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

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**The norm of energy consumption per unit product of sodium
gluconate**

葡萄糖酸钠单位产品能源消耗限额

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Foreword

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA ICS

The norm of energy consumption per unit product of sodium gluconate

The norm of energy consumption per unit product of sodium gluconate 1 Scope

This document specifies the norm grades, technical requirements, statistical scope and calculation methods of energy consumption per unit product of sodium gluconate (hereinafter referred to as energy consumption). This document applies to the calculation and assessment of energy consumption of sodium gluconate manufacturing enterprises that that use starch as raw material and adopt fermentation or enzymatic method, or use glucose as raw material and adopt catalytic oxidation, to produce sodium gluconate, as well as the energy consumption control of newly-built, rebuilt and expanded projects.

2 Normative references

The contents of the following documents constitute the indispensable clauses of this document through normative references in the text. For dated references, only the version corresponding to that date is applicable to this document; for undated references, the latest version (including all amendments) is applicable to this document.

GB/T 2589, General principles for calculation of the comprehensive energy consumption

GB/T 12723, General principles for establishing allowance of energy consumption per unit throughput

GB 17167, General principle for equipping and managing of the measuring instrument of energy in organization of energy using QB/T 4484, Sodium gluconate

3 Terms and definitions

Terms and definitions determined by GB/T 2589 and GB/T 12723, and the following ones are applicable to this document.

6 Statistical scope and calculation method 6.1 Statistical scope 6.1.1 The energy consumption of the sodium gluconate product production system, auxiliary production system and subsidiary production system shall include the actual amount of primary energy, secondary energy and energy consumed in the production of energy-consumed medium in the production boundary of sodium gluconate, which shall not be repeated, and shall not be missed.

6.1.2 The production system of fermentation with starch as raw material includes: liquefaction, saccharification, sugar residue filtration, propagation, fermentation, bacterial filtration, decolorization, concentration, crystallization, centrifugation, drying, packaging.

6.1.3 The production system of enzymatic method with starch as raw material includes: liquefaction, saccharification, sugar residue filtration, fermentation, decolorization, concentration, crystallization, centrifugation, drying, packaging.

6.1.4 The production system of catalytic oxidation with glucose as raw material includes: size mixing, catalytic oxidation reaction, catalyst filtration, concentration, crystallization, centrifugation, drying, packaging.

6.1.5 The auxiliary production system, which refers to the processes, facilities and equipment that serve the sodium gluconate production system, usually includes water supply, power supply, gas supply, heating, refrigeration, maintenance, lighting, warehouses and raw material sites in the factory, as well as safety, environmental protection, and other devices and facilities.

6.1.6 The subsidiary production system, which refers to the production command system that is configured for the production system, and the facilities and equipment of the functional departments and units that serve production, includes offices, operation rooms, lounges, changing rooms, raw material inspection, finished product inspection and other facilities and equipment.

6.1.7 The residual energy and chemical reaction heat generated in the production boundary of sodium gluconate recovery and utilization is of a small utilization amount for the equipment outside the boundary; so, it's negligible, and shall not be included in the energy consumption.

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