

TABLE V-9: SUMMARY OF SELECTED CARCINOGENICITY STUDIES IN EXPERIMENTAL ANIMALS ADMINISTERED HEXAVALENT CHROMIUM

Water Insoluble Chromates

Compound	Route	Sex/Species/ Strain (# in exposed groups)	Dose Administered <sup>1</sup> and Observation Periods	Tumor Incidence	Reference/Exhibit #
Lead chromates (seven different compounds)	Intrabronchial	Male/female Porton- Wistar rats (50 per exposed group)	0.25 to 0.32 mg Cr(VI) as single dose mixed w cholesterol in steel pellet and evaluated at 2 years	Bronchial carcinoma (M/F combined): 0-1/100 (N.S.)	Levy et al. (1986, Ex. 11-2)
Lead chromates (three different compounds)	Subcutaneous	Male/female Sprague Dawley rats (20 per exposed group)	1.5 to 4.8 mg Cr(VI) as a single dose in water and evaluated after 2 years	Sarcomas at injection site (M/F combined): 26-36/40 vs 0/40 for controls	Maltoni et al. (1974, Ex. 8-25) Maltoni (1976, Ex. 5-2)
Lead chromate	Intramuscular	Male/female Fischer 344 rats (25 per exposed group)	1.29 mg Cr(VI) in trioctanoic 1 x mo for 9 mo and evaluated at up to 2 yr	Sarcomas at injection site (M/F combined): 31/47 vs 0/44 for controls	Furst et al. (1976, Ex. 10-2)
Barium chromate	Intrabronchial	Female NIH-Swiss mice (25 per exposed group) Male/female Porton- Wistar rats (50 per exposed group)	0.72 mg Cr(VI) in trioctanoic 1 x mo for 4 mo and evaluated at up to 2 yr 0.37 mg Cr(VI) as a single dose mixed w cholesterol in steel pellet and evaluated at 2 years	Sarcomas at injection site: 0/22 (NS) Bronchial carcinoma (M/F combined): 0/100 (NS)	Levy et al. (1986, Ex. 11-2)

<sup>1</sup> doses calculated and recorded as mg of Cr(VI), rather than specific chromate compound, where possible

Not Statistically significant – NS

Male/Female – M/F

BILLING CODE 4510-26-C

Lead chromate and lead chromate pigments. Levy et al. examined the carcinogenicity of lead chromate and

several lead chromate-derived pigments in 100 male and female Porton-Wistar rats after a single intrabronchial implantation followed by a two year

observation period (Ex. 11-12). The rats were dosed with two mg of a lead chromate compound and lead chromate pigments, which were mixed 50:50 with