S40-5 Guideline on the environmental assesment of pharmaceuticals

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Since 1990, the detecting of the chemicals, which were components such as pharmaceuticals, medical supply for livestock, personal care products and their metabolite products, have been reported in aqueous environment in European and American countries. In Japan, the detection cases have been also reported from aqueous samples such as sewage, treated sewage, river water and groundwater since 2000. The reason for detecting medicinal chemicals in the aqueous environment is based on the improvement of the analytical technique that would be able to detect at the ultra-trace level. Moreover, there might be possibility that the increase of the use of the pharmaceuticals with the aging and the extent of the lifestyle related disease and the social tendency that takes care of the health influence for the detection. From reported data, the concentration in the environmental water was low generally as the ng/L level except a few medicinal chemicals, though detected chemicals were various. The concerns are increased whether pharmaceuticals could influence to human health and ecosystem, because many pharmaceuticals are made in order to prevent and treat diseases and to keep hygiene. The consideration of environmental risk assessment and management of pharmaceuticals by cooperation with industry, government and university is important, when the safe, security and healthy environment will be formed and maintained. Approach and technique of the environmental risk assessment carried out in Europe and America at present are introduced.