

# Effect of Prussian blue (ammonium-iron-hexacyanoferrate) in reducing the accumulation of radiocesium in reindeer

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*Abstract: Laboratory experiments.* Prussian blue (Giese- salt) in doses of 50, 150, 300, 750 and 1500 mg was added to a daily ration of 1 kg reindeer feed (RF-71) and 0.25 kg lichen dry matter providing 8-10 KBq/d. Two reindeer calves were used per treatment, and the results compared to radiocesium accumulation in four control calves (no Prussian blue). Red blood cell activity increased in control animals from background levels to between 400 and 500 Bq/L and were still increasing after six weeks of observation. No accumulation of radiocesium could be detected in the calves treated with 300-1500 mg/d of Prussian blue. A moderate increase was observed at the lowest doses. Thus daily doses as low as 150 mg of the Prussian blue preparation practically prevented the absorption of radiocesium.

*Field trials.* Sodium chloride stones with 2.5% Prussian blue were provided to a herd with a body load of about 10 KBq/kg meat. After exposure to the stones for 24 d the average radioactivity in adult females was reduced from 10.5 to 6.6 KBq/kg (37%). Large differences in the intake of salt were evidenced by individual reductions in blood radioactivity varying from 0 to 70%. Salt eaters were easily distinguished by blue muzzles.

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