



## The Effect of Calcium to The Absorption Lead In Male Mice (*Mus musculus L.*)

Syarifah Nadia\*, Jansen Silalahi<sup>1</sup>, Muchlisyam<sup>1</sup>

<sup>1</sup>Faculty of Pharmacy, University of Sumatera Utara Jalan Tri Dharma No.5 Pintu 4  
Kampus USU, Medan, Indonesia, 20155

**Abstract:** Lead is a poison that can affect human health and is accumulative. Absorption of toxic metals such as lead can be affected by calcium in the body, therefore the calcium contained in food and beverages will increase lead absorption in digestion. The study aims to determine the effect of calcium and magnesium to the absorption of lead in male mice (*Mus musculus L.*). Materials used are Calcium Carbonate, and Lead Acetate. This study used male mice (*Mus musculus L.*) were 60 male mice (*Mus musculus L.*) samples were divided into 10 groups. All groups were given doses of lead at a dose of 40 mg/kg/day, then for group P1 given calcium 25 mg/kg/day, P2 group given calcium 35 mg/kg/day and P3 group was given calcium 45 mg/kg/day. Mice have blood drawn 2 weeks for 3 months. Then the absorption of lead assayed using Atomic Absorption Spectrophotometry air-acetylene flame at a wavelength of 283.3 nm. The data obtained were statistically analyzed by simple linear regression statistical analysis. These results indicate that administration of calcium significantly affect the absorption of lead in male mice (*Mus musculus L.*) of 97%. Based on the above results it can be concluded that the administration of calcium can affect the absorption of lead in mice. With the higher doses will further decrease the absorption of lead.

**Keywords:** Male mice (*Mus musculus L.*), calcium, lead, Atomic Absorption Spectrophotometer.