

NOTE

PERACETIC ACID ROUTE TO TRIPHENYLLEAD ACETATE FROM
HEXAPHENYLDILEAD

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The oxidation of hexaphenyldilead with potassium permanganate¹ to triphenyllead hydroxide followed by reaction with acetic acid yields triphenyllead acetate^{2,3}. The by-product is $K_2O \cdot 2 MnO_2$ which is difficult to filter and must be thoroughly extracted in order for good yields to be obtained.

It has been found in our laboratory that the reaction of hexaphenyldilead in an inert solvent, *e.g.* benzene, with 40% peracetic acid forms triphenyllead acetate in good yield. Lower yields (35%) were obtained with 50% hydrogen peroxide⁴ in acetic acid but this approach merits further investigation.

EXPERIMENTAL

To 17.4 g (0.02 mole) of hexaphenyldilead in 100 ml of benzene in a stirred reactor equipped with a condenser, thermometer and dropping funnel was added 7.5 g of 40% peracetic acid* over a period of 70 min at a temperature of 24° to 32°. The reaction mixture was stirred an additional 30 min at room temperature. The product was filtered, washed with methanol and air-dried. The first crop yield was 17 g (85%), m.p. 201–203°. It was recrystallized from isopropanol and air-dried, m.p. 203–204°. Lit.² m.p. 206–207°. The IR curve matched that of authentic triphenyllead acetate. (Found: Pb, 41.7. $C_{20}H_{18}O_2Pb$ calcd.: Pb, 41.6%.)

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REFERENCES

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* Approximate composition: peracetic acid (41%), hydrogen peroxide (5%), acetic acid (39%), sulfuric acid (1.0%) and water (13%).