

Feature; Spa Treatments John Woodruff

The original Spas are attributed to the Romans, who discovered the benefits of natural hot springs, as are still found and used in Bath. With the departure of the Romans from Britain bathing went out of fashion until 1571 when Harrogate opened mineral water baths and then in Georgian times baths were opened in Leamington Spa and Tunbridge Wells. The popularity of spas was further advanced by the Victorians but they went into decline during the 20th Century, in part because of problems of hygiene brought on by communal bathing and possibly because households installed central heating and constant hot water.

Spas were also popular in Europe; in Germany towns with the prefix Bad were recognised as spa towns and they were also to be found in Austria, France and Italy, in fact anywhere where natural hot springs or well waters with exceptional mineral content were to be found. Associated with spas were medical and beauty treatments, which included steam rooms, hot and cold bathing and even drinking the water!

In the last decade there has been a resurgence of interest in spas as demonstrated by the dramatic increase in the number of establishments offering spa treatments. The best of these provide a full day of pampering and massage and may even be residential, offering short breaks to improve body and mind. As an example, Aqua Sana has five establishments in England and provides more than a dozen individual experiences, including an Indian Blossom Steam Room, a Greek Herbal Bath and a Japanese Salt Bath. Essential oils feature prominently in many spa treatments as do muds; hot shells and mysterious stones for body massage.

Many spas are associated with hotels but a significant number of beauty salons also offer spa treatments, which may only last for an hour or two and may not even involve the use of a steam room, Jacuzzi or hot tub. This has been taken still further from the spa concept by suppliers of skin care products such as Oriflame, the Sanctuary, Molton Brown and Aveda that have developed treatments for home use.

Whatever the venue, the principal cosmetic treatments remain as massage, body scrubs, profile contouring and facial cleansing. It may include nail treatments, pedicure and reflexology and showering or bathing with products that offer more than just cleansing. Relaxation and de-stressing is an important part of any spa experience and words like well-being and detoxifying are freely spoken as are claims to purify, soothe, revitalise and restore balance to both mind and body.

Themes to be found in spas are gathered from around the world and evoked by décor, music, essential oils and the treatments offered. From Asia-Pacific we have the emphasis on spirituality, ancient healing practices, balance and harmony and a holistic approach to mind, body and spirit. Ayurvedic medicine comes from India and China also has an ancient tradition in natural therapies. **Cosmetochem** suggest a variety of ingredients that fit these concepts including extracts of Guta kola, Holy basil, Chinese ginger and fresh water pearls.

Turkey gave its name to steam baths and rose petals, Moroccan mint, fig, saffron and olives play their part in Middle Eastern treatments. Scandinavian countries are where saunas originated and they have a history of using birch, willow, cloudberry and Icelandic moss while Switzerland suggests alpine herbs, edelweiss and yogurt among

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other ingredients. These materials and their uses in spa therapy are all described in a brochure from **Cosmetechem** called Spa and Wellness.

Having set the ambience it is time to prepare for treatment by bathing or showering. The [February issue of SPC] included a feature about surfactants that were mild in use and suitable for shower gels, bath additives and personal cleansing. It also discussed the problems of controlling the rheology of these systems and proposed various thickeners that may be used to advantage. Since writing about this subject two other materials have come to the author's notice: GC818 from **Global Seven** is a natural thickener consisting of a blend of glyceryl esters and the Pure-Gel series of rheological thickeners from **Grain Processing** are based on sodium hydroxypropyl starch phosphate with a wide range of shear and pH tolerance.

The basic shower gel or bath formula can be enhanced by the addition of special ingredients. These may include the extracts already mentioned and many others available from all the principal cosmetic ingredient suppliers. Essential oils also play their part and these are also available from suppliers too numerous to mention but suppliers of both extracts and oils may be found on <http://www.cosmeticsbusiness.com>.

The most famous bathing experience of all time must be that of Cleopatra who bathed in asses' milk; an experience difficult to replicate but blooming bath oils with emollient properties are a possible substitute. Sucragel AOF [INCI: Glycerine, Prunus dulcis (Sweet almond) oil, sucrose laurate] from **Alfa Chemicals** is a suitable vehicle for essential oils and when added to the bath water it gives it a rich milky appearance and imparts a soft, smooth feel to the bathers skin. A less expensive formula uses 30% Sucragel AOF to emulsify equal parts of glycerine and sunflower oil.

