

Toxicity Test Report for Florrea Goldix 567 Gold Extracting Reagent

-Mice Acute toxicity Test by intragastric administration

[Abstract] Purpose: To test the mice acute toxicity of the solution of Florrea gold extracting reagent Goldix 567 by intragastric administration at a dosage of 5/10000 (0.51 mg/ml).

Method: the solution of cicada gold beneficiation agent with a concentration of 5/10000 (0.5mg/ml) of was intragastrically administrated once at the maximum allowable intragastric administration dosage (0.4ml/10g body weight) to mice, with a dosage of 20mg/kg body weight The poisoned performance, poisoning death, weight change etc. of the mice were observed within 14 days after the administration.

Results: the solution of Florrea Goldix 567 gold extracting reagent with a concentration of 5/10000 (0.5mg/ml) was intragastrically administrated once to mice, at a dosage of 20mg/kg body weight, all the mice administrated with the drug showed no poisoned symptoms, no mouse died within 14 days after the administration, for the body weight change, when the treatment group was compared with the control group, $P > 0.05$, and the inter-group difference showed no significance.

1. Purpose of the test: as commissioned by Florrea Chemical Co. Ltd., to carry out the mice acute toxicity test of the solution of Florrea Goldix 567 gold extracting reagent by intragastric administration at a dosage of 5/10000 (0.5mg/ml).
2. Test drug: the test drug, Florrea Goldix 567 gold extracting reagent, is a mixture of gray-white particles and powder, provided by Florrea Chemical Co. Ltd., dissolvable in water, batch No.:20100713, and is used by temporarily preparing it into a solution with a concentration of 5/10000 (0.5mg/ml) in mining and metallurgical enterprises. In this test, the drug was prepared into a solution with a concentration of 5/10000 (0.5mg/ml) for intragastric administration of mice.
3. Test animal: Kunming mice, with body weight ranged 18-22g, female and male accounted for 50%, respectively, and provided by the Experimental Animal Center of Guangxi Medical University. The manufacturing license No.: CUI 2009-0002, Conformity Certificate of Animal: 0001487. Laboratory temporary: 23 ± 3 °C, and relative humidity: 70 ± 5 %.
4. Test method: 50mg of Florrea Goldix 567 gold extracting reagent was precisely weighed, and prepared into 100ml of solution with a concentration of 5 /10000 (0.5mg/ml) with distilled water. 40 qualified mice were selected, and were randomly divided into treatment group and control group after 7 days of adaptive rear in laboratory, 20 for each group (10 both for 占 and 旱), after 16 hours of fasting but provided with water, the treatment group was intragastrically given a solution of the Florrea Goldix 567 gold extracting reagent with a concentration of 5 /10000 (0.5mg/ml) at a dosage of 0.4ml/10 g body weight (the maximum allowable intragastric administration amount for mice), with a dosage of 20mg/kg body weight. The control group was intragastrically given distilled water at a dosage of 0.1ml/10g weight. The poisoned performance, poisoning death, weight change etc. of the mice were observed within 14 days after the administration.

Table 1

Observation and examination items of the toxicity test of the Florrea Goldix 567 gold extracting reagent mice poisoning performance in the acute with a concentration of 5/10000

Organ system	Observation and examination items	General performance after poisoning	Animal performance
Central nervous system and somatic movement	Behavior	Change in posture, abnormal cry, restless or sluggish	Normal
	Movement	Fremitur, ataxia, paralysis, eclampsia, mandatory action	Normal
	Response to various stimulation	Excitable, intuition allergy and lack of perception	Normal
	Brain and spinal reflex	Weakened or disappeared	Normal
	Muscle tension	Tetanus or relaxed	Normal
Autonomic nervous system	Papillary size	Decreased or enlarged	Normal
	Secretion	Hydrostomia or lachrymation	Normal
Respiratory system	Nostril	Running nose	Normal
	Respiratory nature and rate	Lento, difficult, tidal respiration	Normal
Cardiovascular system	Palpation of cardiac area	Bradycardia, arrhythmia, heartbeat too fast or too slow	Normal
Gastrointestinal system	Abdomen appearance	Inflation or contraction, diarrhea or constipation	Normal
	Feces hardness and color	Un-forming stool, black or gray	Normal
Genitourinary system	Vagina, galactophore	Inflated	Normal
	Penis	Prolapsus	Normal
	Perineum	Dirty	Normal
Skin and fur	Color and tension	Redness, fold-up, relaxed, tetter	Normal
	Integrity	Fur erect	Normal
Mucosa	Mucosa	Mucus flow, congestion, bleeding, cyanosis, pallor	Normal
	Oral cavity	Ulcer	Normal
Eyes	Eye lid	Ptosis of upper eyelid	Normal
	Eyeball	Exophthalmos or tremor	Normal
	Transparency	Turbidity	Normal
Others	Temperature of rectum or skin	Decrease or increase	Normal
	General condition	Abnormal poster or marasmus	Normal

Table 2

Body weight change of the mice in the acute toxicity test of Florrea Goldix 567 gold extracting reagent with a concentration of 5/10000 ($\bar{x} \pm s_n = 10$)

Group	Dosage mg/kg	gender	Body weight before drug administration(g)	Body weight 14 days after the drug administration (g)	Body weight increase percentage 14 days after the drug administration(%)
Control group	/	♂	19.4±1.35	33.0±1.83	41.1±4.73
		♀	19.7±1.57	32.8±1.75	39.8±5.35
Treatment group	20	♂	19.5±1.65	33.3±1.70	41.2±6.52
		♀	19.4±1.35	32.9±1.85	41.0±3.84

When the treatment group was compared with the control group, $P > 0.05$, and the inter — group difference showed no significance.

5. Test results

The solution of Florrea Goldix 567 gold extracting reagent with a concentration of 5/10000 (0.5mg/ml) of was intragastrically administrated once at the maximum allowable intragastric administration dosage (0.4ml/10g body weight) to the mice, with a dosage of 20mg/kg body weight, and the mice showed no poisoned performance, poisoning death, weight change etc. within 14 days after the administration, and when the treatment group was compared with the control group, $P > 0.05$, and the inter-group difference showed no significance.

The results indicated that, the solution of Florrea Goldix 567 gold extracting reagent with a concentration of 5/1000 (0.5mg/ml) has less toxicity.

And it will be safer for animals such as human or livestock when Florrea Goldix 567 gold extracting reagent is administrated at a concentration less than or equal to 5/10000 (0.5mg/ml) in mining and metallurgical enterprises.