FINAL REPORT

Study Title: Acute Oral Toxicity Study in Rats with Tembotrione 35g/L +Atrazine 200g/L OD

Study No.: S213460911

Study Director: Sun Lei

Sponsor

EASTCHEM Co., Ltd.

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Test Facility

Liaoning Qianyi Testing and Evaluaiton Technology Development Co., Ltd.

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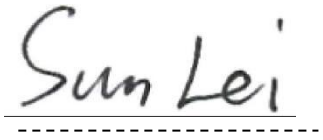
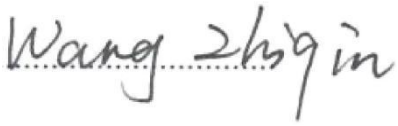
SIGNATURE PAGE

Study Director Sun Lei



Date: 2021.9.20

Test Facility Management Wang Zhiqin



Date: 2021.9.20

GLP COMPLIANCE STATEMENT

STUDY TITLE	Acute Oral Toxicity Study in Rats with Tembotrione 35g/L +Atrazine 200g/L OD
STUDY NO.	S213460911
SPONSOR	EASTCHEM Co., Ltd.

This study was conducted under my guidance in accordance with the NY/T718-2003 Good Laboratory Practice for Toxicological Safety Evaluation of Pesticides issued by the Ministry of Agriculture on December 1, 2003 and implemented on March 1, 2004.

This study was conducted in accordance with the GB15670-1995 Toxicological Test Method for Pesticide Registration approved by the State Bureau of Technical Supervision on August 17, 1995 and implemented on January 1, 1996. The report faithfully and accurately reflects the results of the test.

Study Director Sun Lei

Sun Lei

Date: 2021.9.20

QUALITY ASSURANCE STATEMENT

STUDY TITLE Acute Oral Toxicity Study in Rats with Tembotrione 35g/L +Atrazine 200g/L OD

STUDY NO. S213460911

SPONSOR EASTCHEM Co., Ltd.

The Quality Assurance Unit (QAU) inspected/reviewed this study in accordance with the following GLP (Good Laboratory Practice) regulations:

Good Laboratory Practice for Toxicological Safety Evaluation of Pesticides (NY/T 718-2003), Ministry of Agriculture of the People's Republic of China (MOA).

QAU reviewed the report, which stated the test materials and methods, and the results truly reflected the original data.

Item of Audit	Date of Inspection	Date of Reporting
Draft Study Plan	2021-03-13	2021-03-13
Supplementary Study Plan	2021-07-06	2021-07-06
Weigh*	2021-07-21	2021-07-21
Preparation of test products*	2021-07-22	2021-07-22
Animal grouping and identification*	2021-08-01	2021-08-01
Administration*	2021-08-02	2021-08-02
Critical Phase Inspection*	2021-08-02	2021-08-02
Zootomy*	2021-08-16	2021-08-16
Raw date and Final Study Report	2021-09-18	2021-09-18

Note: * Indicates the procedure - based check item

All the inspection results are accurate reflections of the performances of the study phases. The test report represents accurate descriptions of the test method, test procedure and observation results. The results audited are accurate reflections of the raw data.

Study Director Zhang Tianlong

Zhang Tianlong

Date: 2021.9.20

SUMMARY

Introduction

To observe the toxic reactions and death of SD rats after oral administration of the experimental pesticide, to obtain the median lethal dose (LD_{50}) of the experimental pesticide to the experimental animals, and to preliminarily estimate the target organ of toxicity and possible mechanism of toxicity by observing the clinical manifestations of acute toxic effects, so as to provide reference for the dose level design of subchronic, chronic and other toxicity tests. To provide the basis for acute toxicity classification and safety protection measures.

Method

Hohn's method was used in this experiment, and the doses from low to high were 1000, 2150, 4640 and 10000 mg/kg body weight, respectively, with 10 animals in each group and half male and half female. Before administration, the rats fasted overnight and could not refrain from water, and were given the pesticide by oral intragastric administration. On the day of administration, the toxic reactions and death of the animals were observed closely within 4h after administration, and then observed once a day in the morning and once in the afternoon until the 14th day of administration. Animals were weighed once before grouping, before administration (day 1), on day 8, and on day 15. Gross anatomy was performed on the dead animals during the observation period and those still alive at the end of the observation period, and histopathological examination was performed on the animals with lesions found in the gross examination over 24h after survival. According to the death of animals after administration, LD50 and 95% confidence limit of acute oral toxicity test of SD rats were obtained by Hohn's table method, and toxicity classification was conducted according to the classification standard of acute oral toxicity test of pesticide rats.

