NY

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Replacing NY 1106-2006

Water-Soluble Fertilizers Containing Humic-Acids

含腐植酸水溶肥料

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Water-Soluble Fertilizers Containing Humic-Acids

1 Scope

This Standard specifies the technical requirements, test methods, inspection rules, marking, packaging, transportation and storage of water-soluble fertilizers containing humic-acids (macro element type) and water-soluble fertilizers containing humic-acids (trace element type).

This Standard is applicable to mineral humic acids produced and sold in the People's Republic of China, with a proportion suitable for plant growth; adding appropriate amounts macro elements such as nitrogen, phosphorus, potassium; or trace elements such as copper, iron, manganese, zinc, boron, and molybdenum; so that make the liquid or solid water-soluble fertilizers.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB 190 Packing Symbol of Dangerous Goods

GB 191 Packaging – Pictorial Marking for Handling of Goods

GB/T 6679 General Rules for Sampling of Solid Chemical Products

GB/T 6680 General Rules for Sampling of Liquid Chemical Products

GB/T 8170 Rules of Rounding off for Numerical Values & Expression and Judgement of Limiting Values

GB/T 8569 Packing of Solid Chemical Fertilizers

GB/T 8576 Determination of Free Water for Compound Fertilizers - Vacuum Oven Method

GB/T 8577 Determination of Free Water for Compound Fertilizers - Karl Fischer Method

NY/T 887 Liquid Fertilizers - Determination of Density

NY/T 1108 Liquid Fertilizers – Package Technology Conditions

NY 1110 Water-Soluble Fertilizers-Content-Limits of Mercury, Arsenic, Cadmium, Lead and Chromium

NY/T 1115 Water-Soluble Fertilizers – Determination of Water Insoluble Matter Content and pH Value

NY/T 1117 Water-Soluble Fertilizers - Determination of Calcium, Magnesium, Sulphur and Chlorine Content

NY/T 1971 Water-Soluble Fertilizers – Determination of Humic-Acids Content

NY/T 1972 Water-Soluble Fertilizers - Determination of Sodium, Selenium, Silicon Content

NY/T 1974 Water-Soluble Fertilizers - Determination of Copper, Iron, Manganese, Zinc, Boron, Molybdenum Content

NY/T 1977 Water-Soluble Fertilizers - Determination of Total Nitrogen, Phosphorus and Potassium Content

NY/T 1978 Fertilizers - Determination of Mercury, Arsenic, Cadmium, Lead and Chromium Content

NY/T 1979 Fertilizers and Soil Amendments- Regulations of Label and Specification Assessment

Measures for the Administration of Product Quality Arbitration, Inspection, and Product Quality Identification

Measures for the Metrological Supervision and Administration of Quantitatively Packed Commodities

3 Terms and Definitions

For the purpose of this document, the following terms and definitions apply.

3.1 Water-soluble fertilizers

It is a liquid or solid fertilizer that is dissolved or diluted in water and used for irrigation and fertilization, foliar fertilization, soilless cultivation, soaking seeds and roots.

3.2 Mineral humic acids

It is a mixture of amorphous polymer compounds that contains benzene nuclei,

It shall be performed according to the provisions of NY/T 1978.

5.21 Determination of cadmium content

It shall be performed according to the provisions of NY/T 1978.

5.22 Determination of lead content

It shall be performed according to the provisions of NY/T 1978.

5.23 Determination of chromium content

It shall be performed according to the provisions of NY/T 1978.

6 Inspection Rules

6.1 The products shall be inspected by the quality supervision department of the enterprise; and the manufacturer shall ensure that all the sold products meet the requirements of this Standard. Each batch of products shall be accompanied by a quality certificate, and its content shall be implemented in accordance with the provisions of the marking.

6.2 The product is inspected by batch, taking one batch of ingredients as a batch; and the maximum batch quantity is 50t.

6.3 Sampling of solid or bulk products shall be carried out in accordance with the provisions of GB/T 6679. Sampling of liquid products shall be carried out in accordance with GB/T 6680.

6.4 Place the sampled product in a clean, dry container and mix quickly. Take 600 g of solid sample or 600 mL of liquid sample; divide them into two clean, dry containers, seal and label them, indicating the name of the manufacturer, product name, batch number or production date, sampling date, and sampler's name. One bottle is used for product quality analysis, and the other bottle shall be kept for at least two months for re-inspection.

6.5 After multiple fractionation of the solid sample, take out about 100 g, quickly grind it until all of it passes through a 0.50 mm sieve (if the sample is wet, it can pass through a 1.00 mm sieve), mix well; and place it in a clean, dry container for determination.

6.6 After shaking the liquid sample for several times, quickly take out about 100 mL of it; and place it in a clean and dry container for determination.

6.7 When the manufacturer performs the exit-factory inspection, if one or more indicators of the inspection results do not meet the requirements of this Standard, re-sample from the doubled sampling batch for re-inspection. If one or more indicators do

requirements of the trace element content. When the marked-value of a single trace element is no greater than 2.0% or 20 g/L, the absolute value of the positive and negative relative deviation between each measured value and the marked value shall be no greater than 40%. When the marked-value of a single trace element is greater than 2.0% or 20 g /L, the absolute value of the positive or negative deviation between each measured value and the marked value shall be no greater than 1.0% or 10 g/L.

7.2.3 The marked value of the sulfur content. When the marked-value of sulfur element is "sulfur (S) ≤ 3.0% or 30 g/L", its measured value shall be no greater than 3.0% or 30 g/L. When the marked-value of sulfur element is greater than 3.0% or 30 g/L, the absolute value of the positive or negative deviation between the measured value and the marked value shall be no greater than 1.5% or 15 g/L.

7.2.4 The marked value of the chlorine content. When the marked-value of chlorine element is "chlorine (Cl) ≤ 3.0% or 30 g/L", its measured value shall be no greater than 3.0% or 30 g/L. When the marked-value of chlorine element is greater than 3.0% or 30 g/L, the absolute value of the positive or negative deviation between the measured value and the marked value shall be no greater than 1.5% or 15 g/L.

7.2.5 The marked-value of sodium content. When the marked-value of sodium element is "sodium (Na) ≤ 3.0% or 30 g/L", its measured value shall be no greater than 3.0% or 30 g/L. When the marked-value of sodium element is greater than 3.0% or 30 g/L, the absolute value of the positive or negative deviation between the measured value and the marked value shall be no greater than 1.5% or 15 g/L.

7.2.6 The marked value of pH. The measured pH value shall meet the requirement of positive and negative deviation of its marked-value pH±1.0.

7.2.7 The maximum marked values of mercury, arsenic, cadmium, lead, and chromium element contents.

7.3 The rest shall be performed in accordance with provisions of NY 1979.

8 Packaging, Transportation and Storage

8.1 The net content of each bag (bottle) of the minimum sales package of solid products shall be no less than 100g; if the dispensing package is performed, the net content shall be indicated; the rest shall be performed in accordance with the provisions of GB 8569. Liquid product packaging is performed in accordance with the provisions of NY/T 1108. The net content shall be performed in accordance with the provisions of *Measures for the Metrological Supervision and Administration of Quantitatively Packed Commodities*.

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