

## Seeking Companies interested in the Commercialization of a A Dairy Solution to Sodium Reduction

The Center for Dairy Research (CDR) ([www.cdr.wisc.edu](http://www.cdr.wisc.edu)) is seeking companies interested in the formulation of products containing dairy permeate, (a filtration by-product) which can be used to reduce sodium content while maintaining a “salty flavor” in addition to reducing manufacturing costs. As manufacturers seek to reduce their sodium levels in food, permeate shows great promise in revising existing food formulations. CDR is well-versed in the formulation of permeate products and staff can offer end users assistance in formulating products that use this economical dairy ingredient. If your company is interested in reducing sodium in your existing food products or you are considering new product lines, please contact CDR for more information. We encourage you to find out more about how your company can benefit from working with CDR.

### Technology

- Permeate (which should be labeled as dairy product solids) is a by-product of the ultra-filtration process of milk or whey. The composition of permeate will vary depending upon whether permeate contains milk salts (minerals), lactose, or non-nitrogen components, all of which contribute to permeate’s flavor enhancement characteristics. CDR staff discovered that permeate enhances saltiness and other flavors in foods. Additionally, it was discovered that the product is a cost-effective method for sodium reduction. Permeate can enhance the browning of baked goods, aid in moisture retention, reduce sweetness, deliver a clean dairy flavor and even mask bitter flavors in meat. Salt replacers currently on the market may alter processing parameters and cause off-flavors (e.g. bitterness). CDR staff can work with you to determine the very best permeate source/type for your product and develop a formulation to meet your target market’s demands. CDR staff have years of experience in developing great tasting permeate formulations in everything from muffins to soup..



### Functional/Sodium Reduction Benefits

- Permeate can help to significantly reduce sodium levels in a product while still maintaining the “salty taste” that consumers expect. Up to a 25 percent sodium reduction has been achieved in application research. Nutritionally, permeate contains calcium, phosphorus, and other valuable minerals, contributing to overall mineral profile of a food product creating a salty flavor that enhances the flavor of any product. In addition, the lactose in permeate contributes to browning (but is less sweet than sucrose) which contributes in a positive way to the functionality of a baked good.

### Economic Benefits

- From a cost perspective, permeate can be an economical source of dairy solids. In most cases, permeate lowers the cost of product manufacture as permeate’s makeup generally allows it to replace several ingredients in food applications. Permeate can also be used as a lower cost replacement for sweet whey resulting in economic benefits for many food applications.

### Applications

- \* Baked goods
- \* Soups
- \* Confections
- \* Dry mixes
- \* Meats
- \* Dips, cheese sauces, process cheese food
- \* Ice cream and frozen desserts

### How can CDR help me?

- CDR is an internationally known dairy research center and the largest within the United States. Access to world class food scientists/technologists and a licensed, “operating” dairy plant along with CDR’s commitment to client confidentiality provides applied research results at minimal costs. CDR is not interested in IP opportunities around this technology and charges a nominal fee for service, resulting in a low-cost, low-risk R&D outsourcing option for a variety of companies

