

ABSTRACT

Raisa Diva Gibran. 24020119190148. Hematological Profile of Sprague-Dawley rats (*Rattus norvegicus*) After Shape Discrimination Test. This thesis was conducted under supervision of Kasiyati and Agung Janika Sitasiwi.

This study examines the effect of a shape discrimination test on the hematological profile of Sprague–Dawley rats (*Rattus norvegicus*). Research on visual recognition in rodents predominantly focuses on behavioral outcomes, with limited integration of physiological markers. Consequently, there is a gap in understanding whether shape discrimination tasks influence hematological homeostasis, particularly in widely used laboratory strains such as Sprague–Dawley rats. Sixteen male rats were subjected to a visual shape discrimination test, after which blood samples were collected and examined for erythrocyte count, hemoglobin, hematocrit, MCV, MCH, MCHC, and leukocyte parameters using a hematology analyzer at BBVET Wates. Descriptive statistical analysis was performed to obtain the mean and standard deviation of each parameter. The results showed increases in hemoglobin, hematocrit, MCV, MCH, and MCHC, while leukocyte values remained within normal physiological ranges. These findings indicate that shape discrimination induces mild physiological changes without affecting immune function, supporting its continued relevance as a non-invasive tool in behavioral research.

Keywords: visual cognitive task, behavioral physiology, blood parameter analysis, rodent hematology, laboratory animal model.

