

Retention of the bait marker Rhodamine B in wild house mice

J. Jacob, D. A. Jones and G. R. Singleton

Abstract

We investigated the retention of the systemic bait marker Rhodamine B (RB) in house mice (*Mus domesticus*) that were fed RB in pellet bait (0.5% RB) and in water solutions (1.6%). Wild mice fed RB baits (3 mg RB) or provided with treated water (0.3 mg RB) were screened for traces of RB in whiskers, blood, urine, faeces, and the digestive tract. The dye was detectable in all tissues and excretions tested 12 h after its uptake in pellet bait or solution. RB was detectable under ambient light in urine and the digestive tract for up to four days and in faeces for up to two days. RB was detectable in blood sera for up to 84 h using a fluorometer. RB-bands were found in whiskers for up to seven weeks after ingestion of RB. There was no difference between males and females regarding the presence of RB in blood and whiskers. A second dose of RB (1.8 mg) one week after the first dose resulted in two bands in mouse whiskers. Fewer mice were scored RB positive when uptake of RB was low. In contrast to whiskers, analysis of blood sera provided quantitative results and allowed rapid screening of animals. We conclude that RB is an appropriate marker for short- and medium-term studies on bait uptake in house mice.