Results

In male mice: the death rate of animals from low to high dose was 0, 0, 4, 4.

In female mice: the death rate of animals from low to high dose was 0, 3, 3, 4

Animals in 1000mg/kg dose group showed no abnormal symptoms.

Three (♀) animals in the 2150mg/kg dose group showed symptoms of lying on their stomach and died after administration on the day of administration, and no abnormal symptoms were found in the surviving animals.

In the 4640mg/kg dose group, four animals (♂: 1; ♀: 3) animal death: On day 2 after administration, 3 (♂) animals were found dead, 2 of the surviving animals returned to normal, and the other one still showed dyspraxia symptoms and returned to normal on day 5 after administration.

Six animals (♂: 4; ♀: 2) animal death; On day 2 after administration, some of the animals showed symptoms of dyskinesia, 2 (♀) animals died and 1 animal recovered. On day 3 after administration, one animal still showed symptoms of dyskinesia, which returned to normal on day 5 after administration.

Body weight and weight changes of surviving animals: The body weight of animals showed an upward trend, and no abnormal changes were found.

Pathological examination: No histopathological examination is necessary because gross autopsy is normal.

Conclusion

Under the conditions of this experiment: the acute oral median lethal dose (LD50) of male SD rats was 4220 mg/kg body weight, and the 95% confidence limit was (2530-7020) mg/kg body weight.

The acute oral median lethal dose (LD50) of female SD rats was 2870 mg/kg body weight, and the 95% confidence limit was (1460-5670) mg/kg body weight.

According to the classification standard of acute oral toxicity test of pesticide rats:

Tembotrione 35g/L +Atrazine 200g/L OD was classified as low toxicity for male and female SD rats.

1 GENERAL

1.1 Study title and study No.

Study Title: Acute Oral Toxicity Study in Rats with Tembotrione 35g/L +Atrazine 200g/L OD

Study No.: S213460911

1.2 Objective

To observe the toxic reactions and death of SD rats after oral administration of the experimental pesticide, to obtain the median lethal dose (LD_{50}) of the experimental pesticide to the experimental animals, and to preliminarily estimate the target organ of toxicity and possible mechanism of toxicity by observing the clinical manifestations of acute toxic effects, so as to provide reference for the dose level design of subchronic, chronic and other toxicity tests. To provide the basis for acute toxicity classification and safety protection measures.

1.3 Specifications and guidance documents to follow

1.3.1 GLP

This study was conducted under my guidance in accordance with the NY/T718-2003 Good Laboratory Practice for Toxicological Safety Evaluation of Pesticides issued by the Ministry of Agriculture on December 1, 2003 and implemented on March 1, 2004.

1.3.2 Test instruction

This study was conducted in accordance with the GB15670-1995 Toxicological Test Method for Pesticide Registration approved by the State Bureau of Technical Supervision on August 17, 1995 and implemented on January 1, 1996. The report faithfully and accurately reflects the results of the test.

1.4 Animal welfare

Animal use complied with national animal welfare laws and regulations "Instructive Notions with Respect to Caring for Laboratory Animals" (2006, PRC Ministry of Science). The animal care and use activities required for conduct of this study are reviewed and approved by the test facility Animal Care and Use Committee (IACUC).

1.5 Test facility

Name: Liaoning Qianyi Testing and Evaluation Technology Development Co., Ltd.

Address: No.136 Xianghuai Road, Economic-Technological Development Area of Benxi, Liaoning Province, China.

Test Facility Management: Wang Zhiqin

Tel: 024-47505200

1.6 Sponsor

Sponsor: EASTCHEM Co., Ltd.

