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Ningbo Customs District Technology Center

TEST REPORT

REPORT NUMBER	232500006191
SAMPLE NAME	Par Par
CUSTOMER	ZHEJIANG JEROME HOUSEHOLD ARTICLES CO. LTD

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SIGNATURE PAGE

Report No.: 232500006191. The acute inhalation toxicity test report for the sample named "Par Par" on SD rats has been approved by the authorized signatory and signed by the head of the Toxicological Safety Evaluation Laboratory at the Ningbo Customs Technology Center.

Note 1: This report is an English translation of the 232500006182 report issued on 2025.08.18. If the comparison is inconsistent, the Chinese version shall prevail.

SIGNATURE AND DATE

Authorized Signatory Signature: **Date:** 2025.08.18

Signature of Lab Manager: **Date:** 2025.08.18

EXPERIMENTAL PLAN

Study Initiation Date: 2025.06.13

Study Start Date: 2025.06.27

Dosing Date: 2025.07.09

Observation Period: 2025.07.09 ~ 2025.07.23

Necropsy Date: 2025.07.23

Study Completion 2025.08.04

Report Finalization Date: 2025.08.15

PERSONNEL INVOLVED

Study Personnel: Wang Yibo, Zhang Yinyi

SUMMARY

This report aims to evaluate the inhalation toxicity effects of the test substance "Par Par" on SD rats following a single 4-hour continuous inhalation exposure to a fixed concentration. The study observes the acute inhalation toxicity of Par Par in SD rats and classifies its toxicity category in accordance with GB/T 15670.6-2017 "Toxicological Test Methods for Pesticide Registration - Part 6: Acute Inhalation Toxicity Test".

The acute inhalation toxicity test was conducted using 10 male and 10 female SD rats. Animals were exposed to a single concentration of 5000 mg/m³ for 4 hours via a nose-only exposure system. Signs of toxicity and mortality during exposure and the observation period were recorded.

Clinical Signs

No signs of toxicity or mortality were observed in any animals during the 14-day post-exposure period.

Body Weight

Body weights were recorded on Day 0 (prior to dosing), Day 7, and Day 14. No abnormal changes in body weight were observed during the study.

Gross Necropsy

At the end of the study, all surviving animals were euthanized by carbon dioxide asphyxiation. Gross necropsy revealed no abnormal findings.

Exposure Concentration

The exposure concentration was 5768.5 mg/m³.

Conclusion

Based on the aforementioned results, SD rats were exposed to a concentration of 5768.5 mg/m³ for 4 hours via continuous inhalation. No signs of toxicity or mortality were observed in the experimental animals during the 14-day post-exposure period. It can be concluded that, under the conditions of this test, the acute inhalation LC_{50} of the test substance in SD rats exceeds 5000 mg/m³. Therefore, in accordance with Section 3.3.2.8, Table 2 of the Ministry of Agriculture of the People's Republic of China Decree No. 10, 2007: Provisions on pesticide registration data, the acute inhalation toxicity of the test substance was classified as Category IV (Slightly Toxic).

SAMPLE PHOTO

1. OBJECTIVE

This report aims to evaluate the inhalation toxicity of the test substance Par Par in SD rats following a single 4-hour continuous inhalation exposure to a fixed concentration, and to determine the median lethal concentration (LC_{50}) of "Par Par" in SD rats.

2. TEST STANDARD

GB/T 15670.6-2017 Toxicological Test Methods for Pesticide Registration - Part 6: Acute Inhalation Toxicity Test

3. MATERIALS AND METHODS

3.1. TEST SUBSTANCE INFORMATION

Test Parameters	Detailed Information
Sample name	Par Par
Sample Status	Pale yellow liquid
Sample Status	45 ml/bottle
Sample Quantity	19 Bottle
Sample Brand	Par Par
Sample Packaging	Commercial Package
Customer	ZHEJIANG JEROME HOUSEHOLD ARTICLES CO. LTD
Address of Customer	NO,1WANGJIANG ROAD,DONGNAN INDUSTRIAL AREA,WUYI COUNTRY ZHEJIANG PROVINCE.CHINA

3.2. TEST SUBSTANCE HANDLING

The test sample was administered in its original form.

