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GUNLADA BUNLUEWONG : IRON REMOVAL FROM WATER IN CLOSED SYSTEM OF *Penaeus monodon* Fabricius CULTURE BY OXIDATION AND COAGULATION. THESIS ADVISOR : ASSOC.PROF. SOMCHAI PENGPRECHA, 116 pp. ISBN 974-17-0209-4

The method of removing dissolved iron from water in *Penaeus monodon* Fabricius culture is oxidation and coagulation by using 4 oxidizing agents : potassium permanganate , hydrogen peroxide , calcium hypochlorite and air as well as 2 coagulants : aluminum sulfate and polyaluminum chloride. After the oxidation, sodium hydroxide and calcium hydroxide are used to adjust the pH of the water in the range of 6 to 9 to produce the precipitate of iron. Iron can be oxidized rapidly by potassium permanganate , hydrogen peroxide and calcium hypochlorite ,but in air oxidation, it require the enough time for the completely oxidation reaction . The removal of iron when use sodium hydroxide give a better result than of calcium hydroxide. In the case of using calcium hydroxide with aluminum sulfate, the settlement of precipitate is faster than use of sodium hydroxide with aluminum sulfate.

The conditions used for removing of dissolved iron from water in *Penaeus monodon* Fabricius culture are as follows : hydrogen peroxide as a oxidizing agent, pH 8 adjusted by calcium hydroxide and aluminum sulfate as a coagulant. A resulted water is produced suitable pH and alkalinity and containing a iron concentration less than 0.3 mg/l. to meet the acceptable limit .