

Aluminium sulphate

Toxicological Data on the Unburnt Ingredient

Organism	Test Type	Route	Reported Dose	Reference
mouse	LD ₅₀	<i>i.p.</i>	274 mg/kg	Comptes Rendus Hebdomadaires des Seances, Academie des Sciences. Vol. 256, Pg. 1043, 1963
mouse	LD ₅₀	oral	6207 mg/kg	British Journal of Industrial Medicine. Vol. 23, Pg. 305, 1966

In several in vitro investigations for mutagenic activity, aluminium sulphate at concentrations of 1-10 mM was negative [Bingham, et al.].

Groups of 10 mice received a standard diet containing 170 ppm or 355 ppm aluminium (as aluminium sulphate). There was no significant difference in intake of water, but food intake was significantly less in the group receiving the higher dose. Aluminium balance was studied during the last six days of the test. Intake and fecal excretion of aluminium was significantly higher at the higher dose whereas urinary excretion and retention of aluminium were not. In another study, aluminium balance was measured in eight rats on diet containing 2835 ppm aluminium (as sulfate) for a further eight days. The increased dose rate of aluminium resulted in a reduction of food intake (20 to 15 g/rat/day) and a reduction in average body weight. Aluminium excretion was increased significantly in the higher dose group. About 70% of the dose was excreted in the feces. Retention was increased 20 times. [Joint FAO/WHO Expert Committee on Food Additives]

References

Bingham et al., Patty's Toxicology Volumes 1-9 5th ed. John Wiley & Sons. New York, N.Y. (2001) p.375
Joint FAO/WHO Expert Committee on Food Additives; WHO Food Additives Ser 24: Aluminum (1989)