



SKIDMORE SALES & DIST.

AT YOUR SERVICE

HELLO AGAIN

This newsletter is designed to keep you informed of new developments that are occurring in the area of food ingredients. We hope you will find some of the items of interest. We encourage you to request additional information or samples by calling your sales representative, our office at 800-468-7543 or fax 513-759-4270.

HEALTH & NUTRITION

With the aging U.S. population and the link between nutrition and long-term health becoming more evident, the market for functional foods which contain ingredients that promote long-term health is growing at approximately 10% a year. This is well above the food industry's average of 1% - 2%. **Central Soya**, a world leader in the production and marketing of soy products, is part of the new **Health & Nutrition Group** formed by Eridania Beghin-Say. The **Health & Nutrition Group** provides the technical expertise to help food manufacturers and pharmaceutical companies design and formulate good tasting foods with health benefits.

Functional food ingredients are at the center of the rapidly growing segment of the food industry where nutrition and food science meet. A functional food is defined as any food or food ingredient which provides an additional health enhancing benefit beyond the traditional nutrients it contains. Soy protein, produced by **Central Soya** in North America, is a good example of a functional food ingredient. The well-documented, preventative role soy protein plays in heart health is a benefit beyond its more traditional role of providing a nutritious source of protein.

At the heart of the Eridania Beghin-Say **Health & Nutrition Group** is the commitment to work closely with you, helping to formulate ingredients into your products which will help deliver long term benefits to health-conscious consumers. For a copy of the **Health & Nutrition Group** Questions and Answer Booklet or more information on the line of soy proteins Central Soya manufactures, contact us at 800-468-7543.

“UMAMI” 5—THE FIFTH TASTE SENSATION

Beyond the tastes of sweet, salty, sour or bitter is **Umami**, the elusive flavor component that is identifiable in some of the world's most favored cuisines. **Ajitide**, nucleotides with the Ajinomoto touch, and Ajinomoto's monosodium glutamate work in synergy to capture the full sensation of **Umami**. You will find notable taste improvement in savory products and nutritious vegetable drinks when you formulate with these two outstanding flavor enhancers from Ajinomoto.

Now is the time to explore new taste opportunities by creating **Umami** in both existing or developmental products. For samples or product information, please call us at 800-468-7543.

Erie Foods, a leading supplier of milk proteins, invites you to visit their website at www.eriefoods.com.

COMING SOON...

Our Skidmore Sales Web Site is under construction. You will soon be able to visit us at www.skidmore-sales.com.

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Special points of interest:

- A.E. Staley offers a complete line of starches designed for meat applications
- Add Purac to your salads, dressings, pickles and sauces
- Gemtec, a cost effective isolated wheat protein
- Calcium Gluconate for food fortification
- Novation starches offer several advantages

MEAT STARCHES FUNCTIONAL ADVANTAGES

The meat industry is enticing consumers with an array of new products derived from innovations in injected fresh pork, ready-to-eat items and marinated meats. Accompanying this variety of products is the need for a variety of starches with functional advantages. **A.E. Staley Manufacturing Company**, part of the Tate & Lyle Group, offers a complete line of starches designed for meat applications.

Starch typically functions in meat products to bind water and provide texture. The point at which a starch begins to bind water, or the pasting temperature, is dependent on the starch source and modifications to the structure. Starch benefits emulsified items such as hot dogs and bologna, chunk and formed deli meats and injected and/or vacuum tumbled whole muscle products, such as turkey and chicken breasts.

A.E. Staley's meat starch line includes ingredients derived from potato, dent corn, waxy corn and tapioca. Potato starch, which has a pasting temperature less than corn starches works well in whole-muscle products. In an injected turkey breast, the lower temperature allows the starch granules to swell earlier in the smokehouse, producing good muscle texture. Two new modified potato starches, **Nustar 115** and **Nustar 120**, begin to bind water at 64°C. **Nustar 120** has more cross linking for additional shear and heat stability. Dent-corn starch, like potato starch, contains amylose, which imparts a firm texture to meat products. **Mira-Cleer 187**, a modified dent corn starch, is generally utilized in emulsified and deli meats. Waxy corn starch composed entirely of amylopectin, has increased freeze/thaw stability and water-binding capability. **Maxigel 420**, a modified waxy-corn starch, is typically used in hot dogs and bologna, while a similar starch, **Consista**, is recommended when a firmer product is desired. Corn starches paste at about 71°C.

Lo-Temp 452, modified corn starch, has a very low pasting temperature of approximately 50°C, which enhances consumer prepared products such as low fat patties or chicken breasts. Since this starch begins to bind water at the beginning of preparation, the juices do not run out into the pan and the product stays moist with a good bite. **Lo-Temp 452** can also be combined with a higher pasting starch to ensure water binding throughout processing, such as in an injected smokehouse meat.

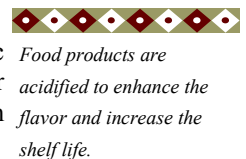
Modified tapioca starches, such as **Tenderfil 428**, offer a clean taste and pasting temperature of about 70°C. Tapioca starch, often used in whole muscle meats, gives a firmer texture than potato starch. For more information or to receive an A.E. Staley's Meat and Poultry Applications Brochure, call us at 800-468-7543.

PURAC—LACTIC ACID

Purac is the natural L+lactic acid used as an acidulant in the food industry because of its good antimicrobial properties and mild acid flavor profile. By adding **Purac** to products like salads, dressings, pickles and sauces, it is possible to achieve a low pH and maintain a mild taste.

