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A Method to Prepare Highly Effective Chlorinated Sodium Phosphate

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A Method to Prepare Highly Effective Chlorinated Sodium Phosphate

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The chlorinated sodium phosphate is a kind of detergent containing bleaching agent for warewashing, disinfectant and bleaching agent. The active chlorine is an effective composition for this purpose.

We have developed a kind of new process for preparing a powerful product of highly effective chlorinated sodium phosphate for detergent. Many methods to prepare chlorinated sodium phosphate have been studied already^[1,2], but the active chlorine generally is not higher than 3%, which will restrict the abilities of disinfection and bleaching effects. Another method is to mix the alkaline detergent with solid active chloride pellets^[3], but the active chloride is easy lost. The method has been improved by adding certain amount of Na_2HPO_4 , changing the crystal temperature, controlling the ratio of Na_3PO_4 and Na_2HPO_4 and controlling the content of sodium hydrochloride in the solution.

The technical processes are: first dissolving the certain amount reactants with certain steps in the crystallizer, controlling the temperature and the velocity of the agitator, after certain hours adding some anticaking agent, reacting again about a half hour, then filtering and centrifuging the crystal. After those send its mother solution with other reactants at certain ratios and crystallize again.

The result is encouraging. The content of active chloride in the crystal is above 5%. Especially by adding a kind of complex surfactant in the crystallizer. It can prevent the crystal caking, and it simplified the technical process. The dry step can be left out. It not only simplified the process, but decrease the loss of the active chloride.

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