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## Molecular Crystals and Liquid Crystals

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### Preparation of 4-Chloro-4-Alkylcyclohexa-2, 5-Diene-1-Ones From 4-Alkylphenols by Solid-Gas Reactions

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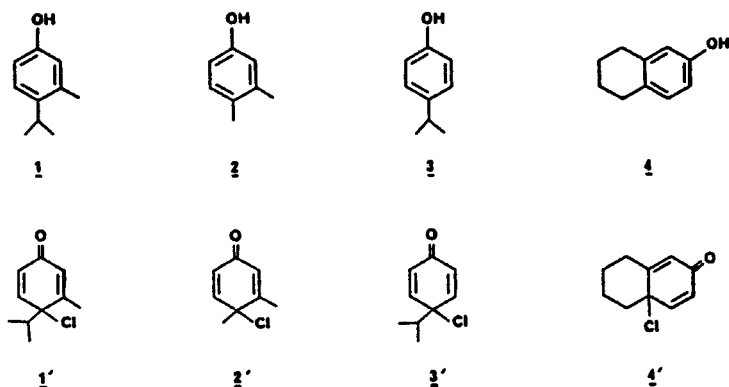
PREPARATION OF 4-CHLORO-4-ALKYLCYCLOHEXA-2,5-DIENE-  
1-ONES FROM 4-ALKYLPHENOLS BY SOLID-GAS REACTIONS.

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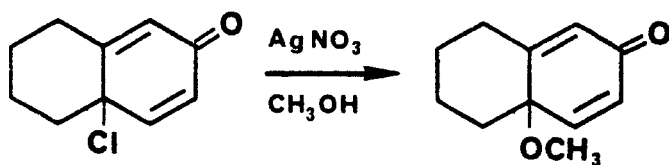
Abstract. The gaseous chlorination of  
4-alkylphenols into the corresponding 4-chloro-4-  
alkylcyclohexadienones is presented.

Recent studies have been devoted to ipso chlorination of  
4-alkylphenols <sup>1-6</sup>. It appears that the ipso position on the  
phenyl ring is reactive in different experimental  
conditions and/or with different chlorination reagents <sup>1-6</sup>.  
In preliminary notes we reported that the gaseous chlori-  
nation of 3-methyl-4-isopropyl phenol 1 leads to the  
production of 4-chloro-4-isopropylcyclohexadiene -1-one, 1',  
via ipso chlorination <sup>6,7</sup>.

In the present work we describe the gaseous chlorination  
of solid 4-alkylphenols 2, 3, and 4, obtaining  
the corresponding 4-chloro-4alkylcyclohexa - 2,5-diene-  
1-ones 2', 3' and 4'.



Cyclo hexadienone 4' is not obtained as pure product, probably because it is unstable. 5 % of starting material 4 is present in the work up mixture. Therefore the mixture containing 4' and 4 was reacted with methanol in the presence of silver nitrate and the methoxy derivative 4'' was purified and characterized.



The gaseous chlorination of 2, 3 and 4 were run in a similar manner as described in reference 6. A paper containing experimental data in detail will be presented later.

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