reflex and the several preparately test was observed on the 3 of the all subjects except tendon reflex in order to eliminate the training effect.

An observation was made on Saturday and on Monday evening. The hours of enjoyining the television was 3 hours, from 6 p.m. to 9 p.m., and detailed observation was made in five times such as before enjoying the television. 30 minutes after the beginning of enjoying the television, 60 minutes after, 120 minutes, 180 minutes after. Followings were the results thus obtained.

1) 3 hours of enjoying the television under compulsion caused comparatively heavy mental fatigue.

2) The mental fatigue caused by the enjoying the television increased with the lapse of time, but the maximum was observed especially one hour duration of after 2 hours to after 3 hours from the beginning of enjoyment.

3) The difference of fatigue due to the difference of fluorescent paints of the screen was observed statistically, but no remarkable difference was observed between them.

4) The difference of fatigue in accordance with age distinction was also observed, however, no remarkable result was obtained.

Above mentioned were the total results of experiment this time, as the 3 hours of enjoying the television was done compulsorily, many different conditions for enjoy television were considered in actural daily life, therefore, more progressive observation was necessary in order to discuss the fatigue caused by the enjoying of television. However, this observation brought us some good suggestion for the consideration of fatigue caused by the enjoying television.

## 54. STUDY ON THE EFFECT OF GRONSAN AS THE TONIC AND ANTIDOTES

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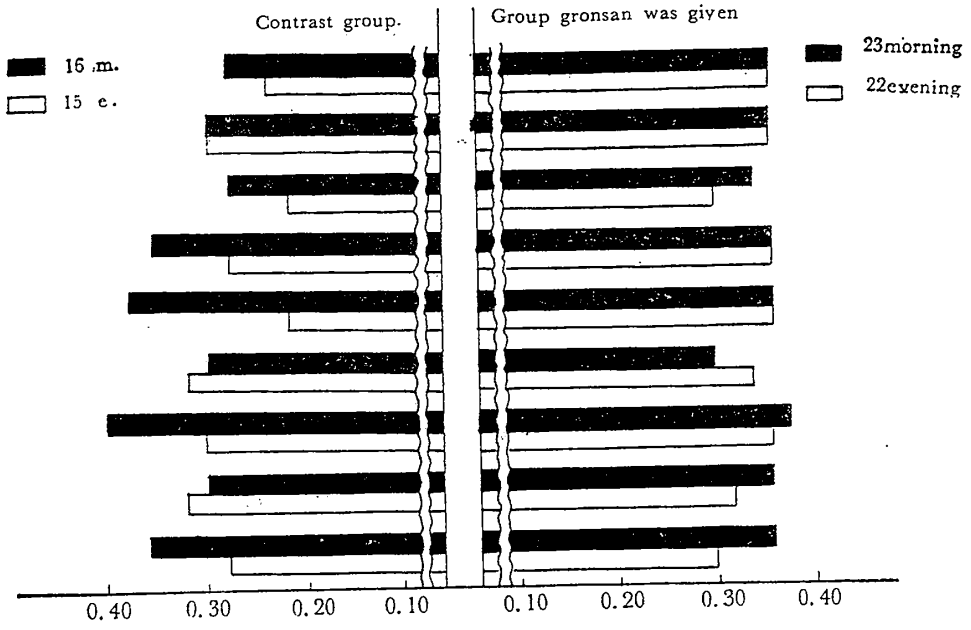
Owing to the speedy and complicated modern life, the fatigue and consumption of the peoples of these days are extremely great even if they seems to be healthy, therefore, taking the active preparation and antidotes are popular.

2 series of the observation were made under the 8 young female aged 18-20 years. As for the observation 1, giving them all night's exercise and let them take Glucuronic Acid, for a week and observed the ratio of before or after the experiment.

The half of the examinees were given 3 tablets of Glucuronic Acid thrice a day for one week. (One tablet of Glucuronic Acid contains) glucuronic acid 50mg, Vitamin C 10mg, Vitamin $B_1$ 2mg, and rest of the examinees was given the hypodermic injection of glucuronic acid once a day.

