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STATISTICAL ANALYSIS OF DRAIZE RABBIT EYE IRRITATION TEST
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There are many papers and researches all over the world that report alternatives to Draize rabbit eye irritation test(Draize test). In vivo Draize eye irritation scores(Draize score) show various results after application of an irritant and concentrations. On the other hand, the cytotoxicity test, red blood cell assay, etc. ordinarily used as alternatives to Draize test is evaluated by in vitro results with peculiar values, such as the median Effective Concentration(EC50). To predict the irritation of substances using an in vitro test, we need the united criteria of an in vivo.

To solve this problem, we statistically analyzed Draize scores with various concentrations of Acetone, Formalin and Sodium Lauryl Sulphate (SLS). As results, we clarified the score of 24 h after the application of 10% aqueous solution on Draize test.

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TIME COURSE OBSERVATION OF THYROID PROLIFERATIVE LESIONS AND SERUM TSH LEVELS IN RATS TREATED WITH THIOUREA AFTER DHPN INITIATION: Takeo SHIMO, Kunitoshi MITSUMORI, Hiroshi ONODERA, Kazuo YASUHARA, Akihiko MAEKAWA and Michihito TAKAHASHI (Division of Pathology, National Institute of Health Sciences, 1-18-1 Kamiyoga, Setagaya-ku, Tokyo 158, Division of Pathology, Sasaki Institute, 2-2, Kanda-Surugadai, Chiyoda-ku, Tokyo 101)

Time course changes in serum TSH and quantitative data for thyroid proliferative lesions in male F344 rats administered N-bis(2-hydroxypropyl)nitrosamine (DHPN: 2000 mg/kg B.W., single s.c.) followed by 0.1 % thiourea (TU), were assessed at weeks 1, 2, 4, 8, 12 and 16 of treatment. The serum T4 level in the TU group was markedly decreased at week 1 and remained significantly lowered throughout the experiment. Serum TSH levels, in contrast, were elevated up to a peak at around week 4 with a return to the normal range at week 12. Proliferative lesions such as hyperplasia and adenomas occurred from weeks 2 and 4, respectively, and increased with the treatment period. The cell proliferative activity of follicular cells was high until week 2, but then returned to normal. The initially appearing hyperplasias and adenomas were characterized by marked proliferation but this was also greatly decreased at later stages. The results of our study thus suggest that a high serum TSH level plays an important role in the early phase of thyroid tumorigenesis and 8 weeks treatment with test substances is sufficient for detection of thyroid tumor promoter potential in two-stage thyroid carcinogenesis models.