

# Olfactory Measurement Method Manual



## **I Olfactory Measurement Method in Japan**

"Olfactory measurement method" is a general name for the method of measuring offensive odors by using human olfaction. This was previously called the "sensory test method" of olfaction, and was changed in the "Further scheme of offensive odor control measures" of the Central Environmental Council Report in March 1995.

In April 1995, in accordance with this report, the Offensive Odor Control Law was revised. The regulatory system of an "odor index," which is measured using one of olfactory measurement methods, was introduced to appropriately deal with complex odors.

Section 2 of the second Article of the Revised Offensive Odor Control Law (Law No.71, 1995) stipulates that the "odor index" in this law is a value that indicates the degree of offensive odor of gas or water. In accordance with the Ordinance of the Prime Minister's Office, the odor index is calculated based on the dilution ratio until the gas or water odor can not be detected any longer with the human olfaction. Article 1 of the Ordinance No. 42 of the Prime Minister's Office in 1995 (Enforcement regulations of the Offensive Odor Control Law after the revision) also stipulates that according to the method prescribed by the Director General of the Environment Agency, the odor index of gas is determined by obtaining the dilution ratio until the gas odor can not be detected any longer with the human olfaction, and by multiplying the logarithm of the dilution ratio by a factor of 10. The "Determination of odor index" (Notification No.63 of the Environment Agency, September 1995) is stipulated as the method prescribed by the Director General of the Environment Agency.

This measurement method is a method of measuring the odor index of gas, called the triangular odor bag method, and was developed mainly by Tokyo metropolitan government since the early 1970s. This measurement method can deal with complex odors appropriately, and has the advantage of easily obtaining measurement results that can correspond to residents' feelings of being victims of the offensive odor. Therefore, the Environment Agency also carried out investigation and research about the quality of measurement, and instructed local governments to utilize it based on the results that measurement results were sufficiently reliable. This measurement method was also based on the "Odor sensory test method using the human olfaction" (Notification No.92 of the Environment Agency, 1992, repealed on March 31, 1996).