**Summarized list of all experiments**

I. Biodiversity and abundance of bacteria and nanoflagellates in the Kuroshio Region (for each station)

II. Interactions between marine microbial loop and grazing food web (for 3 stations in each transect lines, totally 18 stations)

\* We will bring it by ourselves

**Sampling materials:**

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | Item | Quantity | Exp. |
|  | 30 meters Silicone tube 1 for Glo-Flo or Niskin petcock assy | 1 | I, II |
|  | peristaltic pump  (with LS25 tube X 8 (2 for backup)) | 6 | 2 for I,  4 for II |
|  | Silicone tubes 2 for pump rotate #1 | 12 tubes | 4 for I,  8 for II |
|  | Silicone tubes 3 for pump to filter holder #2 | 12 tubes | 4 for I,  8 for II |
|  | Filter holder (to hold the 142 mm filter) | 5 sets | 3 sets for I,  2 sets for II |
|  | Plastic joint 1 for tube 2 to tube 3 | 8 | 4 for I,  4 for II |
|  | Plastic joint 2 for filter holder to tube 3 | 8 | 4 for I,  4 for II |
| \* | Silicone gel for pump-tube | 1 or 2 bottles | I, II |
|  | P.T.F.E Thread seal tapes (Teflon tape, https://tg.pe/4YN) | 1 | I, II |
|  | 100 L dark incubation tanks | 8 | II |
|  | 20 L cubitainers | 24 | II |
|  | 100 mL plastic bottles | 160 | II |
|  | 10-20 Liter Carboy/ Water bottles (polycarbonate bottle) | 6 | I |
|  | 20L carboys | 11 | 6 for I,  5 for II |
|  | 2L carboys | 50 | II |
|  | Parafilm for sealing 2L carboys | 1 | II |
|  | 20 L plastic buckets (diameter 40 cm) | 2 | II |
|  | 50 μm Norpac net | > 15 | II |
|  | 100 μm Norpac net | > 5 | II |
|  | Flowmeter for Norpac | 2 | II |
|  | Cod End for Norpac | 5 | II |
|  | Alcohol thermometer | 2 | II |

**Filters:**

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | Item | Quantity | Exp. |
|  | 80 μm sieves (diameter 30 cm) for reverse filtration | 2 | II |
|  | 150 μm sieves (diameter 30 cm) for reverse filtration | 2 | II |
| \* | 2m x 2m 20 μm nylon filter | 4 | 1 for I,  3 for II |
| \* | 2m x 2m 50 μm nylon filter | 2 | II |
| \* | 50 um hand-made sieve | 2 | II |
| \* | 20 μm sieve | 2 | II |
| \* | 1.2 μm polycarbonate filters (142 mm in diameter) | 6 boxes | 4 boxes for I,  2 box for II |
| \* | 0.2 μm polycarbonate filters (142 mm in diameter) | 6 boxes | 4 boxes for I,  2 box for II |

**Chemicals:**

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | Item | Quantity | Exp. |
|  | 50 % Glutaraldehyde  (50ml sample with final concentration 1%) | 600 mL | 400 mL for I, 200 mL for II |
|  | 10% Paraformaldehyde  (2 ml sample with final concentration 0.2%) | 15 mL x 4 tubes | 2 tubes for I  2 tubes for II |
|  | 40% formalin or  10% formalin | 3 L  (140 mL per set)  12 L  (560 mL per set) | II |
|  | 75% Ethanol | 3 L | 2 L for I,  0.5 L for II |
|  | Liquid nitrogen | ??? | I, II |

**Tools:**

|  |  |  |  |
| --- | --- | --- | --- |
| Mark | Item | Amount | Exp. |
|  | Sharpie marker | 10 | I, II |
|  | Electrical Tapes | 12 | I, II |
| \* | Container box | 5 | 5 for I |
|  | 3.6 mm(width) x 150 mm cable tie/zip tie | 30 | 20 for I,  10 for II |
|  | Big cable tie/zip tie | 30 | 20 for I,  10 for II |
|  | 75-150 square foot roll Aluminum foil | 2-3 pack | I, II |
|  | Curved extra fine tip tweezer | 6 | 4 for I,  2 for II. |
|  | Scissors | 3 | I, II |
| \* | 5 mL Cryogenic tubes | 200 | 200 for I |
| \* | 2 mL Cryogenic tubes | 1240 | 200 for I, 1040 for II |
| \* | 50 mL Centrifuge tubes | 500 | 200 for I, 300 for II |
| \* | 3 or 5 mL Plastic dropper | 20 | 10 for I,  10 for II |
|  | 1000uL Pipette | 3 | I |
|  | 20uL Pipette | 3 | I |
|  | 1000uL tip | 3 boxes | I |
|  | 20uL tip | 3 boxes | I |
|  | 100 mL plastic bottles | 160 (8 per set) | II |
| \* | Kimwipes Kimtech 11 x 21cm (280 papers/box) | 1 | II |
|  | Wash bottle | 3 | II |
|  | 200-400 mL Spray bottle | 1 | I |
| \* | Cleaning Sponge Scouring Pad | 2 | II |
|  | Pressure sprayer (<https://tg.pe/rJu>) | 2 | II |
| \* | Labels | 200 | 200 for I |
|  | Basket (Market type) | 1 | I |
|  | Metal rank for 50mL x 9 tubes | 1 | I |
|  | Latex gloves (size M) | 2 boxes | I |
|  | Neoprene rubber gloves (size M) for preventing gluta | 1 pair | I |

**Sampling water volume at each station**

|  |  |  |
| --- | --- | --- |
| Sampling depth | Needed seawater (L) | Exp. |
| Surface | 30 | I. |
| The depth of subsurface Chla max (SCM) | 30 | I |
| 5 meter-depth | 200 | 40 L for II-Exp 1,  160 L for II-Exp 2 |

**The spent time of tow net**

|  |  |  |  |
| --- | --- | --- | --- |
| Sampling depth | Mesh-size | Spend-time (minutes) | Exp. |
| 5-m (vertical tow) | 50 μm Norpac | 25  (The nets were set to 5 m depth and allowed to drift with the ship for 20 minutes) | II-Exp 2 |
| 5-m (vertical tow) | 100 μm Norpac | 25  (The nets were set to 5 m depth and allowed to drift with the ship for 20 minutes) | II- Exp 2 |
| From 200-m to surface (oblique tow) | 50 μm Norpac with Flowmeter | 40-50 | II- Exp 2 |