Address: Floor 26, Haoyuan Mansion, NO.266, Middle Tongjiang Road, Changzhou, Jiangsu, China

Tel: 86-519-68786677

1.7 Key personnel

Experiment Operators: Liu Yizu, Wang Dan, Wang Yanqiu, Huang Jianhua

Test item Administers: Tang Fengyang

Histopathology Examination: Wang Yan

Archivist: Lu Sibo

Veterinarian: Zhou Lili

1.8 Quality assurance

QA Manager: Zhang Tianlong

Address: No.136 Xianghuai Road, Economic-Technological Development Area of Benxi, Liaoning Province, China.

Tel: 86-24-47505280

The test plan, test implementation, raw data and final report are all supervised and reviewed by the Quality Assurance Department (QAU) of the institution. Conduct periodic inspections of certain operations or processes in the conduct of the study in accordance with the requirements of the relevant SOPs of the Institution. The quality Assurance Department will issue a quality assurance statement in the final report.

1.9 Test protocol changes and deviations

Reasons should be given for the change of the test plan, and the change should be signed and dated by the person in charge of the subject, the person in charge of quality assurance and the person in charge of the institution.

The subject leader shall describe and explain the deviation from the test protocol in order, confirm and date it. The material shall be kept together with the original data.

1.10 Proposed schedule

Study Initiation date: 2021-07-07

Experimental starting date: 2021-07-31

Experimental completion date: 2021-08-16

Final report date: 2021-09-20

2 Materials

2.1 Test item

2.1.1 Test item information

Name: Tembotrione 35g/L +Atrazine 200g/L OD

Batch No.: 20201220

Content: Tembotrione 35g/L ; Atrazine 200g/L

Type of formulation: Oil-based suspension concentrates

Physical condition: Off-white liquid

Expiry date: 2022-12-20

Storage condition: Room temperature (10-30℃)

Stability: Stable under storage conditions

Safety precautions: Wear overalls, gloves and masks

Supplied by: EASTCHEM Co., Ltd.

2.1.2 Preparation of test item

Weigh the test product, add the solvent to 30mL, mix well, and prepare the required

suspension as follows:

Quantity of test products (g)	Solvent	Fill…to volume (ml)	Final concentration (mg/ml)
3.0002	Test water	30	100
6.4503	Test water	30	215
13.9201	Test water	30	464
30.0000	Test water	30	1000

2.1.3 Test product analysis

There is no need for sample analysis in this experiment.

2.1.4 Sample retention for test products

Sample retention: 10.00g

Responsible department for sample retention: Sample Department

2.1.5 Surplus test item disposal

The residual test item after study indicated by sponsor, any residual test item was disposed totally.

2.2 Vehicle and control

Name: Ultrapure water

Physical properties: Colorless clear liquid

Supplier: Milli-Q ultrapure water system

2.3 Test system

2.3.1 Test animal information

Species and Strain: Sprague Dawley Rats

Grade: SPF

Total number and sex: 40(half male and half female)

Age: 7-8 weeks

Body weight: Male, 227.9-276.8g; Female, 206.7-248.2g

Source: Liaoning Changsheng Biological Technology Co., Ltd.

Treatment of animals: No group remaining animals.

2.3.2 Reasons for the selection of test system

The test guidelines recommend the use of rats, and this line of animals at home and abroad have abundant research background data, so the SD rats were selected for the study of acute oral toxicity test in rats.

2.3.3 Selection of experimental animals

The mean body weight difference of the same sex animals between groups should be less than 5% in the early adult SD rats with clear strain and genetic background.

2.3.4 Identification and marking of animals

During quarantine and adaptive breeding, animals are provisionally numbered with numbers written directly on their tails. Animal numbers are marked at different locations with animal coloring pens during formal testing. During the test, each animal has a unique animal number. At the same time, the animal cage card is hung on the corresponding animal cage. The cage card contains the special number, animal number and other information. The color of cage card from low dose to high dose is white, green, yellow and red respectively.

2.3.5 Quarantine and adaptive feeding

All animals underwent quarantine and adaptive feeding for 6 days, and qualified animals were used for testing.

2.3.6 Cage

Animals are raised in plastic rat boxes (size L42cm×W27cm×H20cm). Female and male animals were kept in cages, and the feeding density of each cage was 5 animals per cage during quarantine adaptation period and drug administration period.