Alternatively Cleomilk from **Rahn** is a multi-component mixture that includes Sesamum indicum (sesame) seed oil, sucrose stearate, glyceryl caprylate, Nigella sativa seed oil and Aloe barbadensis leaf juice powder that is claimed to replenish essential lipids that are removed from skin during washing and bathing. Another way of dispersing natural oils in bath water is by mixing them with about 30% AEC PEG-40 sorbitan peroleate plus about 15% AEC PPG-15 stearyl ether, both materials are available from **A&E Connock**.

Bath bombs are certainly popular for home use; **Cornelius** supply a variety of edible glitter shapes that dissolve in water so have to be incorporated in anhydrous systems like bath bombs and bath oils. On addition to the bath they have a glittering but transient life span. Bath bombs are normally a mixture of sodium bicarbonate and citric acid. Unfortunately Dead Sea salts [INCI: Mare salis] will not fizz as they consist principally of sodium, potassium and magnesium chlorides but tourists flock to the Dead Sea to bathe in its waters and its salts can be added direct to a bath or incorporated in surfactant systems to add numerous trace elements to the formulation and they may also improve viscosity.

Thalassotherapy is the use of sea water for medical uses and is particularly popular in the Breton area of France. It may involve bathing in warmed sea water or in baths containing extracts of algae (sea weeds). There are many Breton-based ingredient suppliers that extract active ingredients from the sea: **Agrimer Algues Marines** are in

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Plouguerneau and provide numerous materials for use in thalassotherapy treatments and also include finished products in its range, enabling companies to go to market without the delay of formulating. **Biotechmarine** are in Pontrieux and it specialises in research and marketing of seaweed and plant bioactive natural substances suitable for use in beauty products and particularly for spa applications.

From bathing in the waters of the Dead Sea to squelching in its mud is all part of the treatment and mud baths are popular in spas around the Dead Sea and are also to be found in many of the spas in Europe. **Dead Sea Mud Powder** [INCI: Silt] is spray dried Dead Sea mud produced in the UK for **Chemlink**. It is easy to incorporate into face packs and body scrubs; it has a low bacterial count and contains high levels of trace elements and it provides gentle exfoliation to give emolliancy and skin smoothing.

The Dead Sea is the lowest natural basin on earth; at the opposite extreme Rhassoul clay is mined from volcanic rock in the Atlas Mountains of Morocco. Available from **Natural Actives**, it is a beige coloured volcanic clay of a smectic or swelling type and its mineral content includes silica, and magnesium, iron, calcium potassium and sodium salts. Natural Actives also supplies ingredients obtained from seaweeds and micro algae for spa treatment products.

Available from **Créations Couleurs** are the Pelavie range of silts, clays and peats. Pelavie Silts are fresh water sediments whereas Pelavie Peats come from wetlands. Both are rich in humic acids and other bioactive compounds. Pelavie Clays are bentonites with absorbent properties. They are available in different colours; black or green silts and pink, white and yellow clays and are mostly used in mask applications or body wraps and claim detoxifying, firming, regenerating and balancing properties.

Masks and body wraps may also be formulated using alginates and **Technature** supply a range of peel-off masks based on sodium alginate. The peel-off powder masks are already pre-mixed with other ingredients such as plant powders, actives and fragrance. They are mixed with a precise amount of water and blended until smooth and the paste is quickly applied to the face or body in one thick layer. It sets to a firm gel after about 10 minutes and can then easily be peeled off in one piece, leaving the skin moisturised and refreshed. The setting process absorbs heat from the skin's surface, leaving it feeling cool and refreshed.

TechNature have over 60 types off-the-shelf mask formulations which can be purchased in bulk or in sachets. The minimum order quantities are low, making them ideal for the small salon or cosmetic company. Also available from Technature are shaker masks, which are prepared in a graduated shaker for ease of use. Examples are Strawberry Smoussy, Creamy Chocolate, Fig and Orange and Argan/Rhassoul. Also saving development time and packaging problems **Codif Recherche** supplies a range of generic products, which includes body and facial masks for own labelling under the name Beauté Santé.

Exfoliation is an important part of any body and facial treatment and **A&E Connock** have a very extensive range of materials that can be used for exfoliating scrubs. They range from milled adzuki beans to vanilla seed and walnut powder. Its web site [<http://www.connock.co.uk>] has two articles by Elizabeth Connock describing the

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physical properties of these and how to determine their stability in various gels and lotions.

