

SODIUM DIACETATE - Technical Information

Chemistry

Sodium diacetate is a fungicide and a bactericide registered to control mold and bacteria in foods. Sodium diacetate is a mixture of sodium acetate and acetic acid. It is a white, hygroscopic, crystalline solid having an odor of acetic acid (commonly known as vinegar).

Regulatory status

United States of America

Sodium diacetate is approved as a GRAS (Generally Recognized As Safe) substance for miscellaneous and all-purpose usage in cheese spread, butter, and bread. Since 2000, the Federal Register 21 CFR 184.1754 permits the use of sodium diacetate in Meat and Poultry Products.

Canada

In Canada, provisions currently exist in the *Food and Drug Regulations* for the use of sodium diacetate as a preservative in bread and unstandardized foods. Recently (September 2008), an Interim Marketing Authorization has been issued by Health Canada to permit the use of sodium diacetate as a preservative in standardized and unstandardized preparations of meat, meat by-products, poultry meat, poultry meat by-products, prepared and preserved fish products.

Toxicology

No toxicological data are reported when sodium diacetate is used under the requirements outlined in the IMA. Since acetic acid is completely utilized in metabolism, the residues of sodium diacetate in meat, milk or poultry is considered to be negligible.

Control of *Listeria monocytogenes*

Since the approval of sodium diacetate, extensive efforts are being made by industry in developing formulations of processed meat products that include this antimicrobial in order to reduce or eliminate postprocessing contamination from *Listeria monocytogenes*. Number of significant results has been reported in different commodities. Most effective inhibitory effects were observed when sodium diacetate was combined with sodium or potassium lactates. *Common combinations are sodium diacetate 0.12-0.2 % + sodium/potassium lactate 2-3 %.*

References

- Davidson et al. 2005. Antimicrobials in foods. Taylor & Francis Group, FL, USA.
- FAO. 1962. WHO Technical reports.
- Health Canada. 2008. IMA authorization for sodium diacetate. Canada Gazette 1. 142 (38)
- USDA. 2000. Feral Register (21 CFR 184.1754). Food Additives for Use in Meat and Poultry Products: sodium diacetate, sodium acetate, sodium lactate and potassium lactate.