

US EPA ARCHIVE DOCUMENT

MAY 27 1980

To: Product Manager Castillo (32)
TS-767

Through: Dr. Gunter Zweig, Chief
Environmental Fate Branch

Garnen

From: Review Section No. 1
Environmental Fate Branch

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Attached please find the environmental fate review of:

Reg./File No.: 10182-RO & 10182-EUP-11

Chemical: Poly (hexamethylene biguanide) hydrochloride

Type Product: Algacide

Product Name: Baquacil

Company Name: ICI Americas

Submission Purpose: Registration of swimming pool use

EFB #: 402, 403 Action Code 112, 267

ZBB Code: Sec 3

Date in: 3-19-80

Date Completed MAY 27 1980

Deferrals To:

Ecological Effects Branch

Residue Chemistry Branch

Toxicology Branch

1. BAQUACIL HYDROLYSIS/PHOTODEGRADATION STUDY (App. 4-A; Oct. 17, 1979)
W.R. Turner & H.W. Ramaswamy

- The hydrolysis study of Baquacil was conducted at 10 and 20 ppm concentration of Baquacil (20% a.i.) at pH levels 5, 7, and 9, and incubated at temperatures 25°C and 45°C (in dark), for a 30-day period. Test solutions were sampled on 0, 8, 14, 21, and 28 day of the study and analyzed by PHMB specific analytical colorimetric and differential pulse polarographic procedures.

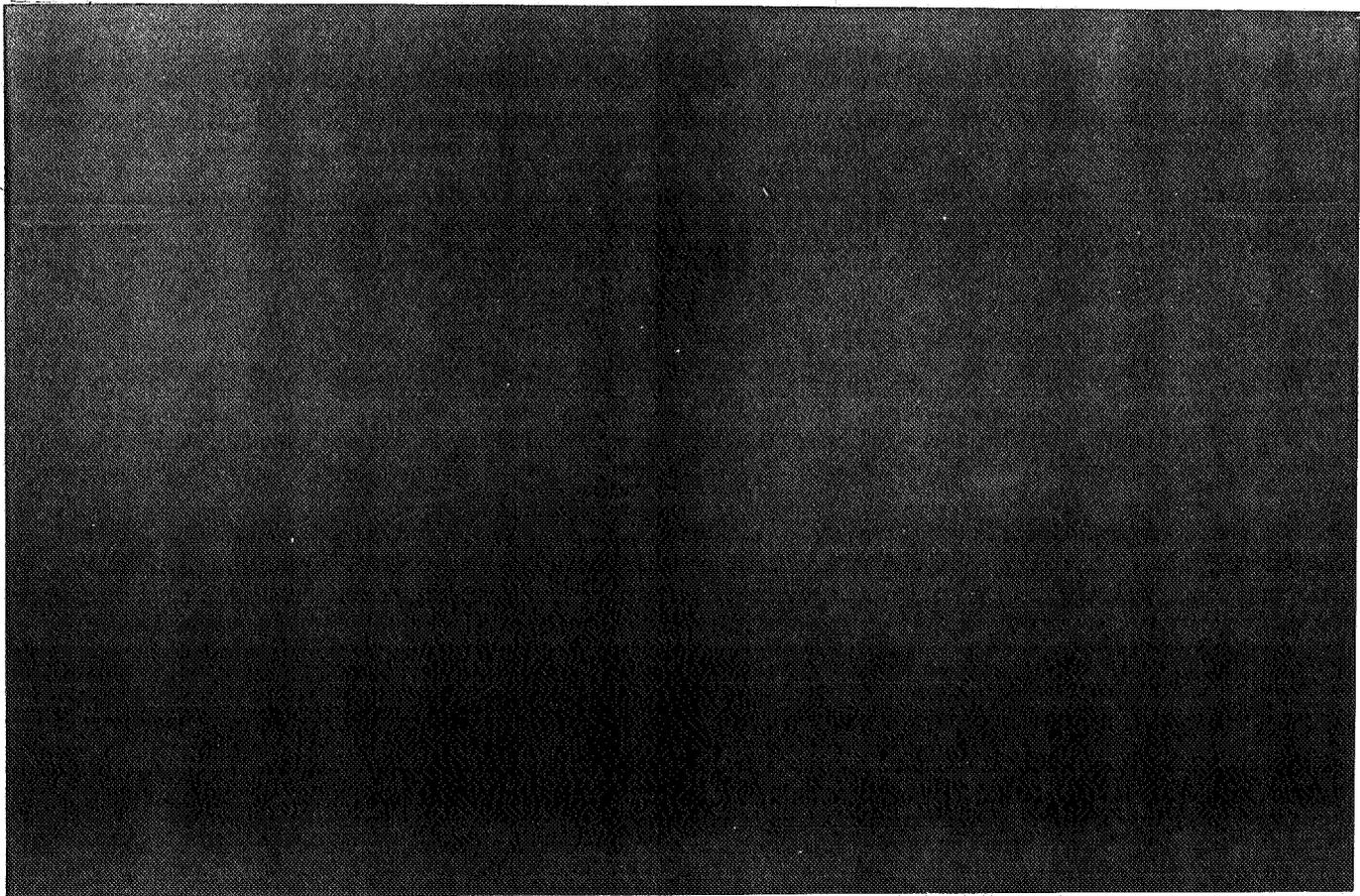
The reported results show no evidence of hydrolysis.

