

**40. Effect of Long-day-prefeeding of
Alginate on the Metabolism of
Ingested Radiostrontium
(Sr-85) in Rats**

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The effectiveness of alginate, a natural chelating agent, on the absorption and retention of ingested radiostrontium (Sr-85) was investigated using a pre-

feeding method in male Wistar rats.

Rats were fed a basic diet supplemented with 10% sodium alginate for 3 days, 10 days, and 30 days before administration of Sr-85. Fifteen KBq of Sr-85 in 1 ml of saline were administered through orogastric tube. Radioactivities of whole body, urine, and feces were counted by gamma counter for 15 days after administration of Sr-85.

Radioactivities of urine and feces were significantly higher, and whole body count was significantly lower in alginate prefeeding groups as compared with the control. This reduce in bioavailability of ingested radiostrontium was higher as the time of alginate prefeeding increased. It suggested that the long day prefeeding of alginate could be used as an effective method for reducing the bioavailability of ingested radiostrontium.