

Title	Reaction of n-Hexyl Bromide with Potassium Fluoride in Several Glycols
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ABSTRACTS

Effects of leaching conditions on the extraction of chromium were studied. 1. Size of ore, 2. Leaching time, 3. Amount of $(\text{NH}_4)_2\text{Cr}_2\text{O}_7$ added, 4. Leaching temperature, and 5. Amount of charge.

Summary of Result : Results obtained are summarized in Table 1, which shows the optimum conditions for extraction of chromium.

If the acid concentration was increased up to 60%, insoluble brownish-yellow precipitate was formed in the presence of $(\text{HN}_4)_2\text{Cr}_2\text{O}_7$ in both cases of leaching.

Reaction of *n*-Hexyl Bromide with Potassium Fluoride in Several Glycols

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J. Chem. Soc. Japan. Ind. Chem. Sec. (Kōgyō Kagaku Zasshi), **60**, 272 (1957)

Reactions of *n*-hexyl bromide with potassium fluoride in isomeric propanediols and butanediols are studied. *n*-Hexylfluoride is obtained in high yields by the use of such glycols that have two adjacent hydroxy groups in the molecule. Two geometrical isomers of 1,2-cyclohexanediols are used as the solvent. The yield of *n*-hexyl fluoride is ca. 30% in the *trans* isomer, whereas it's only 2% in the *cis* isomer.

Nitration of Desoxybenzoin

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The reaction routes of desoxybenzoin with nitric acid ($d=1.30$) were studied by using C^{14} -tracer technique. By the nitration of desoxybenzoin-carbonyl- C^{14} (I) ($12.95\mu\text{c}/\text{m.mole}$) there were obtained *p*-nitrobenzil-carbonyl- C^{14} (II) ($12.92\mu\text{c}/\text{m.mole}$), benzil-carbonyl- C^{14} (III) ($12.96\mu\text{c}/\text{m.mole}$), inactive *p*-nitrobenzoic acid (IV) and benzoic acid-carboxyl- C^{14} (V) ($11.29\mu\text{c}/\text{m.mole}$). When treated with alcoholic potassium hydroxide, II decomposed into inactive *p,p'*-azoxydibenzoic acid, inactive *p*-nitrobenzoic acid and benzoic acid-carboxyl- C^{14} ($12.96\mu\text{c}/\text{m.mole}$). These facts indicate that the nitration occurs at the *para* position to the methylene group of I.

The non-labeled specimens of *p*-nitrodesoxybenzoin, *p*-nitrobenzil, and benzil were treated with the nitric acid, respectively. *p*-Nitrodesoxybenzoin gave benzoic acid, *p*-nitrobenzoic acid, and *p*-nitrobenzil. Benzil and *p*-nitrobenzil, however, were resistant to nitration and oxydation, and were recovered without loss. The specific activity of V is comparatively lower than the theoretical value. These results would lead to the following conclusions. In the action of the nitric acid on desoxybenzoin-carbonyl- C^{14} , the *p*-nitrodesoxybenzoin-carbonyl- C^{14} is formed as an intermediate, and its methylene group is oxidized to *p*-nitrobenzil-carbonyl- C^{14} . While oxidative disruption of the same intermediate gives benzoic acid-carboxyl- C^{14}