

[Method of Preserving Water Sweet]

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Publication Format

Print

Type

Drink

Miscellaneous

Ingredients

charcoal

water

vitriolic acid

Places

Nova Scotia

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Description

Instructions on how to preserve water while transporting it in barrels; for use on ships. nn.658_59. Microfilm Reel 8063.

Transcription

A new and easy METHOD of preserving WATER sweet, for the USE of SEAMEN in SEA VOYAGES, and of purifying it when stinking.

IT is well known that water cannot become putrid, unless it contains animal and vegetable substances; and as this is the case with all river water, it follows that this water, which is generally used on board of ships, is subject to become putrid and nauseous, more or less, in proportion to the quantity and quality of the animal and vegetable matter contained in it.

Another cause of corruption is owing to the dissolving property of water; so that it often happens, that though the casks be filled with pure spring water, yet the water, by dissolving the impurities which may

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be found adhering to the casks, and becoming impregnated with them, or even with the substance of the wood itself, will become putrid after a certain time.

The principal article, by the means of which Mr. Lowitz preserves and purifies water, is charcoal dust; and from a great variety of experiments, the following particulars are deduced for the practical accomplishment of an object so very important to the seafaring people.

The charcoal must be pounded very finely, and the powder must be kept clean, and as free as possible from dust, smoke,

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or other impurities; but the quality of the wood of which the charcoal is made needs not to be regarded, provided it be well charred.--Mr. Lowitz finds that even fossil coal, when well charred and powdered, will answer for the purpose; but he does not mean to recommend the use of it, on account of the metallic minerals which are frequently mixed with it, besides other reasons.

About three drachms of charcoal dust will preserve four ounces of common river water, or will purify it when actually stinking; but if a little acid be added, then a much smaller quantity of charcoal will do.

Any of the mineral acids will produce the effect, and even some salts; but the vitriolic acid is to be preferred, principally on account of its having no smell.

In order to preserve fresh water, the casks must be previously well washed and scoured with sand or charcoal dust. After having been filled with the river water, put as much vitriolic acid into it as is just sufficient to render the water slightly acid: then add about eight pounds weight of charcoal dust to each cask; and as the charcoal dust naturally falls to the bottom of the casks, it should be stirred with a stick at least once a-day, so as to let it come into contact with as much water as possible; and this is all that needs be done to prevent the water acquiring any bad smell or taste.

When the water is to be used, it should be filtered through a flannel bag, which must be ready at hand, and a proper stand for it may be easily contrived. This fil-

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tration serves only to separate those finer particles of charcoal, which, by swimming in the water, give it a blackish appear-

ance.

It is very remarkable that, if water be rendered just sensibly acid by mixing a little vitriolitic acid with it, the addition of charcoal dust will remove the acidity.

In order to purify the water which is actually stinking in the casks, proceed in the same manner as in the preceding operation; viz. first, put some vitriolitic acid into the cask, and the[n] as much charcoal dust as upon trial will be found sufficient to remove the bad smell. In case that neither vitriolitic nor any other acid can be had, then charcoal dust alone is sufficient to purify the water: but in this case a greater quantity of it must be used; perhaps three time as much as when the acid is employed.--This purified water must be also filtrated as above.

In this manner the operation is soon performed; ten minutes, or a quarter of an hour, being more than sufficient time for it.

To preserve the water which has been thus purified, when it is not immediately used, it must be removed into clean casks; otherwise it is apt to become putrid again in a short time.

It is almost needless to remark, that as the waters of different rivers, in different climates and seasons of the year, are impregnated with various proportions of animal and vegetable matter, so the quantity of charcoal dust which must be employed to preserve and purify them, must be more or less in proportion.