



FAST BROMATE

QUALITATIVE DETECTION OF BROMATE IN BREAD







Potassium bromate, or simply called bromate, is an oxidiser used to strengthen dough and enhance its elasticity. This helps bake uniform and whitened bread.

However, excessive use of potassium bromate results in residual concentrations in bread having potentially harmful effects.

Some people who ingested large amounts of bromate had gastrointestinal symptoms such as nausea, vomiting, diarrhea and abdominal pain. Some individuals who ingested high concentrations of bromate also experienced kidney effects, nervous system effects and hearing loss.

European bread lacks a specific ingredient: Potassium bromate. Food makers in the United States regularly use this chemical compound to strengthen dough. In fact, this additive is present in more than 100 products. But, Europe, China, and India have banned Potassium bromate due to concerns that it may be a carcinogen.

HOW TO USE

- 1  Add 4 drops of R1 or 200 uL. of R1 to 1 gr. bread
- 2  Add 1 drop of R2 or 60 uL. of R2 to 1 gr. bread
- 3  Absence of bromate additive in bread
 Presence of bromate additive in bread

CHARACTERISTICS

Reference: 82906A

Linearity range: 0.5 - 50 ug/mL. bromate content

Presentation: Chromogen Activator R1 - 10 mL., Substrate R2 - 3 mL.

Sample Matrices: bread, water

Expiry Date: 24 months

*The kit must be stored at 2°-8°C

BIBLIOGRAPHY

- 1.ABA/AIBI (2008) Commercial baking industry guide for safe use of potassium bromate
- 2.Abdulla NS, Hassan MA (2009) Spectrophotometric determination of bromate in bread by the oxidation of dyes. J Kirkuk Univ 4:31-39
- 3.FAO/WHO J (1992) Evaluation of certain food additives and naturally occurring toxicants (Thirty-ninth report of the Joint FAO/WHO Expert Committee on Food Additives). WHO Technical Report Series No. 828
- 4.Ranum P (1992) Potassium bromate in bread making. Cereal Foods World 37:253-258
- 5.Sandhu HPS, Manthey FA, Simsek S, Ohm J-B (2011) Comparison between potassium bromate and ozone as flour oxidants in breadmaking. Cereal Chem 88(1):103-108. <https://doi.org/10.1094/CCHEM-06-10-0085>