down, one-third of the length of its tail was immersed in a beaker of water maintained at either 48 or 50 ± 0.05°. The beaker was an especially constructed, double-wall container of 400-ml. capacity, which permitted the circulation of water at constant temperature with a circulatory pump connected to a thermostatically controlled water bath. The water in the beaker was agitated with a magnetic stirrer to reduce any temperature gradient. The magnetic stirrer was stopped immediately prior to and during the time an animal's tail was immersed.

The animals reacted to the thermal stimulus with a typical contraction of their tails into circles. The time of this reaction was measured with a stop watch which was turned away from the operator to reduce a possible subjective influence upon him. Reaction times were determined at 15-minute intervals for a total of three determinations. The same individual carried out all measurements in order to assure proper interpretation of the end point. From 4 to 8 animals were used at a time. Half of these received a 50° heat stimulus; the others were subjected to a heat stimulus of 48°. Two days later the conditions were reversed, so that the response of each animal could be measured at both temperatures.

A number of animals were subjected to the described thermal stimulation twice a week for three weeks in order to determine a possible conditioning of their response.

RESULTS AND DISCUSSION

The first-week data obtained from several groups, totaling 31 animals, are shown in Table I. A significant difference ($P < 0.01$) in response to the 48° as compared to the 50° heat stimulus was observed. The reaction times during the third week of animals subjected to heat stimulation twice weekly for three weeks are listed in Table II. No significant differences between the first week and the third week reaction times of these animals at a given temperature were found, but the results obtained during the third week again show the effect of a 2° temperature difference on reaction time. It appears that the animals are not "conditioned" by repeated stimulation over a period of three weeks. This is in agreement with the findings of D'Amour and Smith (2).

TABLE I —TAIL FLICK REACTION TIME OF RATS AT 48 AND 50°

Time of Stimulus, min.	Reaction Time, sec.[a] 48°	50°
0	4.8(1.9)[b]	2.9(0.9)
15	5.4(1.5)	3.4(1.2)
30	5.4(1.7)	3.5(1.5)
Mean	5.2(1.7)	3.3(1.3)

[a] Average of 31 animals. [b] Standard deviation in parentheses.

TABLE II —TAIL FLICK REACTION TIME OF RATS AT 48 AND 50° AFTER REPEATED EXPOSURE TO STIMULUS FOR THREE WEEKS

Time of Stimulus, min.	Reaction Time, sec.[a] 48°	50°
0	5.6(1.5)[b]	3.3(0.7)
15	5.4(1.9)	3.5(1.0)
30	5.5(1.3)	3.9(1.1)
Mean	5.5(1.6)	3.6(1.0)

[a] Average of 21 animals. [b] Standard deviation in parentheses.

The animals used in this investigation neither were especially selected for their normal response, nor were trained in any special manner. According to some investigators (3–5), preselection and training of the experimental animals yields more consistent data, but even without these precautions it was possible in this study to demonstrate the effect of small temperature differences on reaction time. The results show that the temperature of the heat source used for thermal stimulation must be closely controlled if the sensitivity and reproducibility of thermal analgesimetric methods is to be assured.

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ERRATUM

In the paper titled "Toxic Saponin from *Elvira biflora*" (1), qualitative test result (*f*), page 780, column 2, should read (*f*) the same water solution boiled with cholesterol did not hemolyze blood cells of the guinea pig in phosphate buffer.

(1) de Oliveira, M. M., and Andrade. S. O., THIS JOURNAL, **50**, 780(1961).