water storage container 300 and therefore, it is difficult to perform operations such as cleaning inside the water storage container 300 and replacement of the filter cloth 303, which causes a problem in maintainability.

[Citation List]

[Patent Literature]

[Patent Literature 1] Japanese Patent No. 4845855

[Summary of Invention]

[Technical Problem]

Therefore, an object of the present invention is to provide a microorganism sampling device that has a simple and compact configuration and also has excellent maintainability.

[Solution to Problem]

In order to achieve the above object, a microorganism sampling device of one aspect of the present invention is provided for sampling microorganisms existing in water and includes: a lid part having a water supply channel allowing a water supply pipe to be connected thereto, the water supply pipe being for supplying sample water; a housing part, the lid part being detachably attached to the housing

part or the housing part being detachably attached to the lid part; and a filter part housed in the housing part and filtering the microorganisms from the sample water. The lid part is a base part and the housing part is detachably attached to an upper part of the base part. The base part includes an opening for supplying to an inside of the filter part the sample water supplied to the base part. The filter part has a tubular filter and a cup, the cup being attached so as to communicate with the tubular filter. The cup has an opening at a bottom part of the cup and the bottom part of the cup is supported by the base part. The sample water is supplied from an opening provided on the base part to the inside of the filter part via the opening provided on the bottom part of the cup.

The microorganism sampling device of one aspect of the present invention includes: a head part that has a water supply channel to which a water supply pipe for supplying sample water can be connected;

a housing part to an upper part of which the head part is detachably attached; and

a filter part that includes a frame-structured tube body, a tubular filter arranged within the tube body, a cup communicating with the tubular filter and attached to one end of the tube body, and a cap having a channel communicating with the tubular filter and being attached to another end of the tube body, in which the filter part is

housed in the housing part and a bottom part of the cup is supported by a bottom part of the housing part.

The head part is attached to an upper part of the housing part so as to make a water supply channel of the head part and a channel of the cap of the filter part communicate with each other, thereby allowing sample water supplied from the water supply channel of the head part to be supplied into the tubular filter of the filter part.

In the microorganism sampling device of one aspect of the present invention, preferably,

the head part further includes a water discharge channel to which a water discharge pipe for discharging sample water can be connected; and

the head part is attached to the upper part of the housing part so as to make the water discharge channel of the head part and a space outside the filter part communicate with each other, thereby allowing the sample water having passed through the tubular filter of the filter part to be discharged from the water discharge channel of the head part.

In the microorganism sampling device of one aspect of the present invention, preferably,

a discharge port for discharging concentrated water in which microorganisms that are too large to pass through the tubular filter are concentrated is provided on the bottom part of the cup; and a concentrated water discharge part

for discharging the concentrated water from the discharge port of the cup is provided on the bottom part of the housing part.

In the microorganism sampling device of one aspect of the present invention, preferably,

a sample water drain part for draining sample water remaining in the housing part is provided on the bottom part of the housing.

In the microorganism sampling device of one aspect of the present invention, preferably,

a rectifying part for swirling the sample water supplied into the tubular filter is provided within the channel of the cap.

In the microorganism sampling device of one aspect of the present invention,

the lid part is a base part,

the housing part is detachably attached to an upper part of the base part,

Claims

[Claim 1]

A microorganism sampling device for sampling microorganisms existing in water, comprising:

a lid part having a water supply channel allowing a water supply pipe to be connected thereto, the water supply pipe being for supplying sample water;

a housing part, the lid part being detachably attached to the housing part or the housing part being detachably attached to the lid part; and

a filter part housed in the housing part and filtering the microorganisms from the sample water, wherein

the lid part is a base part;

the housing part is detachably attached to an upper part of the base part;

the base part includes an opening for supplying to an inside of the filter part the sample water supplied to the base part;

the filter part has a tubular filter and a cup, the cup being attached so as to communicate with the tubular filter;

the cup has an opening at a bottom part of the cup and the bottom part of the cup is supported by the base part; and

the sample water is supplied from an opening provided on the base part to the inside of the filter part via the opening provided on the bottom part of the cup.

[Claim 2]

A portable microorganism sampling device comprising a frame with a stand provided on a back surface; wherein the

microorganism sampling device according to claim 1 is fixed to the frame.