

Radiotungsten was given as  $\text{Na}_2^{181}\text{WO}_4$  orally to 4 goats and intravenously to 3 goats. Blood, milk, urine and faeces were collected regularly during an 8-day period. Thereafter the animals were slaughtered and different tissues were taken for analyses of  $^{181}\text{W}$ .

It was found that only a minor part of the ingested  $^{181}\text{W}$  absorbed in the gastrointestinal tract. The main part, about 95% of the amount given, passed the GI tract and was recovered in the faeces within 48 hours.

The absorbed radiotungsten was mainly excreted in the urine (1.8 - 3.4%) and only small amount was recovered in the milk (0.03 - 0.12%). On autopsy the largest amounts of  $^{181}\text{W}$  were found in the kidneys and liver but large amounts were also found in ribs and some lymph nodes.

Already 48 hours after I.V. injection about 87% of the given amount was excreted in the urine, 6% in faeces and 3% in milk. As in orally dosed animals, the largest amounts of  $^{181}\text{W}$  were found post mortem in the kidneys and the liver. Ribs, adrenal glands and some lymph nodes also showed high concentrations of radiotungsten.

Intravenous administration was found to give 15 - 20 times higher concentrations of radioactivity in organs than the oral administration. Calculations showed that about 60% of the injected radiotungsten had a biological half-time of 3.5 hours, 30% 19.7 hours and the remaining 10% 154 hours (6.4 days). For I.V. dosed animals the activities in milk and muscle (vastus), 8 days after dosing, were 10-2 and  $7 \times 10^{-3}$  per kg of the given amount, respectively.

The data obtained suggest that radiotungsten is unlikely to be a significant environmental pollutant source for man, as far as it's concentration in milk and meat are concerned.