Flavor and Fragrance ingredients

A brochure detailing Sabinsa's new line of flavor and fragrance ingredients is now available. Please contact Sabinsa NJ office to receive a free copy of this informative publication. Call: (732)777-1111 or e-mail: info@sabinsa.com. This new product line covers a wide range of flavor and fragrance raw materials.

From ancient times, fragrances have appealed to people all over the world. A royal prerogative in the past, perfumery products have now gained general popularity as an integral component of personal grooming. Similarly, compounded flavors enhance the sensory appeal of food / nutritional products and improve the acceptability of medicinal formulations.

Historically, flavors and fragrances were prepared from natural materials. Innovations in chemistry have provided a range of compounded formulations to supplement nature's bounty. These were developed through critical analysis materials followed by their preparation through synthetic routes, paving the way to the creation of several synthetic flavor and fragrance chemicals.

The natural and synthetic raw materials that constitute these com-pounded flavors and aromas include essential oils, isolated constituents, and nature-identical synthetic compounds. Some of these ingredients find versatile applications in aromatherapy as well. Coleus oil, an essential oil extracted from the roots of Coleus forskohlii using a proprietary, solvent-free supercritical carbon dioxide extraction process, is one such example.

The natural constituents of the oil impart a unique spicy aroma, with pleasant woody and pine-like undertones . This essential oil may be used as a flavoring agent in foods and beverages, in aromatherapy and in perfumery. An additional application is as antimicrobial agent in personal care products*.

*patent pending

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Ursolic Acid 90% - a versatile cosmeceutical ingredient

Ursolic acid, also known as urson, prunol, micromerol, and malol, is a pentacyclic triterpenoid compound which naturally occurs in a large number of plant foods and medicinal herbs. It is present in the wax-like coatings of several fruits including apples, pears, cranberries and p r u n e s . Historically, ursolic acid has been used as an emulsifier in foods, cosmet-ics,and pharmaceuticals.

The reported healthful properties of ursolic acid include antitumor, hepato-protective, antioxidant, anti-inflammatory (oral and topical), anti-ulcer, antimicrobial, anti-hyperlipidemic, and antiviral effects. However, its recent popularity as a cosmeceutical ingredi-ent stems from its role as a topical rejuvenating agent.

Ursolic acid treatment improves the health of skin and hair. Ursolic acid and its derivatives form oil-resistant barriers on the skin and hair, just as they form the waxy coating of fruits. Ursolic acid has been used to treat photoaged skin, because it inhibits the appearance of wrinkles and age spots by restoring the skin's collagen bundle structures and elasticity. Ursolic acid inhibits the action of elastase enzyme in the skin, thereby preventing the enzyme from attacking structural proteins. Ursolic acid also inhibits the inflam-matory enzymes cyclooxygenase and lipoxygenase.

Sabinsa Corporation supplies 90% ursolic acid extracted from rosemary (Rosmarinus officinalis) leaves, for use in skin and hair care formulations. Typical use levels range from 0.2-3.0% of cosmetic formulations such as creams, lotions, lip balms and gels. The color of the powder, a pale cream to light tan, blends well with most prepa-rations.

New Patent applications

Two patent applications were submitted to the United States Patent and Trademark Office in November-December 2002:

Manufacturing processes for Se-alkylselenocysteine, Se-allylselenocys-teine, Se-arylselenocysteine, developed by our R & D scientists were the subject of one patent application. The invention describes novel efficient methods for the commercial manufacture of D, L and DL froms of methylselenocysteine, an effective and safe organic selenium supplement.

Commercial processes for isolation and purification of glabridin with high tyrosinase inhibiting activity were the subject of the second patent application. The invention describes efficient, cost-effective methods, developed in our R & D facilities, for the isolation of glabridin from licorice, and its use in skin care compositions. The skin lightening agent, glabridin, is combined with other functional ingredients including antioxidants, sunscreens, skin texture supporting agents and other natural ingredients to provide compositions with multifaceted benefits.

R & D Focus

In the December 2002 issue of this letter we informed you about the prestigious National Award for R & D efforts in Industry presented to Sami Labs Ltd., the research and manufacturing arm of Sabinsa Corporation. This month we present an overview of the state of the art research and development facilities that made this award possible.

The research and development efforts at SAMI are spearheaded by 16 Senior Scientists, with expertise invarious aspects of Phytochemistry, Organic Chemistry, Tissue Culture, Biotec hnology and Quality Control, who work with a team of 50 other scientists and chemists. Research efforts are targeted toward the manufacture and authentication of herbal extracts, fine chemicals, specialty chemicals, cosmeceuticals, and also in the direction of new drug discovery. Product yield and quality are improved through process development efforts in sophisticated techniques such as supercritical fluid extraction.

Plant tissue culture research is one of the exciting research areas that serves to augment existing resources for medicinal herbs, while helping to conserve rare and endangered species. Some of the plants that are cultivated by tissue culture include Coleus forskohlii, Curcuma longa, Olea europaea and Melissa officinalis. In the December 2002 issue of this letter we informed you about the prestigious National Award for R & D efforts in Industry presented to Sami toward the production of secondary metabolites, that are the biologically active principles.

At the Biotechology facility, re-search priorities include probiotics, mineral yeast supplements, biocatalytic processes and the microbial synthesis of therapeutically active natural molecules.

A team of five scientists at Sabinsa's Princeton Research facility collaborate with their counter-parts in India to accelerate product development efforts. This facility has laboratory and semi-commercial scale custom manufacturing capabilities. The processes developed there are scaled up to the required levels at the manufacturing units in India.