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Biliary excretion of linamarin in the wistar rat after a single dose

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Abstract

The biliary excretion of linamarin (2[β -d-glucopyranosyloxy]isobutyronitrile) was studied in male albino Wistar rats injected i.p. with single doses of 300 mg linamarin/kg following cannulation of the bile duct *in vivo*; 24 hr faeces of uncannulated rats, similarly dosed, was examined for excretory products. Enzymatic and spectrophotometric analyses of the bile exudate showed that glucosidic cyanide (linamarin, and non-glucosidic cyanide were excreted; the elimination of both cyanide forms exhibits biphasic kinetics. Thiocyanate ion was undetectable. T.l.c. of the test bile followed by enzymatic and chemical investigation of the chromatogram confirmed the presence of unchanged linamarin, and four different u.v. fluorescent non-glucosidic cyanide metabolites. Neither linamarin nor cyanide ion was detectable in faeces of the uncannulated rats.

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