CCS Z 60

NATIONAL STANDARD OF THE PEOPLE'S REPUBLIC OF CHINA

GB 39727-2020

Emission Standard of Air Pollutants for Pesticide Manufacturing Industry

Issued on: December 24, 2020 **Implemented on: January 1, 2021**

Issued by: State Administration for Market Regulation, China National Standardization Administration

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1 Scope of application

This standard specifies the air pollutant emission control requirements, monitoring and supervision and management requirements for the pesticide manufacturing industry.

This standard is applicable to the management of air pollutant emissions of existing pesticide manufacturing industrial enterprises or production facilities, as well as the Environmental impact assessment of industrial construction projects, design of environmental protection facilities, completed environmental protection acceptance, issuance of pollutant discharge permits and their investment Postpartum air pollutant emission management.

This standard also applies to pesticide intermediate enterprises and their production facilities for pesticide production, as well as pesticide research and development institutions and their experiments Air Pollutant Emission Management of Facilities.

2 Normative references

This standard refers to the following documents or clauses thereof. For dated references, only the dated version applies this standard. For undated references, the latest edition (including all amendments) applies to this standard.

GB 37822 Volatile organic compound fugitive emission control standard

GB/T 4754-2017 National Economic Industry Classification

GB/T 8017 Determination of vapor pressure of petroleum products Reid method

GB/T 14669 Determination of Air Quality Ammonia Ion Selective Electrode Method

GB/T 14678 Determination of air quality hydrogen sulfide, methyl mercaptan, methyl sulfide and dimethyl disulfide gas chromatography

GB/T 15516 Determination of Air Quality Formaldehyde Acetylacetone Spectrophotometry

GB/T 16157 Determination of particulate matter in exhaust gas from stationary pollution sources and sampling methods for gaseous pollutants HJ/T 27 Determination of Hydrogen Chloride in Exhaust from Stationary Pollution Source Mercury Thiocyanate Spectrophotometry HJ/T 28 Determination of hydrogen cyanide in exhaust gas from stationary pollution sources Isonicotinic acid-pyrazolone spectrophotometry HJ/T 30 Determination of Chlorine in Exhaust Gas from Stationary Pollution Source Methyl Orange Spectrophotometry HJ/T 31 Determination of Phosgene in Exhaust from Stationary Pollution Source Aniline UV Spectrophotometry HJ/T 32 Determination of Phenolic Compounds in Exhaust from Stationary Pollution Sources 4-Aminoantipyrine Spectrophotometry HJ/T 37 Determination of acrylonitrile in exhaust gas from stationary pollution sources by gas chromatography HJ 38 Determination of total hydrocarbons, methane and non-methane total hydrocarbons in waste gas from stationary pollution sources by gas chromatography HJ/T 42 Determination of nitrogen oxides in exhaust gas from stationary pollution sources by UV spectrophotometry HJ/T 43 Determination of nitrogen oxides in exhaust gas from stationary pollution sources - Naphthalene ethylenediamine hydrochloride spectrophotometric method HJ/T 55 Technical guidelines for monitoring fugitive emissions of air pollutants HJ/T 56 Determination of sulfur dioxide in exhaust gas from stationary pollution sources by iodometric method HJ 57 Determination of Sulfur Dioxide in Waste Gas from Stationary Pollution Source Constant Potential Electrolysis HJ 75 Technical Specification for Continuous Monitoring of Flue Gas (SO2, NOx, Particulate Matter) Emissions from Stationary Pollution Sources HJ 77.2 Determination of Dioxins in Ambient Air and Exhaust Gas Isotope Dilution High Resolution Gas Chromatography-High Resolution Mass Spectrometry HJ/T 397 Technical Specification for Stationary Source Waste Gas Monitoring HJ 533 Determination of Ammonia in Ambient Air and Waste Gas by Nessler Reagent Spectrophotometry 2HJ 547 Determination of chlorine gas in stationary pollution source waste gas by iodometric method HJ 548 Determination of hydrogen chloride in waste gas from stationary pollution sources Silver nitrate volumetric method HJ 549 Determination of hydrogen chloride in ambient air and exhaust gas by ion chromatography HJ 583 Determination of Benzenes in Ambient Air Solid Adsorption/Thermal Desorption-Gas Chromatography HJ 584 Determination of Benzenes in Ambient Air Activated Carbon Adsorption/Carbon Disulfide Desorption-Gas

