

US EPA ARCHIVE DOCUMENT

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

PM

DATE: 17 August 1979

SUBJECT: 48 Hour LC<sub>50</sub> Daphnia magna study with Paraquat-Cl<sub>2</sub> (239-2186 + 239-2422)

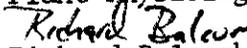
FROM: Ecological Effects Branch, HED

TO: Product Manager #25, Registration Division

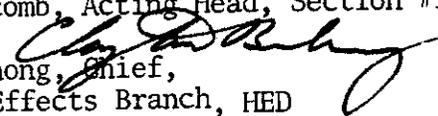
The subject study was reviewed and found to be acceptable.



Robert W. Holst, Ph.D.,  
Plant Physiologist



Richard Balcomb, Acting Head, Section #1



Clayton Bushong, Chief,  
Ecological Effects Branch, HED

Chemical: Paraquat

Formulation: 92.3% Paraquat dichloride salt technical (66.8% cation)

Citation: Wheeler, R.E. 1978. 48 hour acute static toxicity of paraquat dichloride salt (SX957) to 1st stage nymph water fleas (*Daphnia magna* Straus). Chevron Chemical Co. Richmond CA (CDL: 235419)

Reviewer: Robert W. Holst, Ph.D.  
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17 August 1979

Test Title: 48 hour acute Daphnia magna with Paraquat

Conclusion: The LC<sub>50</sub> for Paraquat cation based on analytical concentration is 1.2226 ppm (CL 0.6753 - 2.2134 ppm)

Material and Methods: The standard EPA methods were followed.

Results: pH of the medium was 7.8 to 8.1, hardness 40 mg CaCO<sub>3</sub>/L and Do was 96-99%. The LC<sub>50</sub> for Paraquat dichloride salt (92.3<sup>0</sup><sub>6</sub> a.i) was 2.947 ppm (CL 2.415 - 3.439 ppm). The LC<sub>10</sub> was 1.508 ppm (CL .861 - 1.957 ppm). The LC<sub>50</sub> for Paraquat cation was 1.2226 ppm (CL 0.6753 - 2.2.34 ppm). The LC<sub>10</sub> was 0.616 ppm (CL .353 - 797 ppm). The Paraquat dichloride salt LC<sub>50</sub> and LC<sub>10</sub> are based on the nominal concentration while the Paraquat cation LC<sub>50</sub> and LC<sub>10</sub> are based on analytical concentrations. Statistics were acceptable.

Validation: Core