

Quinoline yellow lake

Toxicological Data on the Unburnt Ingredient

GENOTOXICITY

[+ve, positive; -ve, negative; ?, equivocal; with, with metabolic activation; without, without metabolic activation]

In vivo

Species	Test conditions	Endpoint	Results	Reference
Mouse, NMRI, 5/sex/group	Given by single gavage at 0, 0.5, 1 or 2 g/kg bw. Bone marrow cells examined for micronuclei at 24 hr (all dose levels) and 48 hr (top dose only). Carried out in accordance with OCED Guideline.	Chromosome damage	-ve	Honarvar, 2003

In vitro

Test system	Test conditions	Endpoint	Activation status	Results	Reference
Human peripheral lymphocytes	Incubated for 24 hr in a micronucleus assay at several concentrations up to approximately 0.9 mg/ml.	Chromosome damage	Without	+ve At all concentrations tested.	Macioszek & Kononowicz, 2004
Human peripheral lymphocytes	Cells treated for 1 hr in a Comet assay at several concentrations up to approximately 0.9 mg/ml.	DNA damage	Without	+ve Significant only at highest concentration.	Macioszek & Kononowicz, 2004

Mouse lymphoma L5178Y cells	Cells incubated for 4 or 24 hr with up to 3.8 mg/ml. Carried out in accordance with OECD Guideline.	Mutation	With and without S9	-ve	Wollny, 2000
<i>Salmonella typhimurium</i> strains TA98, TA100, TA1535, TA1537 and <i>Escherichia coli</i> strain WP2 uvrA	Ames test with up to 5 mg/plate. Carried out in accordance with OECD Guideline.	Mutation	With and without S9	-ve	Wollny, 1999
<i>Salmonella typhimurium</i> strains TA98, TA100, TA1535, TA1537	Ames test with up to 50 µg/plate. Limited study, current protocols recommend testing at up to 5-10 mg/plate where technically possible.	Mutation	With and without S9	-ve	Hollstein et al. 1978
<i>Salmonella typhimurium</i> strains TA98, TA100, TA1535, TA1537, TA1538	Ames spot test with 50 µg/plate. A spot test is a limited assay type. The tested dose was very low (current protocols recommend testing at up to 5-10	Mutation	With and without S9	-ve	Blevins & Taylor, 1982

	mg/plate where technically possible.).				
<i>Salmonella typhimurium</i> strains TA98, TA100, TA1535, TA1538	Ames tests: a spot test (a limited assay type) with 1 mg/plate. Also, a plate test with up to 10 mg/plate.	Mutation	With and without S9	-ve	Viola & Nosotti, 1978
<i>Salmonella typhimurium</i> strains TA1535, TA1537	Ames test No further details given in this brief report. Limited study (only 2 strains; at least 4 should be used) and reporting.	Mutation	Not stated	-ve	Gubbini et al. 1975
<i>Salmonella typhimurium</i> strain TA1535/pSK1002	SOS-inducing activity investigated in the umu test. Two samples used, tested at up to 0.4 mg/ml and 0.04 mg/ml, respectively.	Mutation	With and without S9	+ve	Nakamura et al. 1990
<i>Escherichia coli</i>	The methylated product was tested at concentrations of 5 and 10 mg/ml. Full paper is in German and would	Mutation	Not specified	-ve	Lück & Rickerl, 1960

	require translation to obtain further details.				
<i>Bacillus subtilis</i> strains H17A, M45T	A rec assay measuring differential toxicity.	DNA damage (indirect test)	With and without S9	inconclusive	Fujita et al. 1976
<i>Vicia faba</i> (broad bean)	Tested according to the protocol recommended by the IPCS. 4-day old seedlings treated at up to about 0.9 mg/ml in darkness for 2 hours, root tip meristems examined for micronuclei.	Chromosome damage	Not applicable	+ve	Macioszek & Kononowicz, 2004
<i>Vicia faba</i> (broad bean)	Tested according to the protocol recommended by the IPCS. 4-day old seedlings treated at up to about 0.9 mg/ml in darkness for 2 hours and cell nuclei from root tip meristems examined in a Comet assay procedure.	DNA damage	Not applicable	+ve	Macioszek & Kononowicz, 2004

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