



- ✓ Acrylamide reduction
- 🍷 Crispier snacks
- 🏠 Shelf life extension

Reducing acrylamide levels without affecting the crispiness of snacks is especially challenging for starchy products that have been fried or baked at high temperatures, such as potato chips and extruded snacks.

About PURACAL

PURACAL® is a calcium-based product designed to reduce the acrylamide levels in starchy products by up to 80%.

Calcium also plays an important role in improving texture of potato based products by interacting with the pectin in the cell walls. At ambient conditions, potato chips treated with PURACAL maintains crispiness. When blanching is used to leach out reducing sugars, PURACAL restores firmness.

The potato cultivar and seasonal influences impact the color formation of the end product. If the potato quality is not optimal, PURACAL improves color and reduces brownspotting without deterioration of other sensorial aspects.



Reduce acrylamide levels and keep the crispiness

Acrylamide reduction

The snack industry is committed to lowering acrylamide in their products. Acrylamide is mainly formed as a product of the reaction between the amino acid asparagine and reducing sugars. The mechanism of PURACAL is that calcium is able to complex asparagines, thus reducing its acrylamide-producing properties. PURACAL is known for its ease of application and is a non-GMO cost effective solution for acrylamide reduction.

PURACAL is commercially applied in potato chips to decrease acrylamide levels, improve crispiness as well as color. The first graph illustrates acrylamide reduction and calcium uptake in potato chips treated with PURACAL through a blanching step of 3 minutes at 80°C. Increased concentration of PURACAL results in higher calcium uptake and greater acrylamide reduction.

Acrylamide & calcium levels in blanched potato chips treated with PURACAL® PP

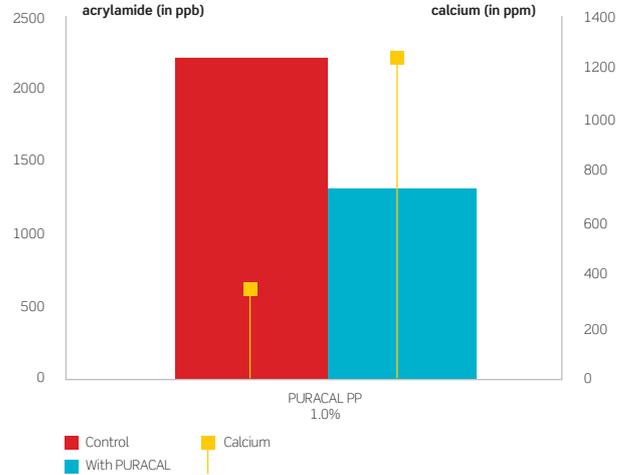


Figure 1

PURACAL PP	
Product form	White powder
Labeling	Calcium Lactate, E327
Target use level (for this application)	0.8 - 1.2%



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Corbion creates innovative ingredient solutions for leading food manufacturers around the world. Our expertise inspires customers to craft foods that start flavorful, stay fresh and remain safe, from date of production to date of consumption. Using sustainable solutions that deliver real, consumer-focused value, we work side-by-side with customers, helping them grow and create delicious food that capture peoples' palates and earn their trust. At Corbion our priorities as consumers shape the solutions we create, and as a result, feel confidence and pride in serving our own families and friends the products we help make possible.

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