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

GB/T 27824-2011

**Chemicals -- Test method of acute inhalation toxicity -- Fixed
concentration procedure**

化学品 急性吸入毒性 固定浓度试验方法

(English Translation)

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Foreword

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

The Standards and Organisation for Economic Co-operation and Development (OECD) Chemicals testing guidelines No.433 (2004) "acute inhalation toxicity test fixture Concentration method "(in English) is consistent technical content.

This standard configuration and do the following editorial changes.

- Increasing the range a chapter;
- The OECDNo.433.2004's "Introduction" section incorporated this standard "Introduction" section;
- The OECDNo.433.2004 "preliminary considerations" section incorporated standard "4.3 Test Procedure";
- The OECDNo.433.2004 "Appendix. Definitions" as part of the standard "2 terms, definitions and abbreviations";
- Change the unit of measure of legal units of measurement.

This standard is managed by the National Standardization Technical Committee chemicals dangerous (SAC/TC251) and focal points.

This standard was drafted. Chinese Center for Disease Prevention and Control of Occupational Health and Poison Control, Ningbo Inspection and Quarantine Institute of Science and Technology, Jiangsu Coal Chemical Engineering Research and Design Institute Limited.

Introduction

Basis of scientific and animal welfare requirements, requiring regular testing of chemicals OECD guidelines be modified. The initial acute suck the toxicity test guidelines (OECD403) was adopted in 1981. Revised acute oral toxicity test. Fixed Dose Method (FixedDoseProcedure, FDP) (OECD420) since the implementation in December 2001, began to consider should be established for acute inhalation toxicity test A fixed concentration of test method (FixedConcentrationProcedure, FCP). The methods using several fixed concentrations of exposure, using a single sex Do animals (generally use a female) to detect acute inhalation toxicity.

The traditional method is based on the evaluation of acute toxicity animal death as the only endpoint. 1984 British Society of Toxicology (BTS) mention Out of a new acute toxicity test method, that is, choose a fixed dose of the test substance exposure [1]. This method avoids the animal death as Endpoint, but in a few fixed-dose dose of obvious symptoms of end point, this dose was also tested Toxicity grading basis. This test also using the above method. To achieve the OECD guidance document [2] on the end point of the humanitarian requirements, construction Proposed test method optimized to minimize animal suffering, to minimize the use of animals. After mathematical model to evaluate FCP test statistically rationality [3].

Test procedures and results interpretation of the norms regarding FCP inhalation toxicity test requirements see acute inhalation toxicity test guideline File [4].

This test can provide hazard characteristics of the test substance. For can cause acute toxicity of the test substance, according to the results of the tests, according to the Joint Global Harmonized System of Chemical Classification mark the country (GHS) for the test substance toxicity grading and classification [5].

Toxicity Test Methods for a fixed concentration of chemicals Acute inhalation

1 Scope

This standard specifies the chemical concentration of the test method for acute inhalation toxicity fixed definitions of terms and abbreviations, principles of testing, test methods, Test data and reports.

This standard applies to the acute inhalation toxicity of chemicals fixed concentration of the test.

2.1 Definition of Terms

The following terms and definitions apply to this document.

2.1.1

Acute inhalation toxicity Short-time interruption after inhalation of harmful effects of air generated by the test substance.

2.1.2

Aerosol

Solid particles or liquid droplets suspended in the gas formed in the suspension, such as liquid or gaseous foam, paste or powder.

2.1.3

Dust dust

Capable of being suspended in the air or a mixture of solid particulate matter from the formation. With irregular shapes, from less than 1µm to 100µm Range.

2.1.4

Fog mist

Suspended in the air by the size of 2µm ~ 100µm ranging from tiny droplets of a substance or mixture. Supersaturated vapor may be condensed, or travel by the mechanical shear rate of the liquid, such as spraying, atomizing, spraying or foaming.

2.1.5

Steam vapour

At room temperature and atmospheric pressure in the gaseous state or a liquid substance or mixture of solid formed.

2.1.6

Concentration Mass per unit volume of air in the test substance. Vapor and dust often in mg/L, gas places mL/m³, said the United Nations Consistent with GHS system representation.

2.1.7

Significant toxicity evidenttoxicity Significant toxicity performance [6] after an infected animal, if higher fixed concentration exposure, most of the animals are expected to be significant pain Bitter, dying state [7] and even death.

2.1.8

Moribund impendingdeath Animals dying or death may state in the observation period has not ended. Rodent dying symptoms include convulsions, lateral, Recumbency and tremors [7].