

## Points for maintaining Wabi-kusa as emerged or submersed plants



### Enjoy Wabi-kusa as emerged plants

#### How about the lighting and temperature?

When growing Wabi-kusa indoor as emerged plants, the biggest problem could be the lighting and temperature. "Branch" which is a lighting system equipped with Halogen lamp is most suited to keep Wabi-kusa emerged. With Branch, adequate amount of light for growing Wabi-kusa can be supplied wherever it is placed in the room. To keep Wabi-kusa without a lighting system, it is suggested to place it at a bay-window with morning sunlight, or by a well-lighted window (at least 3,000lx). In winter, because the temperature gets low, it is a difficult season for tropical plants in Wabi-kusa. The temperature around Wabi-kusa needs to be kept at 15 degrees C. Therefore, early spring to summer when the temperature gets high is the best season for keeping emerged Wabi-kusa in a Plant Glass.

#### How about nutritive additives?

It is essential to supply not only lighting and water but also nutritive additives for growing healthy plants. It is same for Wabi-kusa. By supplying additives appropriately, Wabi-kusa can grow more healthy and beautiful. For emersed Wabi-kusa, there are several ways to apply additives. The several ways include supplying additives directly to water or to the the most suited additive surface using a hand-spray, "be Bright" is for growing emersed Wabi-kusa, which makes the leaf colors darker and more vivid. For Wabi-kusa in a Plant Glass, one capful of be Bright per one liter of water is the most appropriate amount. The frequency of water change should be once a week because when additives are applied to the water, algae tends to emerge and water tends to be spoiled easily. Therefore, if killifishes



and/or shrimps are kept with Wabi-kusa in a Plant Glass, periodical water change is suggested because spoiled water has a negative effect on those organisms. To supply be Bright by spraying with a hand-spray, dilute one capful of be Bright with 500 milliliter of water and continue spraying it for 3 to 4 days. When growing Wabi-kusa emersed, it should not get overdried by air conditioning. In order to avoid Wabi-kusa to get too dry, you can spray water with a handy-spray every morning. Spraying water is effective not only for supplying moisture to the plant but also rinsing the dust on the leaves away.

#### What to do for the bugs?

If you find leaves deforming their shapes, shrinking, or getting blotches on their surfaces, it is suspected that bugs like ant cows are causing such symptoms. When symptoms are mild, bugs can be removed by submerging Wabi-kusa in water for a while. However, for serious symptoms, applying Acetamiprid solution, which is available in the market, diluted by about 1,000 times (please follow the instruction of the product for usage) with a hand-spray is effective. Even if the leaves do not show any symptom, applying Acetamiprid is generally good for preventing bugs. Antcows suck the plant body, so by spraying Acetamiprid, it penetrates to the leaves and helps to prevent Antcows. However, spraying Acetamiprid might have a negative impact for shrimps. So, if the shrimps are kept together in the same container, observe them carefully after spraying Acetamiprid. If you find them acting strange, change the water immediately. Another way to prevent problems with Antcows is that they tend to infest on the back side of leaves, so check the back side of the leaves time to time.



#### What to do when aquatic plants get too long?

If aquatic plants grow healthy, they extend themselves outside of the Plant Glass after a certain period. When they grow too long, you can trim them with specialized trimming scissors to adjust the length. For emersed plants, it usually takes about 3 weeks to be in a good condition after trimming in spring to summer when plants grow fast. Besides, if there are any damaged or old leaves, cut them off as you find them. For stemmed plants, their offcuts produced by trimming can be propagated in the same way as cuttage by planting it in a planter on Aqua-soil during warm seasons, or you can regrow them in water. However, those offcuts should never be discarded outside.



#### What to do for the yellowing water of Waterfall?

For Wabi-kusa maintained with a Waterfall, the water in the Waterfall gradually becomes yellowish. It is due to humic acid contained in the base of Wabi-kusa, and it does not have negative impact on plants' growth. However, if you find it visually unpleasant, you can get rid of the yellowing water by using NA Carbon, an activated carbon filtration media with high absorption performance combined with an external filter such as Super Jet Filter ES-600.



Spray mist every morning as Wabi-kusa kept indoor tends to get dry by air conditioning.