- The photodegradation study was carried out at 25°C only on a 10 ppm solution of Baquacil (20% a.i.) in distilled water placed in a polyethylene container covered with a polyethylene film transparent to visible and U.V. lights (7280 nm), to which it was continuously (24 hrs/day) exposed for a 30-day period. Test solutions sampled and analyzed same as in the hydrolysis study.

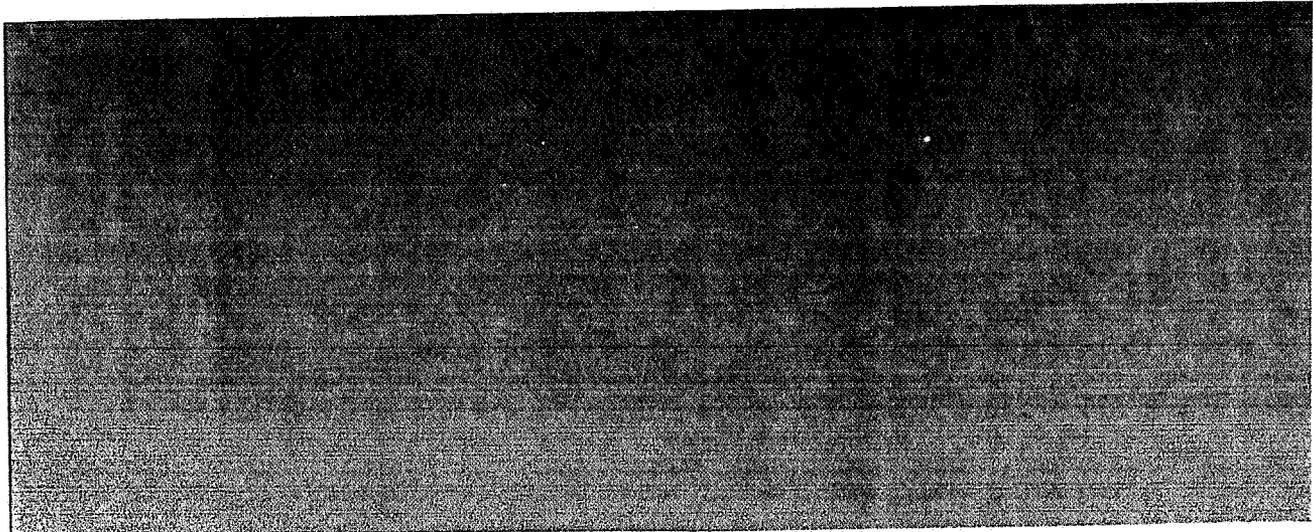
The reported results show absence of photodegradation.

2. THE EXAMINATION OF POLYMERIC BIQUANIDE PRODUCTS FOR N-NITROSAMINE
CONTAMINANTS (May, 1979)
Confidential Project no. 947.

Commercial/financial business information



Commercial/Financial business information



Conclusion and Executive Summary

The studies reviewed here in conjunction with the application for registration of Baquacil have demonstrated the absence of the chemical's hydrolysis and photodegradation in aqueous medium; and the detectability of N-nitrosoamine contaminants as nitric oxide in the baguanide polymeric products Vactocil IB and Vactocil P at level less than 0.01 ppm. It may be concluded that Baquacil's environmental profile has been established short of the data gaps/clarifications requested in EFB's last review (dated 4-3-79; file no. 10182-19).

Recommendation

Environmental Fate Branch concurs with EUP as proposed; however, it declines to make any recommendation for the registration of Baquacil until all questions asked previously are properly and satisfactorily answered.

Madeline Nawar *M. Nawar 5/19/80*
Review Section 1
EFB
5/8/80