2.3.7 Environmental conditions

Rom No.: A1048

Photo period: 12h light and 12h dark

Air change times: ≥15 times /h

Temperature: 20.1-26.3℃

Humidity: 48.3-69.2% RH

Maximum daily temperature difference range: <4℃

2.3.8 Diet

Type of feed: Rat full nutritive solid feed

Feed lot number: 20210601

Manufacturer: Beijing Keaoxieli Feed Co., Ltd.

Storage conditions: Store in special feed room, keep low temperature, dry, hygienic

Feeding method: continuous supply, unlimited free intake

Feed testing: Each batch of feed shall have the quality certificate provided by the manufacturer, and the regular nutrient composition index, chemical pollutant index and microbial index shall be tested once a year by a qualified third-party professional testing unit.

Feed test results: All tested items were qualified, and the test results were stored at our laboratory.

2.3.9 Drinking

Type of drinking water: reverse osmosis water

Water supply method: uninterrupted water supply free intake

Water quality test: Test once every quarter

Water quality test results: All the tested items were qualified, and the test results were stored at our laboratory.

2.4 Main test instrument

2.4.1 Main Instrument

Name	Type	Manufacturer
Electronic scales	T1000	Changshu Shuangjie test Instrument factory

3 Experiment design

3.1 Group and dose

The animals were divided into 4 groups with 10 males and half females in each group. The information is shown in the following table:

Group	Test product	Dose (mg/kg)	Sex	Amount	Animals No.
1	Tembotrione 35g/L +Atrazine 200g/L OD	1000	♂	5	1101-1105
			♀	5	2106-2110
2		2150	♂	5	1211-1215
			♀	5	2216-2220
3		4640	♂	5	1321-1325
			♀	5	2326-2330
4		10000	♂	5	1431-1435
			♀	5	2436-2440

3.2 Reasons for dose design

The dosage was designed according to GB 15670-1995 Toxicological test Method for pesticide Registration through pre-test and literature review.

3.3 Information about administration

3.3.1 Information about administration

Administration route: Continuous agitation during administration, oral intragastric administration, fasting without water overnight before administration, and eating at least 2 h intervals after administration.

Frequency and duration of administration: Single dose

Dose: 10mL/kg

3.3.2 Reasons for the selection of route, frequency and duration of administration

According to the requirements of 《GB 15670-1995 Toxicological Test Method for pesticide Registration》.

3.4 Detection frequency and methods of various indicators

3.4.1 Clinical signs

The animals were observed closely within 4 h after administration, and the toxic reactions or death of the animals were recorded in time. After that, the animals were observed once a day in the morning and once in the afternoon until the 14th day of administration.

Comprehensively observe and record changes in animal fur, eyes and mucous membranes, respiratory system, circulatory system, nervous system, especially changes in limb movement and behavior.

3.4.2 Body weights

Animals were weighed once before grouping, before administration (day 1), on day 8, and on day 15.

3.4.3 Histopathology

Gross anatomy was performed on animals that died during the trial period and those that survived after the trial. No biochemical index test was performed in this experiment, but gross pathological observation was performed on dead animals. For animals that survived for more than 24 h, histopathological microscopy was performed when gross examination of diseased tissues and organs was performed during anatomy. CO2 inhalation anesthesia was used in euthanasia.

4 Data processing

Data was processed using Microsoft Excel 2013 software. The data is summarized in tabular form, showing the animal's weight, animal deaths and mortality during the test, and recording the animal's toxic symptoms. According to the toxic reaction and death of the animals, the LD50 and 95% confidence limit of acute oral toxicity test of SD rats were obtained by Hohn's table method, and toxicity classification was performed according to the classification standard of acute oral toxicity test of pesticide rats.

Toxicity grading standards for pesticide products

Toxicity grading	LD_{50}(mg/kg)
Highly toxic	<5
High toxicity	5-50
Moderate toxicity	50-500
Low toxicity	500-5000

Slight toxicity	>5000

5 Archiving

After filing, the following information shall be kept in the Archives Department of the institution for a period of at least 5 years from the date of registration:

Test scheme;

All raw data;

Electronic file;

Final report, etc.

In addition, the sample can be stored for 5 years after archiving or until the test product fails. The data saved shall be returned to the principal within the specified time limit. If the Principal needs to extend the retention time, the Principal and the Agency shall decide the specific matters through consultation.

