Acute Toxicity Studies with Ortho Paraquat Concentrate 3%
oral, dermal & skin & eye irritation potential

- Dark liquid formula containing 3 lbs para. ion / gallon. Acc. to the label, signal word "Danger" & crossbones, this formulation has 43.5% para. ion and 56.5% inert. The formula of ORTHO Para. Conc. 3, used in this study, had 34.4% para. ion.

(Notes taken from microfiche)
Ortho Paraquat 3 Concentrate

A series of acute toxicology studies have been conducted on ORTHO Paraquat Concentrate 3%. The material used in this study was coded SX-894. A summary of these studies is listed below.

<table>
<thead>
<tr>
<th>Toxicity test</th>
<th>Test material</th>
<th>Concentration</th>
<th>Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Oral LD50</td>
<td>Rat</td>
<td>Minimum</td>
<td>189 mg/kg - males</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>125 mg/kg - females</td>
</tr>
<tr>
<td>Dermal LD50</td>
<td>Rabbit</td>
<td>Minimum</td>
<td>174 mg/kg</td>
</tr>
<tr>
<td>Eye irritation potential</td>
<td>Rabbit</td>
<td>Minimum</td>
<td>Corrosive; severe eye irritant producing corneal opacity, severe pannus and conjunctival necrosis in all animals. Corneal opacity persisted at 14 days. One animal died 9 days after treatment.</td>
</tr>
<tr>
<td>Skin irritation potential</td>
<td>Rabbit</td>
<td>Minimum</td>
<td>Slight to moderate skin irritant. The primary irritation score was 2.1</td>
</tr>
</tbody>
</table>

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THE ACUTE ORAL TOXICITY OF PARAQUAT 3 LBS/GAL CONCENTRATE
SOCAL 1058/31:44  8/1/77

Tox. cat. II

Core - Minimum
Acute Oral

Single doses of the undiluted test material were given to Male and Female rats. Doses ranged from 100-400 mg/kg for males and 70-400 mg/kg for females. Signs of toxicity observed were depression, weakness, reduced food consumption, and death. At autopsy, no gross pathological changes were observed that could be attributed to the test material.

<table>
<thead>
<tr>
<th></th>
<th>LD50 (95% limits)</th>
<th>Slope (95% limits)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Males</td>
<td>189 (90-398 mg/kg)</td>
<td>1.7 (0.73-3.2)</td>
</tr>
<tr>
<td>Females</td>
<td>125 (62-251 mg/kg)</td>
<td>2.0 (9.3-4.2)</td>
</tr>
</tbody>
</table>

Animals: Sprague-Dawley, 211-244 g (M) and 204-233 g (F)

Dosage: Males: 100, 170, 260, 400 mg test material/kg
Females: 70, 100, 170, 260, 300 mg/kg

Paraquat Core 3 was analyzed as 4177 and it contained 34.4% paraquat; acc. to the label, it is 43.5% paraquat.

Used 5 M + 5 F/level + controls

* Equivalent to mg paraquat/kg:
  Males: 34.4, 58.48, 89.44, 137.6
  Females: 34.4, 58.48, 89.44 and 137.6
THE ACUTE DERMAL TOXICITY OF ORTHO PARAQAT 3 LBS/GAL. CONCENTRATE (using the standard occluded method).

SOCIAL 1059/29:40 7/22/77

<table>
<thead>
<tr>
<th>Dose (mg/kg)</th>
<th>Mortality</th>
<th>Test Material</th>
<th>rabbits</th>
</tr>
</thead>
<tbody>
<tr>
<td>8.2</td>
<td>0/6</td>
<td>mg/kg test material</td>
<td>intact and viable</td>
</tr>
<tr>
<td>143</td>
<td>2/6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>250</td>
<td>5/6</td>
<td></td>
<td></td>
</tr>
<tr>
<td>438</td>
<td>6/6</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

LD₅₀ = 174 (80-376) mg test material/kg = 59.9 mg Paraquat cation/kg

Ortho Par. 3 conc. contained 34.4% paraquat.

Signs of toxicity: reduced food intake, diarrhea, depression, ataxia, weakness, bloody urine, pulmonary edema, convulsions, collapse, and death.

Findings at autopsy: hemorrhagic edematous lungs, discolored grazing livers, soft vascularized kidneys, and less than a normal amount of body fat were observed in some rabbits.
THE EYE IRRITATION POTENTIAL OF ORTHO
PARAQUAT 3 lbs/gal CONCENTRATE.
SOCAL 1060/30:70  8/1/77

Dose: 0.1 ml of the test material - 34.4% paraquat, based
on the analysis of this formulation (34.4% paraquat).

Animals: 6 rabbits (see H)  Draize scoring.

Results:
24 hrs after dosing: Moderate conjunctival redness, slight chemosis —
present in most eyes.
At 72 hrs: Severe redness and a very heavy purulent discharge.
At 7 days: Slight dense corneal opacity, mild viti, roughened cornea,
and conjunctival necrosis were observed in most eyes.
At 9 days: 1 rabbit died.
At 10 days: Severe pannus in all eyes.
At 14 days: 3 rabbits had complete opacity and all still had
severe pannus.

The purulent discharge ran down from the rabbits' eyes into their mouths.
Severe burning of the tongue in the mouth a rose color observed in most
animals and drastically reduced food intake was observed from this time on in
the study. One rabbit, which has not been eating for 6 days, was found dead
9 days after treatment. His nose was unmarked & bleeding.
THE SKIN IRRITATION POTENTIAL ORTHO

PARAQUAT 3 LBS/GAL CONCENTRATE

SOCAL 1061/30:71 8/1/77

0.5 ml of test met. (172 mg per ion) applied to 6 abraded and 6 unabraded rabbits (males).

Very slight to moderate to severe erythema and very slight to slight edema were observed during the 7-day observation period. One rabbit was dead 6 days after application.

The primary irritation score was 2.1.