3.3. TEST SYSTEM

3.3.1. Details of the Test System

Species	Rat
Strain	SD Rat
Sex	Equal number of males and females. Females were nulliparous and non-pregnant.
Number of animals	10 Males, 10 Females
Age at the start of dosing	9 weeks
Animal Source	Shanghai jie si jie laboratory animal CO., LTD.
Microbial status	SPF
Animal Quality Certificate No.	20230004023388
Experimental Animal Production License Number	SCXK(Hu)2023-0004
Experimental Animal Use License Number	SYXK(Zhe)2021-0032

3.4. EQUIPMENT

Equipment	Instrument ID	Model No.	Manufactured by
Weighing Balance	201200001655	CPA8201	Germany
Weighing Balance	201200001654	CPA8201	Germany
Oral and nasal whole phase exposure system in small animals	201738JWJ026	Huironghe	China

3.5. TEST METHOD

3.5.1. Housing conditions

Facilities: Barrier system;

Temperature: 21.8℃ ~ 23.8℃

Relative humidity: 44.6% ~ 53.0%

3.5.2. Feed and Water

Name: Irradiated Lab Rat and Mouse Maintenance Formula Diet;

Manufacturers: Jiangsu Xietong Pharmaceutical Bio-engineering Co., Ltd.

Production License Number: Susi license (2024) 01008;

Production Date: 2025.04.02;

Quality guarantee period: 6 months;

Batch number: 2504010202;

Qualification certificate number: 20-SM250620092.

Type I RO water: The free chlorine in water was controlled at 0.3 mg/L -2 mg/L for sterilization. The animals had free access to drinking spout containing water.

Analysis and Detection: The content of heavy metals, microorganisms and free chlorine in drinking water met the requirements of the *GB 5749-2022 Standards for drinking water quality.*。

3.6. EXPERIMENTAL DESIGN AND PROCEDURE

3.6.1. Animal Receipt and Acclimation

Animals were acclimated for 12 days in a barrier-system animal room prior to the study. During the quarantine period, individual identification was achieved through cage number combined with limb staining. Animals were observed once daily for abnormalities. This acclimation period exceeded the minimum 3-day requirement stipulated in GB/T 15670.6-2017 “Toxicological Test Methods for Pesticide Registration - Part 6: Acute Inhalation Toxicity Test”, thereby ensuring that the animals' body weights met the standard requirements.

3.6.2. Animal Identification

During the study, animals were identified using picric acid, fuchsin red, and methyl violet applied to specific body regions. Picric acid marked units digits (1-9), methyl violet marked tens digits (10-90), and fuchsin red marked hundreds digits. Specific marking sites: Units digits (picric acid): left forelimb (1), left flank (2), left hindlimb (3), head (4), dorsal trunk (5), tail base (6), right forelimb (7), right flank (8), right hindlimb (9).Tens digits (methyl violet): left forelimb (10), left flank (20), etc. Combined digits (e.g., 11 = methyl violet [10] + picric acid [1]).

3.6.3. Cage Labeling

During both quarantine and experimental periods, cages were labeled with white self-adhesive cage cards containing the following information: study number, test substance name, animal strain, exposure concentration, group designation, sex, cage/animal ID, signature, and date.

3.6.4. Route of Administration

The test substance was administered dermally by uniform application to the shaved dorsal skin (both sides of the midline), covering at least 10% of the total body surface area.

4. EXPERIMENTAL PROCEDURE/ DESIGN

4.1. Animal Preparation

Before the experiment, the animals were weighed and marked, restrained in restraint devices, and then the devices were inserted into the exposure chambers.

4.2. INHALATION EXPOSURE METHODOLOGY

4.3. DOSE SELECTION

This acute inhalation toxicity test employed a single-concentration, whole-body, nose-only exposure system for dynamic inhalation testing in small animals. Temperature and humidity at the nose-only exposure port were monitored throughout the exposure period using integrated sensors, with the monitoring point set at the exposure port itself. The inhalation exposure chamber was maintained under negative pressure to prevent leakage of the test sample aerosol.

A pre-weighed sample was loaded into the feeding device, after which the aerosol generated by the nebulizer was introduced into the chamber along with carrier air to initiate inhalation exposure. The exposure parameters were set prior to the procedure (target concentration: 5000 mg/m^3), with a single continuous exposure duration of 4 hours.

Upon conclusion of the exposure, the following operational results were directly obtained:

Average aerosol flow rate: 3.003 L/min

Average dilution flow rate: 6.965 L/min

Average extraction flow rate: 12.302 L/min

Total sample consumption: 13.8 g

The calculated actual exposure concentration was 5768.5 mg/m^3.

4.4. OBSERVATION PERIOD

All animals were observed continuously for 14 days post-administration.

5. OBSERVATIONS AND RECORDS

5.1. MORTALITY AND GENERAL CLINICAL SIGNS

Signs of toxicity and mortality were observed and recorded during exposure and throughout the 14-day observation period.

5.2. BODY WEIGHT RECORDS

Individual body weights were recorded at the following time points: at death (if applicable), Day 0 (prior to dosing), Day 7, and Day 14.