6 Changes and deviations

No changes related to the test scheme have occurred in this study, and the deviations are as follows:

Scheme stipulation	Actual situation	Evaluation
Temperature range: 20-26℃	Temperature range: 20.1-26.3℃	No effect

7 Result

7.1 Circumstances of death

Sex	Death of animals at various doses(mg/kg)	LD_{50}(mg/kg)	95% confidence

	1000	2150	4640	10000		limit(mg/kg)
♂	0	0	4	4	4220	2530-7020
♀	0	3	3	4	2870	1460-5670

The distribution of animal deaths is shown in Table 1 of Schedule I

7.2 Clinical observation

Animals in 1000mg/kg dose group showed no abnormal symptoms.

3 (♀) animals in the 2150mg/kg dose group showed symptoms of lying on their stomach and died after administration on the day of administration, and no abnormal symptoms were found in the surviving animals.

In the 4640mg/kg dose group, 4 (♂:1; ♀:3) animals died after the day of administration. On day 2 after administration, 3 (♂) animals were found dead, 2 of the surviving animals returned to normal, and the other one still had dyskinesia symptoms and returned to normal on day 5 after administration.

6 (♂: 4; ♀:2) animals died in the 10000mg/kg dose group after the day of administration. On day 2 after administration, some of the animals showed symptoms of dyskinesia, 2 (♀) animals died and 1 animal recovered. On day 3 after administration, one animal still showed symptoms of dyskinesia, which returned to normal on day 5 after administration.

The clinical observations of animals are shown in Table 2 in Schedule I.

7.3 Body weights

Body weight and weight changes of surviving animals: The body weight of animals showed an upward trend, and no abnormal changes were found.

The data of animal body weight and body weight change are shown in Table 3 in Schedule I.

7.4 Histopathology

There was no abnormality in the gross autopsy and no histopathological examination was necessary.

8 Conclusion

Under the conditions of this experiment:

The acute oral median lethal dose (LD50) of male SD rats was 4220 mg/kg body weight, and the 95% confidence limit was (2530-7020) mg/kg body weight.

The acute oral median lethal dose (LD50) of female SD rats was 2870 mg/kg body weight, and the 95% confidence limit was (1460-5670) mg/kg body weight.

According to the classification standard of acute oral toxicity test of pesticide rats:

Tembotrione 35g/L +Atrazine 200g/L OD was classified as low toxicity for male and female SD rats.

9 References

1) GB 15670-1995 Toxicological test methods for pesticide registration State Bureau of Technical Supervision. Approved on August 17, 1995.1.1 implemented.

2) NY/T 718-2003 Good Laboratory Practice for Toxicological Safety Evaluation of pesticides, Ministry of Agriculture of the People's Republic of China. Issued on December 1, 2003, implemented on March 1, 2004.

10 Appendix

Table 1 Animal death distribution table

Sex	Dose (mg/kg)	No. of Animals	Time of death distribution (day)														Number of deaths	Mortality (%)
			1	2	3	4	5	6	7	8	9	10	11	12	13	14		
♂	1000	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	2150	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0
	4640	5	1	3	-	-	-	-	-	-	-	-	-	-	-	-	4	80
	10000	5	4	-	-	-	-	-	-	-	-	-	-	-	-	-	4	80
♀	1000	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2
	2150	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	60
	4640	5	3	-	-	-	-	-	-	-	-	-	-	-	-	-	3	60
	10000	5	2	2	-	-	-	-	-	-	-	-	-	-	-	-	4	80

Note: - Indicates that no animals have died.

Table 1 Clinical Observation

Dose(mg/kg)	Animals No.	D1	D2	D3	D4	D5	D6	D7	D8	D9	D10	D11	D12	D13	D14
1000	1101	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1102	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1103	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1104	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1105	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2106	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2107	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2108	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2109	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2110	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2150	1211	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1212	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1213	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1214	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	1215	-	-	-	-	-	-	-	-	-	-	-	-	-	-

