DATA REVIEW FOR ACUTE INHALATION TOXICITY TESTING (§81-3)

6(a)(2) data

Product Manager: (21) Reviewer: W. Woodrow
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Testing Laboratory: RCC Res. & Consulting Co. Ag Report No. 246475
Author(s): T. Imamura, K. Biedermann, Ph. Thevenaz
Species: Rat, Wistar, KFM-Han
Sex: 15M & 15F Weight: M 180-200, F 180-200g
Source: BRL-Biological Res. Lab. LTD, Fuellinsdorf Switzerland
Test Material: RO 17-0099/000 (copper 8-quinolinolate) solid, olive green 99.7% pure
Quality Assurance (40 CFR §160.12): adequate

Summary:

1. LC_{50} (mg/kg): Males = ——; Females = ——; Combined = 0.15 mg/L air
2. The estimated LC_{50} is ——
3. Mean Concentration: ——
4. Tox. Category: II. Classification: Guideline

Procedure (~~Deviations From §81-2~~): 3 groups of 5M & 5F each were separately exposed to test material for 4 hour exposures, while exposed-nose only in a tubular, aluminium chamber. The internal flow/past chamber of 1.0 liter, serves animals at different vertical levels positioned radially around tube. Animals were observed

Results:

Reported Mortality

Exposure Concentration (mg/L)	(NUMBER KILLED/NUMBER TESTED) Males	Females	Combined
0.060 mg/L	0/5	0/5	0/10
0.111 mg/L	2/5	2/5	4/10
0.532 mg/L	4/5	5/5	9/10

~~Symptomology & Gross Necropsy Findings~~:

1x/hour during exposure, 1x on day 1, and 2x daily to 15 days post-exposure. Test material (solid) aerosols were generated using a piston/brush-feed generator (RBG 1000, Palas, Germany, the aerosol discharged into the chamber. Chamber concentration, particle size distribution, O_2 conc. samples taken at the

site of animal exposure chamber. The chamber concentration was measured by sample collection on Gelman A/E 47mm dia. glass fiber filters; samples thus collected were wt. determined and analyzed by spectrometry. Particle size distribution measured using a 7 stage Mercer Cascade Impactor (MO2-1300) - impacting on pre-weighed stainless steel slips - air flow 1.0 L/min. Animal body weights measured days 0, 8 & 15. All animals subjected to necropsy examination. Histopathological slides prepared from: lungs, nasal cavity, trachea, stomach, liver & kidneys.

Results

Chamber Concentration(s) (mg/L air)

Group	gravimetric	analytical
1	0.05	0.060
2	0.10	0.111
3	0.52	0.532

Particle size distribution (μ effective cut off dia.)

Group 1, 0.060 mg/L 91.9% of particles 3μ or <
Group 2, 0.111 mg/L 91.5% particles 3μ or <
Group 3, 0.532 mg/L 86.8% particles 3μ or <

Animals - No treatment-induced body weight effects. Clinical - Males: restlessness, apathy, hunched posture, ruffled fur, tachypnea up to 3 days post-treatment.

females - same signs as for males, also, salivation in group 2. to day 3.

Histopathology - Macroscopic findings only in lungs of rats dying during study - not collapsed, gray-white foci and reddish or dark red discoloration. Microscopic - 2 highest dose groups - degeneration of nasal & tracheal mucosa, pulmonary congestion & edema. In lungs of some surviving rats, evidence of ongoing resolution of acute pulmonary lesions.