

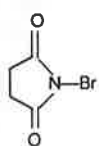
# Thème "Utilisation des organobromés"

## Organobrominated compounds in the organic synthesis : preparations, economical aspects

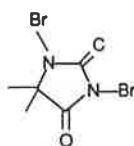
Pierre Allemand

Brominated compounds in the organic synthesis are :

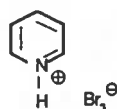
- brominating reagents as



N-Bromosuccinimide



1,3-Dibromo 5,5-dimethylhydantoin



Pyridinium tribromide

Brominated intermediates are liquid and solid organic chemical products designed to react with other chemicals in order to obtain a more complex molecule.

Preparations of brominated compounds are examined with bromine or hydrobromic acid as brominating reagents.

The importance of market of organic compounds and the cost of these compounds, the problems of health, safety and environment will be discussed.

Some examples of synthesis using organobrominated compounds will be presented. We will discuss the advantages of organobrominated compounds in comparison of organochlorinated compounds.

- and brominated intermediates.

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## Bromine in organic flame retardants. Synthesis, uses, economical importance, and new developments

Thomas P. Fidelle, Jr

Brominated organic flame retardants have occupied a major position in the worldwide plastics industry for the past three decades. Virtually every plastic material requiring flame retardance contains a brominated organic compound to meet requirements, which are : efficiency, low cost, and good combinations of physical properties of the finished goods. In many cases, brominated organic flame retardants were developed to replace inferior and/or more costly flame retardant additives. World wide consumption of these materials in 1988 will be approximately 100,000 metric tons valued at \$ 300 million US.

The mechanisms by which brominated flame retardants inhibit burning are known only in an approximate way, and it is not the purpose of this paper to deeply explore the chemistry of combustion. Suffice it to say that brominated flame retardants work in the gas phase by liberating free radicals which "trap" high energy  $H^{\bullet}$  and  $OH^{\bullet}$  radicals, thereby impeding the chain reactions that contribute to rapid decomposition and sustained combustion. The finished document will focus on many of these postulated mechanisms.

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