	2216	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2217	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	2218	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2219	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	2220	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
4640	1321	1H	-	-	-	-	-	-	-	-	-	-	-	-	-
	1322	1H	8A	-	-	-	-	-	-	-	-	-	-	-	-
	1323	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	1324	1H	8A	-	-	-	-	-	-	-	-	-	-	-	-
	1325	1H	8A	-	-	-	-	-	-	-	-	-	-	-	-
	2326	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	2327	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	2328	1H	-	-	-	-	-	-	-	-	-	-	-	-	-
	2329	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	2330	1H	1H	1H	1H	-	-	-	-	-	-	-	-	-	-
10000	1431	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-
	1432	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-

1433	1H	-	-	-	-	-	-	-	-	-	-	-	-	-	
1434	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-	
1435	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-	
2436	1H	8A	-	-	-	-	-	-	-	-	-	-	-	-	
2437	1H	1H, 8A	-	-	-	-	-	-	-	-	-	-	-	-	
2438	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-	
2439	1H	1H	1H	1H	-	-	-	-	-	-	-	-	-	-	
2440	10E, 8A	-	-	-	-	-	-	-	-	-	-	-	-	-	

Note: - indicates normal; 1H indicates dyskinesia; 10E indicates lie on your stomach; 8A indicates discovery of death

Table 3 Animal body weight and weight gain

Group	Sex	Animal No.	Body weight (g)			Weight gain (D15-D1)
			D1	D8	D15	
1	♂	1101	256.1	344.7	387.4	131.3
		1102	226.5	310.4	362.1	135.6
		1103	221.1	321.9	367.7	146.6
		1104	217.1	305.5	360.5	143.4
		1105	213.4	302.8	360.4	147.0
		Mean	226.8	317.1	367.6	140.8
	♀	2106	225.7	264.2	280.3	54.6
		2107	205.6	244.8	252.0	46.4
		2108	204.9	238.4	256.0	51.1
		2109	200.3	242.0	266.5	66.2
		2110	198.5	238.6	251.8	53.3
		Mean	207.0	245.6	261.3	54.3
2	♂	1211	236.4	336.0	346.9	110.5
		1212	231.1	323.1	351.0	119.9
		1213	221.3	304.2	319.8	98.5
		1214	213.4	303.0	338.1	124.7
		1215	216.4	298.3	312.9	96.5
		Mean	223.7	312.9	333.7	110.0
	♀	2216	212.0	257.5	279.8	67.8
		2217	208.0	-	-	-
		2218	195.7	230.2	256.0	60.3
		2219	206.0	-	-	-
		2220	198.6	-	-	-
		Mean	204.1	243.9	267.9	64.1
3	♂	1321	238.6	333.1	388.8	150.2
		1322	234.8	-	-	-
		1323	225.8	-	-	-
		1324	206.4	-	-	-
		1325	211.5	-	-	-
		Mean	223.4	333.1	388.8	150.2

	♀	2326	215.3	-	-	-
		2327	212.1	-	-	-
		2328	205.7	235.7	261.8	56.1
		2329	197.9	-	-	-
		2330	198.0	238.4	245.5	47.5
		Mean	205.8	237.1	253.7	51.8
4	♂	1431	237.1	-	-	-
		1432	236.8	-	-	-
		1433	227.8	313.9	370.7	142.9
		1434	221.1	-	-	-
		1435	206.2	-	-	-
		Mean	225.8	313.9	370.7	142.9
	♀	2436	213.0	-	-	-
		2437	206.7	-	-	-
		2438	201.7	-	-	-
		2439	199.6	222.2	239.8	40.2
		2440	197.0	-	-	-
		Mean	203.6	222.2	239.8	-40.2

Note: - indicates that data does not exist

11 Qualification certificate

CNAS

China National Accreditation Service for Conformity Assessment

GLP Compliance Statement

(Registration No. CNAS GLP0011)

Liaoning Qianyi Testing and Evaluation Technology Development Co., Ltd.

No.136, Xianghuai Road, Economic-Technological Development Area of Benxi, Liaoning, 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：2019-09-29

Expiry Date：2022-09-28

Date of Initial Accreditation：2016-09-30

Signed on behalf of China National Accreditation Service for Conformity Assessment

China National Accreditation Service for Conformity Assessment (CNAS) is authorized by Certification and Accreditation Administration of the People's Republic of China (CNCA) to operate the national accreditation schemes for conformity assessment. CNAS is a member of the International Laboratory Accreditation Cooperation (ILAC) and the Asia Pacific Accreditation Cooperation (APAC).
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