

chloroform-ethanol (95:5, v/v), and benzene-dioxane-ethanol (75:20:5, v/v).

Mass spectra were determined by solid probe introduction into a Finnigan Series 3000, quadrupole mass spectrometer.

#### RESULTS AND DISCUSSIONS

The yield of [*ring*-<sup>14</sup>C]diuron was 63  $\mu$ Ci from 89  $\mu$ Ci of [<sup>14</sup>C]DCA, a radiochemical yield of 71%. The corresponding masses were calculated from the specific activity stated by the supplier of [<sup>14</sup>C]DCA and were 3.2 mg of DCA and 3.26 mg of diuron. Radiochemical purity of diuron was greater than 99% in three different solvents. Structure was confirmed by mass spectroscopy (Benson and Damico, 1968).

Radiochemical yield of 3-(3,4-dichlorophenyl)-1-methylurea was 9.5%. The compound was identified by cochromatography and mass spectroscopy (Safe and Hutzinger, 1973). The commercial dimethylcarbamoyl chloride was not purified and may have contained methylcarbamoyl chloride, which caused the formation of 3-(3,4-dichlorophenyl)-1-methylurea.

Total recovery of <sup>14</sup>C in solutions was 86%. Some DCA may have been lost during solvent evaporation (Bartha, 1968). Recovery of <sup>14</sup>C was 95% in a preliminary trial in which evaporation of benzene had not been necessary. Residual activity of eluted silica gel from the preparative TLC plate was not checked, but diuron was almost completely eluted in a preliminary trial.

The reaction was faster at temperatures above 20 °C, but a minor product formed. At 80 °C, the yield of a compound which cochromatographed with 1,3-bis(3,4-dichlorophenyl)urea was 10–15%. This minor product did not form at 20 °C.

Dimethylcarbamoyl chloride should be a useful reagent

for radiochemical synthesis of ring-<sup>14</sup>C-substituted phenyl dimethylureas from labeled anilines.

#### ACKNOWLEDGMENT

Mass spectral analysis was performed by Karl Yanagihara, Department of Agricultural Biochemistry, University of Hawaii.

#### LITERATURE CITED

- Attar, A., Ismai, R., Bieniek, D., Klein, W., Korte, F., *Chemosphere* 2, 261 (1973).  
 Bartha, R., *J. Agric. Food Chem.* 16, 602 (1968).  
 Benson, W. R., Damico, J. N., *J. Assoc. Off. Anal. Chem.* 51, 347 (1968).  
*Chem. Eng. News* 54(18), 7 (1976).  
 Hey, W., Thiess, A. M., Zeller, H., *Zentralbl. Arbeitsmed. Arbeitsschutz* 24, 71 (1974).  
 Hsu, T. S., Bartha, R., *J. Agric. Food Chem.* 24, 118 (1976).  
 Safe, S., Hutzinger, O., "Mass Spectrometry of Pesticides and Pollutants", CRC Press, Cleveland, Ohio, 1973, p 147.  
 Snyder, F., "The Current Status of Liquid Scintillation Counting", Bransome, E. D., Ed., Grune and Stratton, New York, N.Y., 1970, p 248.  
 Swanson, C. R., Swanson, H. R., *Weed Sci.* 16, 137 (1968).  
 Tanaka, F. S., *J. Agric. Food Chem.* 18, 213 (1970).  
 Van Durren, B. L., Goldschmidt, B. M., Katz, C., Seidman, I., *J. Natl. Cancer Inst.* 48, 1539 (1972).

Vincent A. Elder\*  
 Burton L. Koch

Department of Agronomy and Soil Science  
 University of Hawaii  
 Honolulu, Hawaii 96822

Received for review December 13, 1976. Accepted March 4, 1977.  
 Hawaii Agricultural Experiment Station Journal Series No. 2081.  
 This work was supported by Western Regional Research Funding for Project W-82.

#### CORRECTION

##### FATE OF POLYBROMINATED BIPHENYLS (PBB'S) IN SOILS. RETENTION OF HEXABROMOBIPHENYL IN FOUR MICHIGAN SOILS

In this article by Alexander B. Filonow, Lee W. Jacobs, and Max M. Mortland [*J. Agric. Food Chem.* 24, 1201 (1976)], on p 1203, the wrong values were used for the adsorption equilibrium concentrations of HBB. This error changes the regression equations given to express Freundlich-type adsorption and the values in Table III derived from those equations. The correct equations are: Spinks,  $\log x/m = 0.57 + 1.25 \log C$ ; Miami (eroded),  $\log x/m = 1.08 + 0.94 \log C$ ; Miami,  $\log x/m = 2.04 + 0.50 \log C$ ; and Brookston,  $\log x/m = 1.33 + 1.31 \log C$ . These corrections do not change the conclusions made from our research data.

##### TOXAPHENE AND 1,1,1-TRICHLORO-2,2-BIS(P-CHLOROPHENYL)ETHANE (DDT) LOSSES FROM COTTON IN AN AGROECOSYSTEM CHAMBER

In this article by Ralph G. Nash, M. Leroy Beall, Jr., and William G. Harris [*J. Agric. Food Chem.* 25(2), 336 (1977)] the following corrections should be made. On p 338, column 1 (1) lines 4 and 5 should read "5 equal areas by taking ten measurements at the intersections of the pipe"; (2) line 15, substitute "0.29" for "0.35"; (3) line 17, substitute "2.5 m<sup>3</sup>/min (3.3 chamber air changes/min)" for "2.9 m<sup>3</sup>/min (3.9 chamber air changes/min)". On p 340, column 1, (4) the  $\mu$ g/m<sup>3</sup> concentrations in Figure 3 and 4 are ca. 18% too low.