The evolution of the clear oil trend

Karolina Krupińska, Technical Development Chemist; Lorna Radford, Technical Development Manager; Dr Dani Loughran, Director, Aston Chemicals Ltd., look at the different types of clear oil products on the market, and some of the oils and esters that fit with each application area.

The on-going demand for clear oils appears to be a trend that’s here to stay. Facial oils have been on the market for many years but started to increase in popularity in 2012, and the number of brands with facial oils in their range has been increasing ever since.

As clear oils expand into new areas, we can expect them to continue to be a driving force in personal care innovation. Clear oil products already launched onto the market cover various segments such as body care, facial care, nail care and haircare. The key to formulating clear oils is to provide an oil-based product that is transparent with no cloudiness or precipitate, and that is formulated to meet and exceed consumers’ expectations.

Application areas for clear oils

Facial and body oils

Oils for the face and body can provide a variety of skincare benefits, the most obvious of which is the creation of a protective layer on the skin that helps to prevent moisture loss. Lipophilic compounds in oils are also compatible with the lipid layers of the skin and can pass through these layers more quickly than hydrophilic or non-lipophilic compounds. This gives them the potential to enhance the delivery of active ingredients to the skin.

In addition to providing moisturisation and a dewy or “glowing” appearance, facial oils can be formulated with ingredients to provide potential free-radical protection, anti-ageing effects, prevention of irritation and decreased inflammation. UV protection can also be achieved with clear oils by using organic UV filters. However, oils can feel greasy and heavy, so careful selection and formulation of ingredients is required to give the desired performance and aesthetics.

Hair oils

Hair oils can be formulated to provide gloss, heat protection, and to repair damaged hair and to enhance the growth of new hair. Hair oils can be used as rinse-off products, applied to wet hair before styling or applied directly to dry hair.

Lip oils

Lip oils are nourishing oils that provide the high shine of a lip gloss and can be infused with pigments to give the colour of a lipstick. Caring lip oils can help to soothe and prevent dry, chapped and cracked lips. They can either be used alone or applied on top of lipstick for a deeper colour, moisturisation and shine. Lip oils can benefit from containing soothing and anti-inflammatory ingredients such as supercritical CO2 berry seed extracts rich in essential unsaturated fatty acids.

Nail and cuticle oils

Nail and cuticle oils act as emollients to make nails more flexible, prevent them from becoming dry and help to protect the sensitive skin around nails. Clear nail and cuticle oils can include film-formers to prolong the effects of the product, nourishing butters such as shea, esters and oils to nourish the nail and cuticle, and ingredients to provide gloss to the nail.

Ingredients for clear oils

A wide range of synthetic and natural oils and esters can be used in cosmetic oils. Mineral oils are relatively low cost, occlusive, clear, colourless and odourless, but are not generally attractive to consumers and do not have any benefits in addition to their occlusive properties.

Natural oils can be used for their specific provenance, stories, functionality, colour and benefits to skin and hair. Much can also be made of the sustainability of vegetable oils versus fossil fuel-derived mineral oils, and of the ethical business models behind many natural oils, such as AAK’s “Kolo Nafaso” project to support women’s shea-gathering collectives in West Africa.

There is an enormous variety of natural and naturally derived oils and esters that can be used to provide clear, aesthetically pleasing oils with additional benefits for skin and hair and a wide range of effects. It is possible to achieve different colours, viscosity, skin-feel, odours and bioactivity by using combinations of different natural oils and esters.

Natural alternatives to mineral oils

Vegetable-derived alternatives to mineral oils tend to be priced more highly, and have stronger, generally more yellow, colours. Relatively low cost mineral oil alternatives include Lipex Bassol C (Olus Oil) from AAK, an Ecocert approved, clear emollient with high oxidative stability which is used as a base oil for clear liquid formulations. Other frequently used natural oils include canola (particularly popular in Nordic countries), sweet almond, grapeseed, macadamia and other nut oils.

Supercritical carbon dioxide extraction

Supercritical CO2 extraction is a useful technique for producing oils. The low temperature and the absence of oxygen used results in lipophilic plant extracts that contain a high content of bioactive compounds with antioxidant activity. This technique removes any risk of oxidation damage or thermal degradation of

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polyunsaturated fatty acids in the oil, prevents polymerization of glycerides, does not allow the formation of trans-fatty acids and produces a final oil with high bioavailability of fatty acids and higher purity and stability6. Research on supercritical CO2 strawberry seed extract shows that 0.5-2% of the oil can provide moisturising and skin softening benefits in rinse-off products without significantly affecting their cleansing and foaming properties7. Aromtech’s supercritical CO2 strawberry seed extract, SUMMER VITA Strawberry Seed Oil, contains antioxidants and nutritious linoleic, alpha-linolenic and oleic acid fatty acids in a concentrated form. It is an ideal ingredient for nourishing and invigorating all types of skin8. Clear oils from novel sources

Creating clear oils using ingredients that are not usually available in a clear format is a novel and effective way to engage consumers and provide additional skincare benefits. Shea butter is well known as a rich, thick, opaque butter with great moisturisation and skin nourishing activities. However AAK have used their processing expertise to produce Lipex SheaClear (Butyrospermum Parkii (Shea) Butter), a clear liquid Shea Oil containing 6-8% functional unsaponifiables. SheaClear is easy to formulate with and can be used in cold processes at levels from 1-80%11.

By using the right oils and esters, formulators can develop clear oils that are natural, aesthetically pleasing and offer a wide range of benefits for skin, nails and hair. Careful formulating can also allow products to be differentiated by colour, texture, skin-feel, odour and viscosity – to give the consumer the efficacy, functionality and pleasurable experience they demand from personal care brands.

Aston Chemicals Ltd, Stand U160

Bibliography

11. Aston Chemicals, Lipex SheaClear product page,