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69. SOIL PHOTOLYSIS OF STRYCHNINE ALKALOID UNDER CONTROLLED ENVIRONMENTAL CONDITIONS, R.W. Timm and R.I. Starr, USDA/APHIS, Denver Wildlife Research Center, P.O. Box 25266, Denver, CO 80225-0266

Soil photolysis experimentation was conducted using a non-radiolabelled form of the plant alkaloid strychnine ( $C_{21}H_{22}N_2O_2$ ) at an initial soil concentration of about 100 ppm. To test the affects of humidity, one experiment was conducted under minimal ( $< 10\%$  RH) conditions and another under moderate ( $\approx 50\%$  RH), using equipment specifically designed to strictly control environmental paramaters. At designated times during the 30-day exposure period, three replicate soil samples were extracted and analyzed for residual strychnine and possible degradates using HPLC with UV detector at 254 nm. Total net strychnine loss in each experiment was less than 10%, with no degradation products being detected. The greater humidity air-flow contributed to a slightly more rapid loss in both control and irradiated samples during the first week than the drier air-flow conditions. This suggests that processes other than photolysis may be contributing to the observed losses, such as irreversible sorption.