

## **ABSTRAK**

Masyarakat Indonesia mengkonsumsi MSG cukup tinggi sebanyak 0,6 g/hari. Konsumsi MSG dapat menyebabkan *Sindroma Metabolik* salah satunya adalah resistensi leptin yang dapat menyebabkan perubahan berat badan. Tujuan penelitian ini untuk mengetahui perubahan berat badan berdasarkan lama dan dosis pemberian MSG.

Penelitian eksperimental dengan rancangan *prepost test only control group*. Subjek penelitian adalah mencit ( $n=32$ ) yang diukur berat badan dengan timbangan berat badan Ohaus dengan ketelitian 0,1 gram perminggu selama 1 bulan, penelitian ini dibagi menjadi 4 kelompok yakni: kelompok 1= kontrol tanpa perlakuan, kelompok 2= MSG 15 mg, kelompok 3= MSG 30 mg, dan kelompok 4= MSG 45 mg. Perubahan berat badan dianalisis dengan uji Two Way Anova dan dilanjutkan dengan uji Post Hoc.

Terdapat perbedaan berat badan berdasarkan lama dan dosis pada uji Two Way Anova ditunjukkan nilai  $p=0,000$ . Hasil Uji Post Hoc diperoleh hasil  $p<0,05$  untuk dosis pemberian MSG pada tiap minggu yang menunjukkan semakin lama pemberian MSG semakin menaikkan berat badan sedangkan untuk lama pemberian MSG tiap dosis didapatkan  $p<0,05$  kecuali pada kelompok MSG 30 mg dibanding MSG 45 mg didapatkan hasil  $p=0,087$  yang menunjukkan semakin tinggi dosis maka tidak semakin menaikkan berat badan.

Disimpulkan bahwa pemberian MSG berpengaruh terhadap berat badan pada semua kelompok setelah diukur perminggu selama 1 bulan.

**Kata kunci:** MSG, berat badan, nukleus arkuata

## ABSTRACT

The daily dietary of MSG intake among Indonesian has been shown to be high (0.6 g/day). MSG can cause *Metabolic Syndrome* one of them is leptin resistance that can cause changes in body weight. The purpose of this study was to determine effect of MSG on body weight.

In this experimental research with prepost test only control group design The research subjects were mice (n = 32) were measured weight with weight scales Ohaus to the nearest 0.1 gram per week for 1 month, this study were divided into 4 groups, group 1 served as control, group 2, 3, 4 were treated with 15 mg, 30 mg, 45 mg MSG respectively. Changes in body weight were analyzed by Two Way Anova followed by Post Hoc test.

The results showed there are differences in weight by the duration and dose on Two Way Anova test demonstrated the value of  $p = 0.000$ . Post Hoc Test Results obtained result  $p < 0.05$  for doses of MSG in every week that showed the longer the administration of MSG increasingly gain weight while for the duration of administration of each dose of MSG was obtained  $p < 0.05$  except for the 30 mg group compared to MSG MSG 45 mg showed  $p = 0.087$  which shows the higher dose then do not even raise the weight.

In conclusion, the administration of MSG has an effect on body weight in mice in all groups when measured per week for 1 month.

**Keywords:** MSG, weight, the arcuate nucleus