*In vitro*availability of soluble calcium from fish bone

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ABSTRACT

Calcium, a mineral required by the body for a variety of physiological functions and for the maintenance of bone tissues, needs to be consumed in adequate amounts each day. Recently, as the prevalence of osteoporosis increases with the aging, greater attention has been focused on the development of soluble calcium. In this study, soluble calcium from hoki (*Johnius belengerii*) bone powder was recovered by combination of three treatments (physical, chemical and enzymatic method). The soluble calcium was recoverable above 90% by combinational method in order followed; enzymatic, phsical, chemical treatments. In order to investigation of *in vitro*bioavailability correlated with calcium absorbability in intestine, the amount of calcium in supernatant was determined by flame atomic absorption spectroscopy (FAAS) after soluble calcium was incubated and precipitated in phosphate (Na2HPO4) solution at 37℃for 3 h. The results show that the rate of calcium without precipitation in phosphate solution is approximately 30%.