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<td>Author(s)</td>
<td>Takagi, Seishi; Tsukatani, Hiroaki; Tanaka, Hisashi</td>
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京都大学
As the gas in the autoclave is released, the following dissociations take place gradually:

\[
\text{(NH}_4\text{)}_2\text{CS} \rightarrow \text{NH}_4\text{SCN} + 2\text{H}_2\text{S} \quad (2),
\]

\[
2\text{NH}_3 + \text{CS}_2 \rightarrow 2\text{H}_2\text{S} + \text{H}_2\text{S} \quad (3),
\]

so that when the pressure in the autoclave is released in a hot state, a decrease in the yield of \( \text{NH}_4\text{SCN} \) will be resulted, according to equation (3). Furthermore, the experimental result that by increasing charging density of \( \text{NH}_3 \) and \( \text{CS}_2 \) the formation of \( \text{NH}_4\text{SCN} \) is decreased can be explained quantitatively with a rate equation derived on above reaction schema from the standpoint of chemical kinetics.

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27. Preparation of Organo-mercurisulfides. (I)

Seishi Takagi, Hiroaki Tsukatani and Hisashi Tanaka

(S. Takagi Laboratory)

Merthiolate, \textit{i.e.}, sodium ethylmercurithiosalicylate, which was synthesized by Kharasch \textit{et al.} in 1926, has strong sterilizing power.

But, the material mercuri-compound of this substance is expensive.

The authors, also with the same purpose, prepared the following compounds, using easily obtainable aromatic mercuri-compounds.

\begin{itemize}
\item p-Ethylmercaptomercuribenzoic acid. \text{dec. p.} 179.5°–181°
\item p-(\( \beta \)-Hydroxyethylmercaptomercuri)-benzoic acid. \text{dec. p.} 168°–170°
\item p-Carboxyphenylmercurithiosalicylic acid. \text{dec. p.} 215.5°–216.5°
\item o-(\( \beta \)-Hydroxyethylmercaptomercuri)-benzoic acid. \text{dec. p.} 142°–144°
\item 4-(\( \beta \)-Hydroxyethylmercaptomercuri)-2-chloro-benzoic acid. \text{dec. p.} 147°–149°
\item 3-Chloro-4-carboxyphenylmercuri-thiosalicylic acid. \text{dec. p.} 204.5°–205.5°
\item 2-Chloro-tolyl-4-mercurithiosalicylic acid. \text{dec. p.} 153.5°–154.5°
\item 2-Chloro-tolyl-4-mercuripseudothiourea chlorohydrate. \text{dec. p.} 140°–150°
\end{itemize}