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ONLINE ISSN : 1880-1404

PRINT ISSN : 0916-717X

Biomedical Research on Trace Elements

Vol. 18 (2007) , No. 4 380-385

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Evaluation of colorimetric method for zinc, using clinical chemistry analyzer.

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(Received: August 23, 2007)

(Accepted: October 9, 2007)

Abstract:

We developed a colorimetric reagent kit for determination of zinc in serum, "ACCURAS AUTO Zn". The reagent is applicable to all auto-analyzers widely used in hospital laboratories, without any serum pretreatment. Within-run and between-run precisions(C. V.)were 0.7-1.0% and 1.4-1.9%, respectively. The calibration curve was linear up to 500 µg/dl, and the detection limit was 5 µg/dl. Interference from iron and copper was eliminated by a masking agent. A good correlation($r = 0.996$)was obtained between the results of the present method and those of atomic absorption spectrophotometry. This kit enables accurate and immediate assay of zinc with a clinical chemistry auto-analyzer, and saves time and efforts in the field of a nutrition support team(NST)work in hospitals.

Key words: Zinc, Colorimetric method, ACCURAS AUTO Zn, 5-Br-PAPS, Clinical chemistry auto-analyzer, Atomic absorption spectrophotometry

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Kazuhiko Higurashi, Naomi Iizuka, Hajime Yoshimura, Tatsuhiko Tanaka and Shozo Nomoto, "Evaluation of colorimetric method for zinc, using clinical chemistry analyzer.", Biomedical Research on Trace Elements, Vol. **18**, pp.380-385 (2007) .

JOI JST.JSTAGE/brte/18.380

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