

**INDUSTRY STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

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**Technical regulation of field investigation for environment and
health--Cross-sectional study**

环境与健康现场调查技术规范 横断面调查

(English Translation)

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Foreword

To carry out the "Environmental Protection Law of the People's Republic of China" to protect the environment and public health, regulate the environmental and health field investigation work Fixed standard.

This standard sets out the general principles, working procedures, survey contents, methods and technical requirements for cross-sectional survey of environment and health.

This standard is organized by the Ministry of Environmental Protection Science and Technology Standards Division.

This standard is the first release.

The main drafting of this standard. Environmental Protection Department of South China Environmental Science Research Institute, Environmental and Economic Policy Research Center, Ministry of Environmental Protection National Environmental Monitoring Station, Peking University School of Public Health, Huazhong University of Science and Technology School of Public Health, Fudan University School of Public Health.

This standard is approved by the Ministry of Environmental Protection on June 9, 2017.

This standard is implemented from the date of publication.

This standard is explained by the Ministry of Environmental Protection.

Environmental and health field survey technical specifications cross - sectional survey

1 Scope of application

This standard sets out the general principles, working procedures, survey contents, methods and techniques for cross-sectional surveys of environmental and health field surveys.

begging.

This standard applies to specific time points or periods, for enterprises and institutions and other production and business activities led to environmental pollution to carry out the environment Exposure and population health survey.

This standard does not apply to nuclear and electromagnetic radiation, noise, light, micro-organisms, mobile sources, occupational exposure and other environmental pollution and sudden environment an Investigation on the Impact of Pollution Accidents on Population Health.

2 Normative reference documents

This standard refers to the following documents or the terms thereof. Those who do not specify the date of the reference file, its effective version (including amendments) appropriate for this standard.

GB/T 5750.2 Standard Test Method for Drinking Water - Collection and Preservation of Water Samples GB/T 16126 Biomass Monitoring Quality Assurance Technical Guidelines for Environmental Monitoring Quality Management Technical specification for layout of DK 664 ambient air quality monitoring Technical specification for SJ sample preparation for industrial solid waste Technical Guidelines for Unorganized Emissions Monitoring of Air Pollutants Technical specification for surface water and wastewater monitoring Technical specification for groundwater environmental monitoring Technical specification for soil environmental monitoring Technical specification for indoor air quality monitoring of HJ/T 167 Technical specification for manual monitoring of ambient air quality Technical specification for HJ/T 397 fixed source exhaust gas monitoring Technical specification for layout of DK/T 664 ambient air quality monitoring Technical specification for pollution monitoring of agricultural, livestock and aquatic products Methods of dietary survey in foodstuffs - Part 2. Weighing method Medical institutions clinical laboratory management approach (Wei Medical [2006] No. 73) Interim Provisions on the Administration of Healthy Physical Examination (No. 7 [2009] of Health Medical Administration) the ethical review of human biomedical research (the 11th edition of the Health and Health Commission.2016)

3 Terms and definitions

The following terms and definitions apply to this standard.

Cross-sectional study Refers to a simultaneous investigation of the health effects of the source of the pollution, the level of exposure to the environment and the corresponding exposure at a given point in time or during the period.

Exposure

Refers to the contact of one or more biological, chemical or physical factors with the human body in time and space.

Body load

The total amount of a substance in the human body.

Environmental background concentration Refers to situations where the environmental elements (such as the atmosphere, water bodies, water bodies, etc.) are not affected by the "source" or other local "source" pollution that is being investigated, Rocks, soils, organisms and human tissues), the concentration of various chemical elements associated with the effects of environmental pollution.

Exposure pathway

Refers to the route from contaminants to exposure to exposed receptors, including the source of pollutants, environmental trends and transmission, exposure sites, violence Exposure methods (such as digestive tract intake, respiratory inhalation and skin absorption, etc.) and exposure to people and other five parts.

Dietary survey

Refers to the individual, family or population a certain period of time a variety of food intake and nutrient intake status of the investigation.

Sensitive target

Refers to the pollution sources may be affected by contaminated areas of residential areas, schools, hospitals, drinking water source protection areas and important public places.

Sample survey

Refers to a total number of representative observation units from all the survey subjects to select a sample of the observation unit, and then use the sample Inferred the characteristics of all research objects.

4.1 Spatial matching

According to the scope of pollution within the scope of the activities of the crowd and lifestyle, to ensure that pollution sources, environmental exposure survey and health survey Match each other.

4.2 Time relevance

According to the characteristics of pollutant metabolism and health effects, reasonable set of environmental exposure survey and health survey time and frequency of investigation.

4.3 Crowd consistency

In the context of the identified environmental survey, for the same target population to carry out questionnaires, in vivo load survey, physical examination.

4.4 Index matching

The selection of indicators should pay attention to the correspondence between environmental surveys, exposure surveys and health surveys, focusing on the sensitivity, specificity Sexual and biological rationality.

4.5 Sample representation

The use of procedural and systematic approach to regulate the process of environmental and health investigation to ensure that the environment sample layout and survey population samples have Representation, sample size to meet the statistical requirements.

4.6 Comparison of the control area

There is no pollutant emission source associated with the investigation in the control area, or the level of pollutant in the environment is not higher than the national environmental quality standard (Or local environmental background); control and contaminated areas have similar natural conditions, socioeconomic status and population lifestyle;

Live population is relatively stable, there are enough people to investigate the crowd.

5.1.1 Investigation of pollution sources

Understand the impact of the activities of enterprises or other producers and operators on the surrounding environment, including historical and current pollutant types, emissions and the scope of influence.

5.1.2 Exposure survey

Grasp the environmental media (air, water, soil/dust, etc.) and dietary contaminant concentration, investigate the population exposure patterns, determine the the crowd exposed the main route to estimate the level of exposure to the population.