sheet:	Supplied
Maximum usage:	In accordance with SEPA regulations.
Storage:	Brought onto site as required: may be stored for a short time in site chemical store
Trade name:	Azasure
Supplier/Manufacturer:	Neptune Pharma Ltd
Active Ingredient:	Azamethiphos
MSDS sheet:	Supplied
Maximum usage:	In accordance with SEPA regulations.
Storage:	Brought onto site as required: may be stored for a short time in site chemical store
Trade name:	Paramove 50
Supplier/Manufacturer:	Solvay Interlox
Active Ingredient:	Hydrogen peroxide (49.5%)
MSDS sheet:	Supplied
Maximum usage:	3 kg m ⁻³
Storage:	Brought on site only as required.

Trade name:	Salartect 500/350
Supplier/Manufacturer:	Brenntag (UK) Ltd.
Active Ingredient:	Hydrogen peroxide (50% / 35%)
MSDS sheet:	Supplied
Maximum usage:	3 kg m ⁻³ (50%); 4.28 kg m ⁻³ (35%).
Storage:	Brought on site only as required.

Trade name:	Asperix Vet
Supplier/Manufacturer:	Evonik
Active Ingredient:	Hydrogen peroxide (49.5%)
MSDS sheet:	Supplied
Maximum usage:	3 kg m ⁻³
Storage:	Brought on site only as required.

Net antifouling

The products listed below may be used. Net Polish does not contain biocides and may be used as a pretreatment to reduce antifoulant use.

Trade name:	Netpolish
Supplier/Manufacturer:	NetKem AS
Active Ingredient:	Emulsion
MSDS sheet:	Supplied
Maximum usage:	500l/80m net
Storage:	Offsite

Trade name:	Netrex AF
Supplier/Manufacturer:	Mobil Oil
Active Ingredient:	Copper (I) oxide, wax emulsion
MSDS sheet:	Supplied
Maximum usage:	500l/80m net
Storage:	Offsite

Trade name:	Netwax
Supplier/Manufacturer:	NetKem AS
Active Ingredient:	Wax emulsion, copper (I) oxide
MSDS sheet:	Supplied
Maximum usage:	500l/80m net
Storage:	Offsite

Trade name: **AquaNet**
Supplier/Manufacturer: NetKem AS
Active Ingredient: Copper (I) oxide
MSDS sheet: Supplied
Maximum usage: 500l/80m net.
Storage: Offsite

Trade name: **Flexgard VI**
Supplier/Manufacturer: Flexabar Corporation
Active Ingredient: Copper (I) oxide, ethylene glycol, dichlofluanid
MSDS sheet: Supplied
Maximum usage: 500l/80m net
Storage: Offsite

Trade name: **Flexgard VIII**
Supplier/Manufacturer: Flexabar Corporation
Active Ingredient: Ethylene glycol, dichlofluanid
MSDS sheet: Supplied
Maximum usage: 500l/80m net
Storage: Offsite

Trade name: **Flexgard XI**
Supplier/Manufacturer: Flexabar Corporation
Active Ingredient: Copper (I) oxide, polyvinyl/acrylic copolymer, ethylene glycol
MSDS sheet: Supplied (2 versions)
Maximum usage: Max working concentration copper (I) oxide 3%.
500l/80m net, product diluted 50% before use.
Storage: Offsite