

Acute Toxicity Description

Generally, MTD determinations are done in a way that conserves compound and limits the number of animals used to the barest minimum possible. Thus, a single mouse is given a single injection (IP, IV, SC, IM or PO) of 400 mg/kg (or lower if the compound is anticipated to be extremely potent, e.g. natural products); a second mouse receives a dose of 200 mg/kg and a third mouse receives a single dose of 100 mg/kg. The mice are observed for a period of 2 weeks. They are sacrificed if they lose more than 20% of their body weight or if there are other signs of significant toxicity. If all 3 mice must be sacrificed, then the next 3 dose levels (50, 25, 12.5 mg/kg) are tested in a similar way. This process is repeated until a tolerated dose is found. This dose is then designated the maximum tolerated dose and is used to calculate the amount of material given to experimental mice during anti-tumor testing. The mice are allowed *ad libitum* feed and water. Injections are most commonly administered IP, but SC, PO, and IV dosing may be required upon occasion. Dose volumes are generally 0.1 ml/10 gm body weight but may be up to 0.2 ml/10 gm body weight for the IP, IV, SC and PO routes of administration.