Q&A

12Q6: Recently, we have algae problems in our raw water. We consider starting odor test. Please explain its procedures. (L.N, Cambodia)

A: A kind of algae is known as a source of unpleasant odor, so it is necessary for us to know algal growth in raw water. In Japan, musty odor problem of water supply is mainly occurred by odor producing blue-green algae in eutrophic lake. Odor assessments using human sense are performed to provide qualitative descriptions and approximate quantitative measurements of odor intensity.

1. Sampling
   Sample bottle should be cleaned before analysis in order to exclude contamination of other odors. The sample should be kept cool and tested as soon as possible after collection.
2. Panelists
   For assessing the odor of samples, the testing panel should be composed of people familiar with the odor of the source to be analyzed. Panelists should be free from colds or allergies that affects odor response, should not eat or smoke up to 1 hour prior to the test. Ideally, on the day of the test, panelists should avoid the use of perfumes or cosmetics, including scented soap for hand washing. At least three panelists should be available to perform the assessment of odor.
3. Odor assessment (qualitative descriptions)
   Water sample is smelled by a group of people in order to provide qualitative description of the odor; in addition, an indication of intensity of the odor. If you can record the indication of intensity of the odor, the information is useful for evaluation of water quality accurately. If your water treatment plant use chlorine for disinfection, treated water has chlorine odor. In that case, the sample should be de-chlorinated for further assessment.

Analytical Procedure

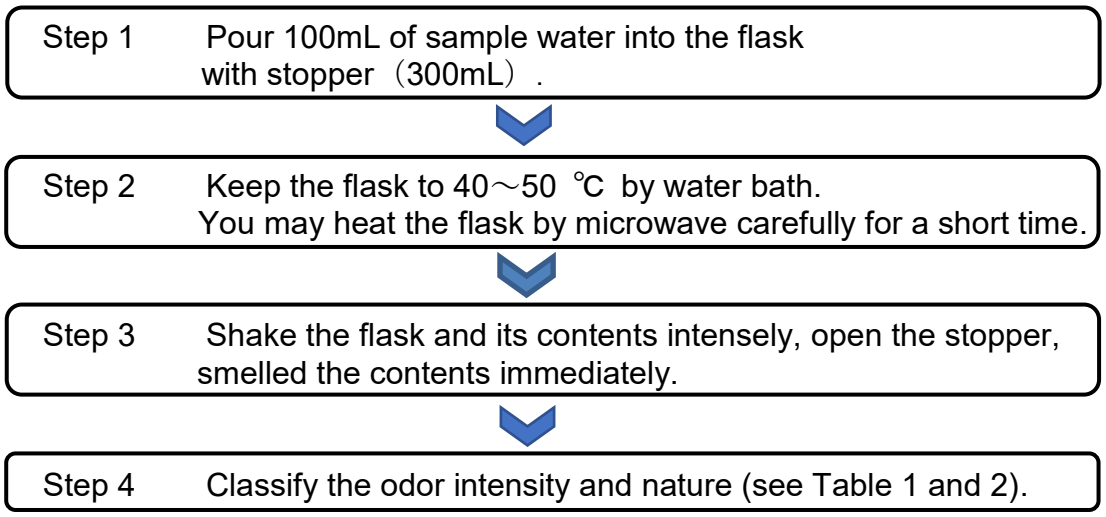

Table 1 Intensity of odors
No odor <Very mild<Mild<Strong<Very strong

Table 2 Description of odors
No odor
Aromaticity (such as fruity, cucumber)
Vegetable (such as grassy, woody, seaweed)
Musty or earthy
Fishy
Medicinal (such as chlorinous, phenolic, oily)
Metallic
Corruptive(such as sulphide , ammoniacal waste,)
Other

（Answerer：Ms. HOSON Toshiko, Osaka Water Supply Authority, 2016）