Chromatography HJ 604 Determination of Total Hydrocarbons, Methane and Non-Methane Total Hydrocarbons in Ambient Air Direct Injection-Gas Chromatography HJ 629 Determination of Sulfur Dioxide in Exhaust Gas from Stationary Pollution Source Non-dispersive Infrared Absorption Method HJ 644 Determination of volatile organic compounds in ambient air Adsorption tube sampling-thermal desorption/gas chromatography-mass spectrometry HJ 683 Determination of aldehydes and ketones in ambient air by high performance liquid chromatography HJ 688 Determination of hydrogen fluoride in waste gas from stationary pollution sources by ion chromatography HJ 692 Non-dispersive infrared absorption method for the determination of nitrogen oxides in waste gas from stationary pollution sources HJ 693 Determination of nitrogen oxides in waste gas from stationary pollution sources by constant potential electrolysis HJ 732 Sampling air bag method for volatile organic compounds in waste gas from stationary pollution sources HJ 734 Determination of Volatile Organic Compounds in Waste Gas from Stationary Pollution Sources Solid Phase Adsorption-Thermal Desorption/Gas Chromatography-Mass Spectrometry HJ 759 Determination of Ambient Air Volatile Organic Compounds Canister Sampling/Gas Chromatography-Mass Spectrometry HJ 836 Gravimetric Method for Determination of Low-Concentration Particulate Matter in Exhaust Gas from Stationary Pollution Sources HJ 944 General Principles of Technical Specifications for Environmental Management Ledger and Pollution Permit Implementation Report of Pollutant Discharging Units (Trial)

HJ 987 Technical Guidelines for Self-Monitoring of Pollutant Discharging Units Pesticide Manufacturing Industry HJ 1079 Determination of chlorobenzene compounds in waste gas from stationary pollution sources by gas chromatography HJ 1131 Portable UV Absorption Method for Determination of Sulfur Dioxide in Waste Gas from Stationary Pollution Sources HJ 1132 Portable UV Absorption Method for Determination of Nitrogen Oxides in Exhaust Gas from Stationary Pollution Sources "Administrative Measures for Automatic Monitoring of Pollution Sources" (Order No. 28 of the State Environmental Protection Administration)

Measures for the Administration of Environmental Monitoring (Order No. 39 of the State Environmental Protection Administration)

"Technical Guidelines for Continuous Monitoring of Non-methane Total Hydrocarbon Emissions in Exhaust Gas from Stationary Pollution Sources (Trial)" (Monitoring Letter from the Environmental Protection Office [2020])

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3 Terms and Definitions

The following terms and definitions apply to this standard.

3.1 Pesticide industry Pesticide manufacturing industry (C263) specified in GB/T 4754-2017, including chemical pesticide manufacturing (C2631) and biochemical Pesticide

and Microbial Pesticide Manufacturing (C2632). The pesticide manufacturing process includes pesticide intermediate manufacturing, technical drug manufacturing, and preparation processing with compounding.

3.2 pesticide intermediates For compounds that are specially used for the synthesis of pesticide technical materials, or are mainly used for the synthesis of pesticide technical materials, please refer to Appendix A.

33.3 volatile organic compounds (VOCs)

Organic compounds participating in atmospheric photochemical reactions, or organic compounds determined according to relevant regulations.

When characterizing the overall emission of VOCs, according to industry characteristics and environmental management requirements, total volatile organic compounds (with TVOC), non-methane total hydrocarbons (NMHC) as pollutant control items.

3.4 total volatile organic compounds (TVOC)

Using the specified monitoring method, measure the single VOCs substances in the exhaust gas, add them to get the total amount of VOCs substances, Calculated as the sum of the mass concentrations of individual VOCs. In actual work, the results should be analyzed as expected, and more than 90% of the total Single VOCs substances are measured and summed.

3.5 non-methane hydrocarbons (NMHC)

Using the specified monitoring method, the sum of the gaseous organic compounds other than methane for which the hydrogen flame ionization detector responds, In terms of carbon mass concentration.

3.6 process vents Waste gas emitted during pesticide production, including materials preparation, reaction, fermentation, refining, solvent recovery, separation, drying, etc.

Process exhaust, as well as auxiliary equipment such as vacuum pump exhaust.

3.7 tail gas from fermentation In the production of biochemical pesticides and microbial pesticides by fermentation, the waste gas containing biological metabolites discharged from the microbial fermentation tank, It also includes contaminant-containing steam discharged during the cleaning and sterilization of the fermenter.

3.8 fugitive emission Irregular discharge of air pollutants without passing through the exhaust stack, including the escape of open workplaces, and through crevices, ventilation openings, open doors and windows, and similar openings (holes) discharges, etc.

3.9 airtight closed/close Contaminants are not in contact with the ambient air, or are isolated from the ambient air by sealing materials or sealing equipment Mode.

3.10 closed space A closed area or closed area formed by blocking pollutants, workplaces,