

### 38. Studies on Biocatalyses. (XIII) .

#### Boron in Sea Weeds.

*Kinsuke Kondo, Shigeki Mori and Fumio Kawai.*

As McHargue et al.<sup>1)</sup> has pointed out, sea weed contains extraordinarily large quantity of boron. The amount of boron, calcium and the mucilageous component, alginic acid were determined on seven varieties of sea weeds<sup>2)</sup> and it was found that there was no close relation to each other. The boron content of the sea weeds are as follows; each numeral represents mg B per Kg dry matter, Green sea weeds, (1) Hitoegusa, *Monostroma nitidum* Wittrock 138, (2) Aomogusa. *Boodlea coacta* (Dickie) Murray et de Toni 519, Brown sea weeds, (3) Mamedawara, *Sargassum piluliferum* A. Agardh 233, (4) Umiuchiwa, *padina argoescens* Holmes 262, Red sea weeds, (5) Kamogashira-nori, *Nemalion palvinatum* grun 408, (6) Hanafunori, *Gloiopeltis Complanata* (Harv.) Yamada 127, (7) Fukurofunori. *Gloiopeltis furcata* postels et Ruprecht 105.

The amount of boron extracted with hot water (at 85°C) from the weeds, and the ratio of dialysability, calculated from the amount of boron dialysed from the aqueous extract were also determined.

1) J. Am. Soc. Agr., 32 622 (1940).

2) Collected at Sato Marine Biological Laboratory, Kyoto Univ., Shirahama, Wakayama Pref.

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### 39. Studies on Biocatalyses. (XIV)

#### Boron in some Animal Products.

*Kinsuke Kondo, Shigeki Mori and Morikazu Kajima.*

The boron content of some animal products were determined. The results are as follows; the numerals were represented in mg B per Kg dry matter; hens egg, yolk 5.2, egg white 28.8 shell 22.6; blood (ox) 16.8, corpuscle 10., serum 43.7; cow's milk 19.2, purified casein, trace; rabbit, muscle 2.6, kidney 36.4, heart 39.4, stomach 23.0, eyeball 97.9. As seen in the above results, large amount of boron was found in egg white, whey, blood serum and various viscera.

We also determined the boron content in the different part of body of oyster, in the whole body 36.3, (a) muscular scar 98.1, (b) Mantle 52.8, (c) branchia 21.5 and the remainder part after removing (a), (b) and (c) 30.0.