

Translation of Neosugar Conference, (1982) in Tokyo,
page17~18

Acute toxicity study of Neosugar

Research Laboratory;

Laboratories of Toxicology,
Pharmacology and Toxicology Laboratories,
Meiji Seika Kaisha, Ltd.,
760, Morooka-cho, Kouhoku-ku,
Yokohama, Kanagawa prefecture

Supervisor;

Ueto TAKEDA, Ph.D., (Director)

Technicians;

Tetsutaro Niizato, (Researcher)

Time Period;

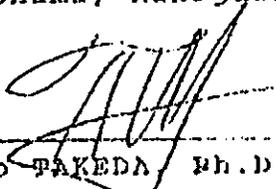
Nov. 1, 1981 Dec. 20, 1981

Acute toxicity study of Neosugar

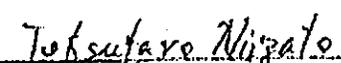
Research Laboratory;

Laboratories of Toxicology,
Pharmacology and Toxicology Laboratories,
Meiji Seika Kaisha, Ltd.,
760, Morooka-cho, Kohoku-ku,
Yokohama, Kanagawa prefecture

Supervisor;


Ueto TAKEDA, Ph.D., (Director)

Technicians;


Tetsutaro Niizato, (Researcher)

Time Period;

Nov. 1, 1981 ~ Dec. 20, 1981

Acute toxicity study of Neosugar

1. Materials and Methods

Both sexes of JcL-IcR mice (SPF) at the age of 4 weeks, male SD rats (SPF) at the age of 6 weeks and female SD rats at the age of 10 weeks, purchased from Nippon Charles River Co., were used in groups of 6 animals each.

Neosugar (GF; trace, GF2; 30.9%, GF3; 55.0% and GF4; 14.1%) dissolved with distilled water was used as the test sample solution. Sample concentration was adjusted to the level of 3, 6 and 9 g of Neosugar per kg of bodyweight in 0.5 ml for a mouse and in 2.0 ml for a rat. Nine grams of Neosugar per kg of bodyweight was the maximum level for physical possibility.

After a single oral dose of each sample, the mortality and the alteration of bodyweight was observed for 7 days.

2. Result

No gross pathological changes were noted on day 7 and the body weights recorded on day 7 were within limit as shown in the Table 1. No motarity was produced by respective dose.

These results indicated oral LD₅₀ of Neosugar was greater than 9 g/kg bodyweight.

Meiji

MEIJI SEIKA KAISHA, LTD.

4-16, KYOBASHI 2 CHOME, CHUO-KU, TOKYO, 104 JAPAN.

*Neosugar Purification
for acute Toxicity Study*

December 17, 1993

Purification Methods of Neosugar
for Acute Toxicological Study

1. Methods

- a) production of Neosugar G from sucrose by the action of fuructofuranosidase
- b) loading Neosugar G on a column packed with granular active carbon
- c) removal of glucose and sucrose by eluting with distilled water (50 times against the active carbon volume)
- d) recovering FOS by eluting with 20% EtOH (the same volume to active carbon)
- e) concentration by an evaporator and freeze drying

-- Analytical result

Sugar composition by HPLC analysis is,

GF	;	trace	GF ₂	;	30.9%
GF ₃	;	55.0%	GF ₄	;	14.1%

3. Production

Date : September 1, 1981 October 31, 1981
Conducted by: Goichi Yamaguchi
Bio Science Laboratories,
Meiji Seika Kaisha, Ltd.

Goichi Yamaguchi

signature

Table 1 Mean Bodyweight Changes in Acute Toxicity Studies on Male and Female Mice and Rats

Animal		Body Weight (g) ($\bar{x} \pm SD$)							
		Mouse				Rat			
Group (g/kg)		♂		♀		♂		♀	
		Before	7 days	Before	7 days	Before	7 days	Before	7 days
Untreatment		21±2.0	29±1.6	18±0.9	22±1.0	169±5.5	229±8.4	120±5.6	159±7.6
3		20±0.9	27±2.1	18±1.3	22±0.6	169±8.5	225±11.5	120±7.7	157±9.6
6		21±1.1	29±1.9	17±1.7	22±1.5	169±5.5	229±7.9	119±5.0	157±8.5
9		21±1.8	28±1.8	18±0.9	22±0.5	167±7.1	227±9.5	120±5.0	157±9.3