GB

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PEOPLE'S REPUBLIC OF CHINA

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Replacing GB 15618-1995

Soil Environmental Quality - Risk Control Standard for Soil Contamination of Agricultural Land

(Trial)

土壤环境质量　农用地土壤污染风险管控标准（试行）

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Soil Environmental Quality - Risk Control Standard for Soil Contamination of Agricultural Land

1 Scope

This Standard specifies the risk screening values and intervention values for soil contamination of agricultural land, as well as the monitoring, implementation and supervision requirements.

This Standard is applicable to the screening and classification of soil contamination risks of arable land. For garden plots and grassplots, this Standard may be taken as a reference.

2 Normative References

The content of this Standard quotes the following documents or their clauses. In terms of references without a specific date, the latest edition applies to this Standard.

GB/T 14550 Soil Quality - Determination of BHC and DDT - Gas Chromatography

GB/T 17136 Soil Quality - Determination of Total Mercury - Cold Atomic Absorption Spectrophotometry

GB/T 17138 Soil Quality - Determination of Copper, Zinc - Flame Atomic Absorption Spectrophotometry

GB/T 17139 Soil Quality - Determination of Nickel - Flame Atomic Absorption Spectrophotometry

GB/T 17141 Soil Quality - Determination of Lead, Cadmium - Graphite Furnace Atomic Absorption Spectrophotometry

GB/T 21010 Current Land Use Classification

GB/T 22105 Soil Quality - Analysis of Total Mercury, Arsenic and Lead Contents in Soils - Atomic Fluorescence Spectrometry

HJ/T 166 Technical Specification for Soil Environmental Monitoring

HJ 491 Soil Quality - Determination of Total Chromium - Flame Atomic Absorption Spectrometry

HJ 680 Soil and Sediment - Determination of Mercury, Arsenic, Selenium, Bismuth, Antimony - Microwave Dissolution / Atomic Fluorescence Spectrometry

HJ 780 Soil and Sediment - Determination of Inorganic Element - Wavelength Dispersive X-ray Fluorescence Spectrometry

HJ 784 Soil and Sediment - Determination of Polycyclic Aromatic Hydrocarbons - High Performance Liquid Chromatography

HJ 803 Soil and Sediment - Determination of Aqua Regia Extracts of 12 Metal Elements - Inductively Coupled Plasma Mass Spectrometry

HJ 805 Soil and Sediment - Determination of Polycyclic Aromatic Hydrocarbon by Gas Chromatography - Mass Spectrometry Method

HJ 834 Soil and Sediment - Determination of Semivolatile Organic Compounds - Gas Chromatography / Mass Spectrometry

HJ 835 Soil and Sediment - Determination of Organochlorine Pesticides - Gas Chromatography / Mass Spectrometry

HJ 921 Soil and Sediment - Determination of Organochlorine Pesticides - Gas Chromatography

HJ 923 Soil and Sediment - Determination of Total Mercury - Catalytic Pyrolysis - Cold Atomic Absorption Spectrophotometry

3 Terms and Definitions

The following terms and definitions are applicable to this Standard.

3.1 Soil

Soil refers to the complex of loose porous material layer on the surface of the land, on which, plants can grow, and its related physical and geographical elements.

3.2 Agricultural Land

Agricultural land refers to 01 cultivated land (0101 paddy field, 0102 irrigated land, 0103 dry land), 02 garden plot (0201 orchard, 0202 tea garden) and 04 grassland (0401 natural pasture, 0403 artificial pasture) in GB/T 21010.

3.3 Soil Contamination Risk of Agricultural Land

Soil contamination risk of agricultural land refers to the adverse impact on the quality and safety of edible agricultural products, crop growth or ecological environment of the soil due to soil contamination.

3.4 Risk Screening Values for Soil Contamination of Agricultural Land

For the risk screening values for soil contamination of agricultural land, when the contaminant

6 Application of Risk Screening Values and Risk Intervention Values for Soil Contamination of Agricultural Land

6.1 When the contaminant contents in the soil are equal to or lower than the risk screening values specified in Table 1 and Table 2, the risks of soil contamination of agricultural land are low, and they may be ignored under general circumstances; when they are higher than the risk screening values specified in Table 1 and Table 2, there may be risks of soil contamination of agricultural land, and the monitoring of soil environment and coordinated monitoring of agricultural products shall be strengthened.

6.2 When the contents of cadmium, mercury, arsenic, lead and chromium in the soil are higher than the risk screening values specified in Table 1, and equal to or lower than the risk intervention values specified in Table 3, there may be risks of soil contamination, for example, the edible agricultural products fail to comply with the quality and safety standards, and in principle, safe utilization measures shall be taken, such as: agronomic regulation and alternative plantation, etc.

6.3 When the contents of cadmium, mercury, arsenic, lead and chromium in the soil are higher than the risk intervention values specified in Table 3, there may be high risks of soil contamination of agricultural land, for example, the edible agricultural products fail to comply with the quality and safety standards, and it is difficult to reduce such risks of soil contamination of agricultural land, for example, the edible agricultural products fail to comply with the quality and safety standards, through the safe utilization measures, and in principle, strict control measures shall be taken, such as: prohibiting the cultivation of edible agricultural products and returning farmland to forests, etc.

6.4 The classification of soil environmental quality shall take this Standard as the basis, combined with the results of coordinated monitoring of edible agricultural products, and delineated in accordance with the relevant technical regulations.

7 Monitoring Requirements

7.1 Monitoring Sites and Sample Collection

7.1.1 The layout of survey and monitoring sites and sample collection of soil contamination of agricultural land shall comply with the relevant technical regulations of HJ/T 166.

7.2 Analysis of Soil Contaminants

7.2.1 The analysis methods of soil contaminants shall comply with Table 4.

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