

MEASUREMENT OF LEVELS OF POTASSIUM BROMATE AND SOME HEAVY METALS IN BREAD SAMPLES PRODUCED IN PORT HARCOURT METROPOLIS, NIGERIA

OBUNWO C. C & KONNE J. L

Department of Chemistry, Rivers State University of Science and Technology, Nkpolu-Oroworukwo,
Port Harcourt, Nigeria

ABSTRACT

In order to determine the compliance level of small-scale bakeries in Port Harcourt metropolis with national and international standards, bread samples from ten (10) of these small-scale bakeries were analysed for levels of potassium bromate, lead (Pb) and iron (Fe) in the samples using appropriate spectrophotometric techniques. From the results, the concentrations of potassium bromate ranged between 0.12 ± 0.08 mg/kg and 7.28 ± 2.14 mg/kg, indicating that all the bread samples had bromate levels higher than the permissible limit (0.02 mg/kg). The concentration ranges of Pb and Fe in the samples were 0.23 ± 0.10 mg/kg - 7.28 ± 2.14 mg/kg and 0.45 ± 0.10 mg/kg - 6.40 ± 2.20 mg/kg respectively. 40% of the bakeries recorded higher Pb levels (samples 2, 4, 5 and 8) than the permissible limit while 30% of them recorded higher Fe levels than the permissible limit. It is thus deduced that bakeries 2, 4 and 8 are operating at sub - standard levels.

KEYWORDS: Potassium Bromate, Bread, Lead and Iron Concentrations