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WS

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

WS/T 669-2020

**Definition and demarcation of iodine deficient areas and iodine
adequate areas
(English Translation)**

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Foreword

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

Drafting organizations of this standard. Endemic Disease Control Center of China Center for Disease Control and Prevention, Shanxi Institute of Endemic Disease Control, Anhui Province Diseases Prevention and Control Center, Shandong Institute of Endemic Disease Control, Hebei Provincial Center for Disease Control and Prevention, Henan Provincial Center for Disease Control and Prevention, Jiangsu Provincial Center for Disease Control and Prevention.

1 Scope

This standard specifies the delineation indicators and methods for iodine-deficient areas and iodine-adapted areas.

This standard applies to the delineation of iodine-deficient areas and iodine-adapted areas.

2 Normative references

The following documents are indispensable for the application of this document. For dated reference documents, only the dated version applies to this document.

For undated references, the latest version (including all amendments) applies to this document.

WS/T 107.1 Determination of iodine in urine Part 1: Arsenic-cerium catalytic spectrophotometry WS/T 107.2 Determination of iodine in urine. Part 2: Inductively coupled plasma mass spectrometry WS 276 Diagnostic criteria for endemic goiter

3 Terms and definitions

Iodine deficient areas in the natural environment, without taking iodine supplementation measures, the iodine intake through drinking water and food cannot meet the normal iodine requirement of the human body.

Areas that cause iodine deficiency in the population.

Iodine adequate areas in the natural environment, without taking iodine supplementation measures, the iodine intake through drinking water and food can meet the normal iodine requirement of the human body.

4 Delineation of iodine deficiency areas

Take the administrative village (resident committee) as the unit and conduct the survey according to the sampling method specified in Appendix A to detect the iodine content of the water according to WS/T 107.1 or WS/T 107.2 for the determination of iodine in urine, areas with the following indicators.

- a) The median iodine of residents' drinking water $< 40\mu\text{g/L}$;
- b) The median urinary iodine of children between 8 and 10 years old is less than $100\mu\text{g/L}$.

In areas where iodine supplementation measures such as iodized salt have been adopted, they are designated as iodine-deficient areas in accordance with a).

In areas that have not taken iodine supplementation measures such as iodized salt, they are designated as iodine-deficient areas in accordance with a) and b).

5 Delimitation of areas suitable for iodine

Take the administrative village (resident committee) as the unit and conduct the survey according to the sampling method specified in Appendix A to detect the iodine content of the water according to WS/T 107.1 or WS/T 107.2 for the determination of iodine in urine, and diagnosis of endemic goiter in accordance with WS 276. Areas with the following indicators.

- a) The median drinking water iodine of residents is $\geq 40\mu\text{g/L}$ and $\leq 100\mu\text{g/L}$;
- b) The goiter rate of children between 8 and 10 years old is $\leq 5\%$;
- c) The median urine iodine of children between 8 and 10 years old is $\geq 100\mu\text{g/L}$ and $< 300\mu\text{g/L}$.

In areas where iodine supplementation measures such as iodized salt have been adopted, they shall be designated as iodine-suitable areas according to a).

In areas that have not taken iodine supplementation measures such as iodized salt, they

are designated as iodine-adapted areas in accordance with a), b) and c).

Appendix A

(Normative appendix) Sampling method A.1 Sampling method of water iodine. This standard stipulates that for administrative villages (resident committees) with distributed water supply, 10% of residents' drinking water iodine surveys Sampling method, divide each administrative village (resident committee) into 5 directions. east, south, west, north, and middle, and randomly sample 10% from each position Wells (when there are less than 10 wells in a certain position, the one with the largest drinking population is drawn); administrative villages with less than 5 wells (residential committee) all samples are taken, and 1 water sample is collected from each well. In the administrative village (resident committee) with centralized water supply, collect 2 pieces of peripheral drinking water and enter Conduct iodine content testing in drinking water.

A.2 Sampling method of urine iodine in children. This standard stipulates that the urine iodine content survey of children aged 8 to 10 shall adopt a random sampling method.

Children are required to be divided between males and females, and the total number of samples must be more than 50.

Children from 12 to 12 years of age should carry out a general survey, and the urine iodine content should be tested in accordance with WS/T 107.1 or WS/T 107.2.

A.3 Sampling method of thyroid volume. This standard stipulates that the random sampling method shall be adopted for the investigation of the goiter rate of children between 8 and 10 years old.

The surveyed children are required to be divided between males and females, and the total number of samples must be more than 100. When the number is insufficient, children between 6 and 12 years old Qi may carry out a general survey of children between 6 and 12 years old, and diagnose endemic goiter according to WS 276.