Many companies offer suitable materials for physical exfoliation: the Creascrub range from **Créations Couleurs** includes exfoliants based on natural or synthetic materials that vary in particle sizes and can be used in facial product as well as in body care applications. **Lipo** offer ground cocoa bean and grape seed among others and **Biotechmarine** suggests its Chondrus crispus flake. **Beraca** provides scrub particulates based on renewable resources from the Amazon. These include Euterpe oleracea pulp powder (Açaí), Carapa Guaianensis (Andiroba) and Astrocaryum murumuru seed powder.

From **DuPont** there is the Gotalene range of functional additives based on pure high quality polymers that have been specifically designed to offer mild, or medium, non-irritating and very effective exfoliating properties. Gotalene powders are available in a wide range of colours and the beads are shaped so they do not cause abrasions to the skin. In contrast to the DuPont synthetic polymers **Lessonia** exfoliants contain only 100% natural raw plant, algae and mineral ingredients. Its range of exfoliants, microzests and spa products are available in various colours and grades and there are now over twenty products which are suitable for use in organic products for personal care.

Cosmospheres from **Peletch** comprise active ingredients encapsulated in lactose and microcrystalline silica. They are available in different shapes, sizes, colours and actives and these small, soft spheres easily breakdown with shear or on rub-in. Cherry Powder [INCI: Prunus cerasus (bitter cherry) shell powder] from **Laboratories Expanscience** comes from the kernel of cherry stones from France. Also from **Laboratories Expanscience**, Avocado Powder [INCI: Persea gratissima (avocado) fruit powder] comes from ground up residues from waste avocado oil so it can claim to be sustainable and environmentally friendly.

The use of alpha hydroxy acids for exfoliation is well known and there are also enzyme treatments. These plus the treatment of cellulite, body sculpturing and microdermabrasion were described in detail in the May 2011 issue of SPC; Anti-ageing skin care - resurfacing & rejuvenation.

In the spa environment shower gels are more likely to be called body washes and contain mild and natural ingredients. Users expect rich, creamy foam and to be left with a soft silky feel to the skin. Ways of improving the foaming characteristics of surfactants were described in [**SPC February issue**]. Some additives not only provide marketing stories but also have positive benefits, such a material is Phytofoam from **Crodarom**. Phytofoam brings together an active synergy between three plants originating from Asia, Africa and Europe and all traditionally used for personal hygiene. The extracts are from Acacia concinna fruit, Balanites aegyptiaca (desert date) fruit and Gypsophila paniculata root and are rich in saponins, a family of surfactants naturally present in plants, which will help create stable foams with cleansing properties.

Incorporating oils or ingredients derived from natural resources is a way of enhancing the appeal of body washes and facial cleansers for spa use. Olive oil has connotations

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of health and well being and is the natural source for Essachem SOW [INCI: Stearyl olivate] from **Essa Technologies**. It is described as an ester wax that melts at skin temperature that can be incorporated into surfactant systems. The **B&T Company**, now part of **Hallstar**, specialises in active ingredients derived from olive oil and the range includes surfactants and active ingredients.

Generally speaking spa users prefer the use of natural ingredients so the following two materials to be added to body washes may be of special interest. Verochic [INCI: Shikimic acid] from **Sinerga** is derived from 'Star Anise' and may be used as a natural deodoriser and bacterial inhibitor. It inhibits the degradation of triglycerides into free fatty acids and thus reduces and controls body odours. From **Carrubba** a *Saccharomyces* ferment under the trade name Deoplex is a natural sugar derived deodoriser that will remove all mammalian malodours.

Spa therapists love to talk about “Detox”; Detoxium from **Lucas Meyer** consists of Nigari salt encapsulated in an Ionosome system. Nigari salt is purified from sea water and is mainly composed of natural magnesium chloride. Magnesium is a fundamental component of human metabolism and is claimed to be involved in all of the body’s natural self-cleansing and detoxification responses. Ionosome is a new system described by **Lucas Meyer** as a liposome coated with the hydrophobic polysaccharide, stearyl inulin, in a lipid membrane of biomimetic phospholipids rich in phosphatidylcholine. This protective coating helps to resist extreme conditions of pH, ionic strength and surfactants, and makes the encapsulation of vulnerable molecules possible. It also increases the diffusion of the entrapped molecules through the skin and enhances their efficacy.

All the ingredients described in this article are supplied with literature to back their supplier’s claims and many have Ecocert approval. Also some of the materials named are extensive mixtures so the INCI names in this feature are mainly restricted to active principals and those interested are advised to contact the suppliers or their local agents for more information.

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