

Sodium Reduction

Meat, Poultry & Fish



Achieve sodium reduction targets



Water activity control



Shelf life extension

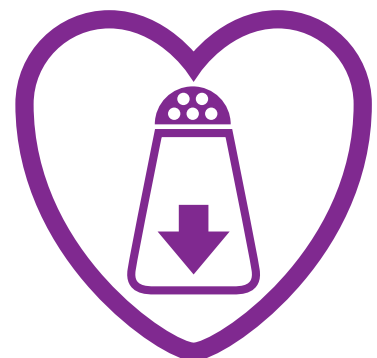


Flavor management

The excess intake of sodium is considered a human health threat because it is linked to hypertension, increased risk of stroke and cardiovascular diseases. Organizations such as the Food Safety Authority (FSA) and National Salt Reduction Initiative (NSRI) have defined sodium targets to decrease the intake of sodium salts. Worldwide, food companies are working to reduce the level of sodium in foods.

Meat products are responsible for 10-21%¹ of the sodium intake of retail food. In processed meat products the major contributor to sodium content is salt (sodium chloride). Processing or enhancing meat requires salt to manage water activity, extract proteins and achieve desired taste and flavor. Simply cutting back on salt is not always an easy solution because it has influence on product quality and stability. Even minor reductions can have effect on bacterial spoilage, taste, yield and texture. Salt substitutes often do not allow processors to obtain the desired shelf life and may have a negative effect on taste and texture.

Corbion Purac's PURASAL® HiPure P Plus and PuraQ Arome NA4 are valuable solutions for processors who want to make sodium reduced products while maintaining great tasting and high quality standards. PURASAL HiPure P Plus enables sodium reduction by increasing shelf-life without affecting taste. PuraQ Arome NA4 is a natural flavoring ideal for sodium reduction in cooked and processed meats. It mimics meat flavor and is label friendly.



¹ FSA, The National Diet & Nutrition Survey: adults aged 19 to 64 years, 2003 / Voedselconsumptiepeiling onder jongvolwassenen, 2003 / Webster et al., Asia Pac J Clin Nutr 2009;18 (3):303-309

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Effect of PuraQ Arome NA4 on sensorial attributes of chicken rolls.

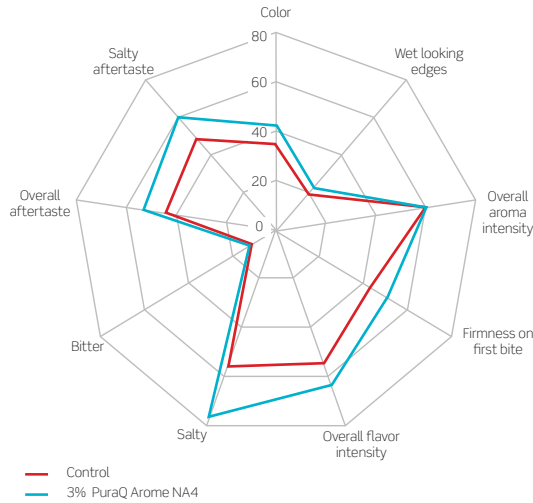


Figure 1

PuraQ Arome NA4 is a natural flavor designed to promote salty, meaty and savory notes allowing processors to maintain a good flavor profile of their reduced sodium products. PuraQ Arome NA4 is labeled as a 'natural flavouring'. In a test with chicken rolls of equal sodium contents, PuraQ Arome NA4 increased the salty taste and other quality characteristics (figure 1). Reduction of 30-50% has been achieved in ham, sausage, bologna, hamburger and RTE meat.

Total plate count of vacuum packaged bacon

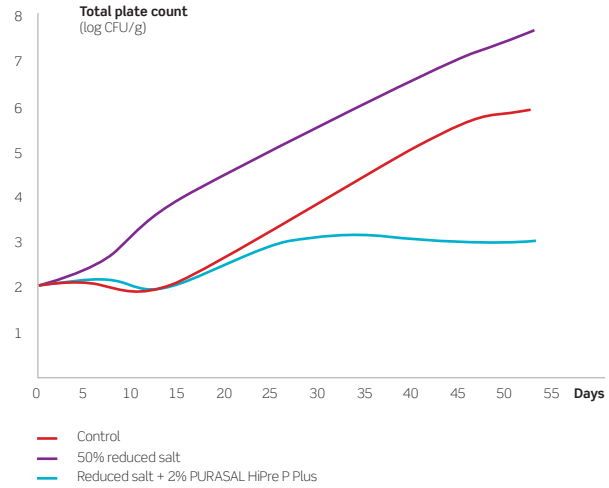


Figure 2

PURASAL HiPure P Plus allows producers to cut back on salt while retaining or extending shelf-life and helps maintain product taste and flavor. PURASAL HiPure P Plus is a high concentrate potassium lactate and possesses the cleanest flavor profile on the market. The potassium lactate will slow down bacterial growth and increase shelf-life. An internal study shows that shelf life of 50% sodium reduced bacon was extended for several weeks when formulated with PURASAL HiPure P Plus (figure 2).

Theme	Problem	Solution
Shelf life	Bacterial spoilage	PURASAL HiPure P Plus
	Water activity	PURASAL HiPure P Plus <i>Opti.Form</i> PPA Plus
Food safety	<i>Listeria monocytogenes</i>	<i>Opti.Form</i> PPA Plus
Flavor	Loss of salty taste	PuraQ Arome NA4
	Loss of taste intensity	PuraQ Arome NA4
Texture	Moisture loss	PURASAL HiPure P Plus

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With over 80 years of fermentation expertise and the use of natural raw materials to produce exceptional food and beverage ingredients, Corbion Purac has a wealth of expertise in the world of biobased food ingredients. Corbion is the global market leader in lactic acid, lactic acid derivatives and lactides, and a leading company in functional blends containing enzymes, emulsifiers, minerals and vitamins. Corbion operates 10 production plants, in the USA, the Netherlands, Spain, Brazil and Thailand, and markets its products through a worldwide network of sales offices and distributors.

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