The flavor of many food products is determined by the ingredients and processing steps used in production. In acidified food products, the acid is one of the ingredients that has a major impact on flavor. Organic acids are normally used, ranging from acetic or vinegar and citric to malic and lactic acid. Although inorganic acids are used sporadically, the organic acids are preferred since they also possess antimicrobial properties.

The flavor of acids has been described as sour, but several studies have reported that acids have non-acidic properties as well. Although non-acidic properties influence taste perception, sourness is still the major parameter which influences overall flavor intensity. The pH and the acid itself have a major influence on the perception of sourness.



Food products are acidified to enhance the flavor and increase the shelf life.

Purac has developed **Purac Fresh**, which has good anti-microbial properties, a low pH and a mild flavor.

Purac Fresh has successfully been applied in salads, dressings, pickles and cooking sauces. Another interesting property of lactic acid is that at pH = 3.5 lactic acid is perceived to be more sour than citric acid. In meat, pasta, potato, cheese or other savory products, lactic acid is preferred since no negative flavor is associated with lactic acid. For more information or to receive a copy of the Purac Lactic Acid Brochure, call us at 800-468-7543.

UPCOMING EVENTS...

November 8, 2000—Chicago IFT Exposition—Rosemont Convention Center

March 27, 2001—Western New York IFT Exposition—Rochester Riverside Convention Center

April 17, 2001—New York IFT Exposition—New Jersey Convention & Exposition Center at Raritan Center

April 24, 2001—Great Lakes IFT Exposition—McCamy Plaza Hotel

April 26, 2001—Ohio Valley IFT Exposition—Oasis Conference & Banquet Center—Cincinnati



MANILDRA GEMTEC FUNCTIONAL WHEAT PROTEIN ISOLATES

Manildra, a world leader in the production of Vital Wheat Gluten, is introducing **Gemtec**, brand Isolated Wheat Proteins, which have been designed for use in meat and poultry applications.

Gemtec functional wheat protein isolates provide the functionality of solubility, dispersibility, emulsification, viscosity, gelling and water holding for injected meats such as poultry, hams and roast beef. Emulsified and ground meats such as frankfurters, bologna, meat patties and sausages.

Gemtec functional wheat protein isolates provide benefits to the processor and the consumer by improving consistency and yields along with increased flavor and eating quality. Most importantly, **Gemtec** is cost effective resulting in improved margins to you the customer. For samples, please call us at 800-468-7543.

CALCIUM FORTIFICATION WITH GLUCONATE

Calcium gluconate, from **PMP**, is one of the most versatile ingredients for food fortification. The flavor of **calcium gluconate** is mildly sweet. It does not have the chalky taste of carbonate or the sour flavor of citrate. The calcium density of **calcium gluconate** is approximately 9%. Each gram of **calcium gluconate** provides 9% of the recommended average daily intake. The absorption of **calcium gluconate** is very high. In fact the absorption of **calcium gluconate** is the standard used by scientists in their comparisons of various calcium compounds. **Calcium gluconate** has a low buffering capacity when compared to the other soluble organic calcium salts. The means that in preparing acidified calcium fortified beverages, less acid component is required to reach the typical pH of 3.8.

Calcium gluconate can be used to fortify various types of liquid, semi-moist and dry foods. It has been successfully incorporated in beverages, both dairy based and acid based, cottage cheese and yogurt-type products, puddings, powdered sweeteners, coffee whiteners and bakery products. For liquid based applications a concentrated solution (up to 20%) is made by mixing **calcium gluconate** into hot water (180° F) and stirring until completely dissolved. This solution is utilized with the other ingredients to achieve the desired fortification level. For dry mix food products special care should be taken that the particle size or granulation is appropriate to prevent stratification of ingredients. In some products, formulators utilize two sources of calcium to achieve a higher solubility and a better flavor balance. **Calcium gluconate** and **Calcium Lactate**, from Purac, are often used in a ratio of 3-to-1 or 2-to-1 respectively. This combination of calcium ingredients has found great success in a number of food applications. Call your Skidmore Sales representative for more information or to order samples PMP's Calcium Gluconate or Purac's Calcium Lactate.

Looking for a great source of calcium? Take a look at Calcium Gluconate from PMP.

SIMPLE LABEL, CLEAN FLAVOR ... NOVATION

Novation products offer new cost saving and processing opportunities to formulators of fruit products and delicately flavored food systems. The most popular choices for stabilizers in fruit preparations have traditionally been Pectin, modified starches, and Locust Bean Gum. Modified starches offer an economical choice to more costly pectin or locust bean gum, but Pectin has been perceived as offering better, cleaner flavor release than traditional starches.

Novation, the revolutionary technology from **National Starch and Chemical Company**, now offers manufacturer's another option. **Novation** starches provide all the processing tolerance of traditional modified food starches, but have the simplified label declaration "starch". These new starches offer a number of advantages. Process tolerance, simplified labeling, potential cost-savings compared to pectin-based systems, ease of use, and cleaner flavor release, and an "all natural" label.

Trials were conducted utilizing a standard commercial fruit prep formula, 30% brix, 4% starch, which were evaluated for, initial viscosity, viscosity stability, yield stress and gel strength. The results indicated that the **Novation** products delivered the expected processing tolerance and improved flavor profiles compared with traditional modified starches and unmodified starches. In fact, the unique heating profile of the tapioca-based **Novation** products, having an exceptionally low, hot viscosity, followed by a heavy bodied, high, cold viscosity offers potential advantages for processing delicate fruits.



In conclusion, combining the effective stabilizing properties of traditional modified starch with the consumer friendly label, extremely clean flavor release profile, these starches provide a unique opportunity for product improvement or differentiation. Something that is very important in today's crowded and competitive marketplace. If you would like to receive more information on National Starch's **Novation** products or request a sample, please call us at 800-468-7543.

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