

SUBJECT:

Cobley
UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Teratologic evaluation of three quaternary
compounds (Bardac 22, Bardac 20, Bardac LF)
For inclusion into product file. Caswell No. 331A, DATE: 8/17/77
613A, 392H.

FROM:

Toxicology Branch R/D
C. Frick *C. Frick*

TO:

Mr. H. Jacoby, PM#24 *for OEP 8/16/77*

Product: Bardac LF EPA Reg. No. 6836-40

Submission By: Lonza Inc., Fairlawn, N.J.

Study By: Food & Drug Research Labs., Inc. 3/4/77 Lab#5155

Materials Tested:

a) Bardac-22 Lot #B3683

Didecyl Dimethyl
ammonium chloride 50%

EPA Reg. #6836-18

b) Bardac-20 Lot #B35307

octyl decyl dimethyl
ammonium chloride 25%
diethyl dimethyl ammonium
chloride 12.5%
didecyl dimethyl ammonium
chloride 12.5%

EPA # 6836-19

c) Bardac LF Lot #B3414

Diethyl Dimethyl
ammonium chloride 50%

EPA # 6836-40

Animals Used: Virgin, adult female albino rats (wistar derived stock)

Experimental Design:

Group	No. of Animals Bred (Females)	Test Material	Dose Level (mg/kg)
A	51	Water	-
B	52	Aspirin	250
C	25	Bardac-22	10
D	24		25
E	24		50
F	23	Bardac-20	10
G	25		25
H	23		50
I	26	Bardac LF	10
J	23		25
K	16		50

Parameters Measured:

- I Pregnancies
 - Total Number
 - Wastage to 19 days
- II Implant sites
 - Total Number
 - Avg per dam
- III Live Fetuses
 - Total Number
 - Avg per dam
 - Male/Female ratio
 - Avg Fetus wt
- IV Resorptions
 - Total Number & Number of Dams involved

V Dead Fetuses

Total no and number of dams involved

VI Body wt. on days 0, 6, 11, 15, 20

VII Skeletal and soft tissue abnormalities

Comments:

The test compounds had no deleterious effect on gestation but all Bardac compounds did cause more dams to resorb one or more fetuses at the high (50 mg/kg) dose level. Possible fetotoxicity effect. The control fetuses were smaller ($P < .05$) than all but 3 of the Bardac treatment groups -10 & 25 mg/kg Bardac 20 and 25 mg/kg Bardac 22. No such elevation of weight occurred in the dams so the biological significance of this finding is not known. The skeletal and soft tissue findings indicated no significant difference between tested compounds and control. No maternal toxicity was noted. In summary, no teratological findings could be ascribed to the Bardac compounds tested in this study at doses up to 50 mg/kg.

Validation Category-Core Minimum Data