

Azodicarbonamide in Foods

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Application of azodicarbonamide

- A synthetic chemical
- Used as a flour treatment agent (INS 927a)
 - May strengthen and enhance elasticity of the dough
- Used as a blowing agent in the rubber and plastics industries
 - Found in foamed plastic sealing gaskets for metal lids on glass jars

Health effects of azodicarbonamide

- ▣ Azodicarbonamide is of relatively low acute toxicity to animals repeatedly exposed by the oral route.
- ▣ No tumorigenic effects were observed in studies in which animals were treated with the breakdown product biurea.
- ▣ It is concluded that the mutagenic properties displayed by azodicarbonamide in bacterial systems will unlikely be expressed *in vivo*.

Health effects of azodicarbonamide

- ❑ Evidence that azodicarbonamide can induce asthma in humans has been found from bronchial challenge studies with symptomatic individuals and from health evaluations of employees at workplaces where azodicarbonamide was manufactured or used.
- ❑ Indications that azodicarbonamide may induce skin sensitization via the dermal route.
- ❑ Nevertheless, such health effects have not been observed via dietary exposure (e.g. consumption of bread with azodicarbonamide).

Health-based guidance value

- ❑ JECFA has not established an ADI for azodicarbonamide.
- ❑ An acceptable level of treatment has been allocated for azodicarbonamide at 0-45 mg/kg flour.
- ❑ WHO (1999) considered that it was not possible to reliably quantify the risk of developing occupational asthma.

Regulation of azodicarbonamide in foods

Can be used as food additive	Not on the list of food additive
Codex • GSFA: 45 mg/kg flour	European Union
USA	Australia & NZ
Canada	Singapore
Mainland China	
Korea	

Regulation of azodicarbonamide in foods

- ❑ In Hong Kong, azodicarbonamide can be used in foods provided that it is used under Good Manufacturing Practice.
- ❑ Shall include in the ingredient list the specific name or identification number and functional class if azodicarbonamide constitutes an ingredient of a prepackaged food.

Thank you