The eosinocyte, specific gravity of whole blood (copper sulfate method), the resistant ratio of blood corpuscle pH in saliva and in urine, simple cordiopneumo-

Graph No. 1

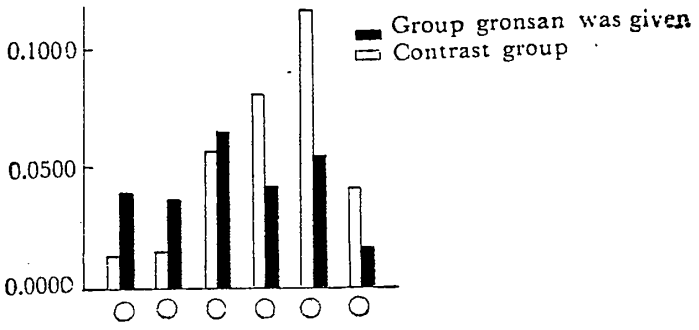



Graph No. 2 (Observation II)

| | 1 2 3 4 5 6 7 8 9 |
|---|---|
| | ○ ○ ○ ○ ○ ○ ○ ○ ○ |
| Measurement from the evening of 8 Dec. to the morning of 9 | ○ ○ × × × ○ ○ ○ × <br> ● ● |
| Measurement from the evening of 15 Dec. to the morning of 16 | × × ○ ○ ○ × × × ○ <br> ● ● |

× untreated
○ Gave them the same tablet as (Obs. 1) for 3 days before the observation in equal.
● Gave them the intramuscular injection of gronsan 100mg in the morning on 8th and 15th.

Graph No. 3 Resuscitation of time (II)



coefficient, the ratio of physical wabbling and reproducing method of time (Yoshii) were chosen for the consideration.

As for the result of observation 1, the resistant ratio of blood-corpuscle had 5% of danger before and after the exercise and significant difference was observed, and the variation was little in case of giving Glucuronic Acid.

As for the eosinocyte, the greater number were observed on the contrast group before exercise, but it decreased after the exercise, on the contrary, it increased in case of giving Glucuronic Acid.

As for the ratio of physical wabbling, it's little in case of giving Glucuronic Acid, however, the statistical signifance was hardly recognized in those two observations. As for the observation 2, we made a plan like a indication of graph 2. In case of giving Glucuronic Acid, pH in saliva and urine had more acidity and decreasing ratio of the eosinocyte was also great. The reproducy ratio of time was stabilized in comparison with the contrast group.

Above all, Glucuronic Acid was considered to be effective antidotes and active preparation.

## 56. THE INFLUENCE OF INTAKED SODIUM-1-METHYL-5-SEMICARBAZONO-6-OXO-2, 3, 5, 6-TETRAHYDROINDOLE -3-SULFONATE TRIHYDRATE UPON THE ACTIVITY OF SUCCINIC DEHYDROGENASE DURING EXERCISE

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We have been studied the influence of adrenochrom derivative upon the physical body chiefly from the view point of activity of dehydrogenase however, this time, the influence of intaked sodium-1-methyl-5-semi-carbazono-6--oxo-2, 3, 5, 6-tetrahydroindole-3-sulfonate-trihydrate (AC-17) upon the activity of succinic dehydrogenase during exercise was observed and the followings were the results thus obtained.

1) The activity of succinic dehydrogenase of the liver, kidney myocard and the muscles of hind legs of the group of rats that had two hours' forced swiming and did not intake AC-17 into their abdominal cavity showed low ratio in comparison with those of the untreated group. Decrease of those activities. As for the decrease of those activities, it's 5% in kidney and was 0.5% in myocard, and those dangerous ratios were considered to be significent.

2) The activity of succinic dehydrogenase of the liver, kidney, myocad and the muscles of hind legs of the group of rat that had two hours' forced swiming and having intaked AC-17 into their abdominal cavity for 3 days was almost the same as those of the untreated group.

3) The activity of succinic dehydrogenase of the liver, kidney, myocard and the muscles of hind legs in case of giving AC-17 into the abdominal cavity for 3