



Nu-RICE[®] in Pretzels and Low Pressure Formed Dough Products

Hard baked pretzels, soft pretzels and other like products are produced from dough systems of lower protein wheat flour. As such, the consistency can be difficult to maintain. With hard baked pretzels, the baking process can produce an overly hard, brittle pretzel that does not hold up well to shipping and storage. Soft pretzels easily release their moisture to the atmosphere and become dry, hard and rubbery. The entire process is further complicated by the addition of flavorings and adjuncts that only further weaken the structure and produce further breakage in storage and transport.

Nu-RICE from RIBUS, Inc. is a patented and proprietary extract from rice bran that provides numerous functional attributes that improve and enhance the functional characteristics of wheat flour.

- **In hard baked pretzels:** the glycolipids and pentosans inherent in the ingredient, improve water binding and strengthening of the gluten – starch interaction and imparts enhanced strength to the finished product while not hardening the texture of the finished product.
- **In soft pretzels:** the glycolipids and pentosans work to improve moisture retention and to soften the internal structure. Shelf life as measured by softness is extended. Further to its use in soft pretzels, increased volume and water retention after baking is noted.

The use of Nu-RICE at between 0.5 and 1.0% in hard baked pretzels provides significant packaging and transportation strength while not softening the internal crumb structure. In soft pretzel products, usage rates of between 0.5 and 1.5% are not unusual. Your specific use rate will be based upon your desired outcome(s).

Besides the previously mentioned advantages, Nu-RICE addition to the formulation with help improve throughput and conformity of product. In many instances, production rates can be increased while reducing the energy required. The lubricating effect of the glycolipids facilitate these improvements.