Bread additive stir: The circus around potassium bromated

The recent study by the Delhi-based Centre for Science & Environment on white bread, bun, pav and pizza bread in New Delhi has put the spotlight firmly on potassium bromate, a chemical compound commonly used for baking.

The additive is used to strengthen dough and improve the shelf life of bread. It is also an affordable additive in comparison to ascorbic acid, a naturally occurring organic compound that is used to strengthen dough, says Ramesh Mago, president of the All India Bread Manufacturers' Association. "This makes potassium bromate a viable alternative for the bread industry, since ascorbic acid cannot be used on its own. It has to be combined with some other enzymes to improve the quality of dough, which is key to the baking process," he says.

Potassium bromate, say experts, also helps bread to rise during the baking process, which is why it is a popular additive with local bakers. "While the US hasn't banned potassium bromate, the European Union and some other countries such as Canada, Brazil, Argentina and China have," says Ashwin Bhadri, chief executive, Equinox Labs, a Mumbai-based food testing and consulting company.
Bread makers say the permissible limit for potassium bromate in bread in the US is higher, at 75 parts per million, in comparison to India’s 50 ppm. Mago argues its use is widespread in the US, though there are breads available that do not use it.

In its study, CSE noted that potassium bromate was a Category 2B carcinogen, meaning it could cause cancer, while potassium iodate could trigger thyroid disorders. “We found 84 per cent of the samples positive with potassium bromate/iodate. We re-confirmed the presence of potassium bromate/iodate in a few samples through an external third-party laboratory. We checked labels and talked to industry and scientists. Our study confirms the widespread use of potassium bromate/iodate, as well as presence of bromate/iodate residues in the final product,” said Chandra Bhushan, its deputy director-general.

The Food Safety & Standards Authority of India (FSSAI) has said it would issue a notification shortly to remove potassium bromate from its food additives list.

However, bread makers argue that working out a replacement in manufacturing will take time and they should get three to six months for a switch.