5.3. GROSS NECROPSY EXAMINATION

All animals found dead were necropsied on the day of death. Survivors were euthanized by carbon dioxide asphyxiation and subjected to gross necropsy at the end of the 14-day observation period.

6. RESULTS AND DISCUSSION

6.1. MORTALITY AND CLINICAL OBSERNVTIONS

No signs of toxicity or mortality were observed in any animals during the 14-day post-exposure period. Detailed data are presented in Tables 1 and 2.

6.2. BODY WETGHT

No abnormal changes in body weight were observed during the study. Results are shown in Appendix Table 3.

6.3. GROSS NECROPSY FINDINGS

Gross necropsy findings for euthanized animals are detailed in Table 4.

7. CONCLUSION

Based on the experimental results, SD rats were exposed to a single continuous inhalation concentration of 5768.5

mg/m³ for 4 hours. No signs of toxicity or mortality were observed in the test animals during the 14-day post-exposure observation period. It can be concluded that, under the conditions of this test, the acute inhalation LC_{50} of the test substance for SD rats is greater than 5000 mg/m³.

Therefore, according to the toxicity classification criteria outlined in Section 3.3.2.8, Table 2 of the Ministry of Agriculture of the People's Republic of China Decree No. 10, 2007: Provisions on pesticide registration data, the acute inhalation toxicity of the test substance is classified as Category IV, indicating low toxicity。

8. REFERENCES

1) GB/T 15670.6-2017 Toxicological Test Methods for Pesticide Registration - Part 6: Acute Inhalation Toxicity Test

2) Ministry of Agriculture of the People's Republic of China Decree No. 10, 2007: Provisions on pesticide registration data.

9. DATA TABLES

Table 1: Animal Mortality Observation Record

Exposure Concentration (mg/m³ body weight)	Number of animals	Sex	Mortality
5768.5	10	Male	0
5768.5	10	Female	0

Table 2: Clinical Observations in Animals

Animal ID	Sex	Observation Period														
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14
01	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
02	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
03	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
04	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
05	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
06	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
07	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
08	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
09	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
07	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
08	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
09	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
10	♂	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
11	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
12	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
13	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
14	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
15	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
16	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
17	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
18	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
19	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N
20	♀	N	N	N	N	N	N	N	N	N	N	N	N	N	N	N

Note: "♂" denotes male animals; "♀" denotes female animals. "N" means No abnormal clinical changes were found.

Table 3: Animal Body Weight (g)

Exposure Concentration (mg/m^3 body weight)	Animal of Numbers	Sex	Day 0 (Prior to Dosing)	D7	D14	14 days weight gain
5768.5	10	Male	208.4±7.04	251.1±7.12	294.8±10.34	86.4±5.21
5768.5	10	Female	201.5±5.94	237.8±6.32	265.2±8.98	63.7±3.76

Table 4: Gross Anatomical Findings in Animals

Exposure Concentration (mg/m^3 body weight)	Number of animals	Sex	Mode of Death	Gross Necropsy Examination
5768.5	10	♂	Euthanasia	N
5768.5	10	♀	Euthanasia	N

Note: "N" means No abnormal gross anatomy found.

10. ANNEXURES

ANNEXURE 1: THE TOXICITY CLASSIFICATION OF PROVISIONS ON PESTICIDE REGISTRATION DATA

Toxicity Classification	Classification	Acute Oral LD_{50} cut-off values(mg/kg)	Acute Dermal LD_{50} cut-off values(mg/kg)	Acute Inhalation LC_{50} cut-off values (mg/m^3)
Ia	Extreme toxicity	≤5	≤20	≤20
Ib	High toxicity	>5 ~ 50	>20 ~ 200	>20 ~ 200
II	Moderate toxicity	>50 ~ 500	>200 ~ 2000	>200 ~ 2000
III	Slight Toxic	>500 ~ 5000	>2000 ~ 5000	>2000 ~ 5000
IV	Negligible Toxic	>5000	>5000	>5000

ANNEXURE 2: CNAS CERTIFICATE

CNAS

China National Accreditation Service for Conformity Assessment

GLP Compliance Statement

(Registration No. CNAS GLP0004)

Ningbo Customs District Technology Center

Meigang Building C, Meishan Free Trade Port Zone, Beilun District, Ningbo, Zhejiang, China

is inspected to Principles of Good Laboratory Practice（GLP） published by Organisation for Economic Co-operation and Development（OECD）for the study expertise listed in the appendix to this statement, which bears the same registration number as above. The appendix forms an integral part of this statement.

Effective Date：2025-03-26

Expiry Date：2028-04-17

Date of Initial Accreditation：2011-07-20

Signed on behalf of China National Accreditation Service for Conformity Assessment 张朝华

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