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

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Norm of water intake for industry - Part 65: Beverage

工业用水定额 第65部分：饮料

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1 Scope

The document lays down the method of calculating the water intake norm for beverages, the water intake norm itself and the management requirements.

It applies to water management in beverage manufacturing enterprises, solid beverages excepted.

3 Terms and definitions

The terms defined in GB/T 10789, GB/T 18820 and GB/T 21534 apply, together with the following.

Quantity of water intake for per ton beverage products: the quantity of water an enterprise needs to draw from the various conventional water sources to produce one tonne of beverage product.

4 Calculation method

4.1.1 The water sources counted are surface water, metered as supplied by the water treatment plant, groundwater, the municipal water supply project, and other water or water products bought on the market by the enterprise, such as steam, hot water and geothermal water.

4.1.2 The supply covered by the water intake of beverage production takes in the main production system, that is the water used over the whole course from the washing of the raw material to the making of the product; the auxiliary production system, taking in the boiler house, equipment maintenance, heating and ventilation, the refrigeration system, the compressed air system, the effluent treatment station, the laboratory and storage and

transport; and the ancillary production system, taking in enterprise offices, toilets, showers, the laundry, environmental cleaning and planting.

4.1.3 The water intake is metered by the first-level meter of the enterprise.

4.2 The water intake per tonne of beverage product is calculated from an equation whose symbols are the water intake per tonne of beverage product in cubic metres per tonne; the sum of the water intake in the production process over the reporting period in cubic metres; and the output of conforming beverage product over the reporting period in tonnes.

5 Water intake norm

The water intake norm for beverage products shall comply with Table 1.

Table 1 fixes, for each beverage category, an advanced value and a general value of the water intake per tonne of product in cubic metres per tonne. The categories named are packaged drinking water, split into natural mineral drinking water, purified drinking water and other drinking water; carbonated beverages, that is soda; fruit and vegetable juice and its beverages, split into fruit and vegetable juice or pulp made from fruit and vegetable raw material, other fruit and vegetable juice or pulp, fruit and vegetable juice or pulp beverages, and concentrated fruit and vegetable juice or pulp; tea beverages, split into milk tea beverages and others; special purpose beverages; flavoured beverages; plant beverages; protein beverages; and coffee beverages. The numerical values of the table are not reproduced here because the row groupings of two blocks of the table could not be paired reliably with the values in the extracted text.

The table sets adjustment factors R for products of particular packaging or process: 1.1 for packaged drinking water in returnable barrels; 1.8 for carbonated beverages in returnable bottles; 1.8 for protein beverages in returnable bottles; 1.1 for protein beverages using post-sterilisation; 1.1 for protein beverages using a fermentation process; 1.1 for coffee beverages using post-sterilisation; and 1.2 for coffee beverages using an extraction process.

For a product falling under an adjustment factor, the water intake norm is the norm listed in the table multiplied by the factor. Where a product falls under two or more factors, the norm listed in the table is multiplied by the sum of the factors less the number of factors plus one, the number of factors being written as n.

The water intake norm of the other categories of beverage in GB/T 10789 is taken from the categories of the table according to the similarity of the process. The evaluation period of the water intake norm is one year, that is twelve months, of normal production.

6 Management requirements

The general value of the water intake norm is used for the day to day water management

and the water saving assessment of existing enterprises, and the advanced value is used for the water resources appraisal, the water abstraction permit approval and the water saving evaluation of new, rebuilt or extended enterprises.

The water balance test of the enterprise shall meet GB/T 12452.

The provision and management of water metering instruments in the enterprise shall meet GB/T 24789.

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