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WORKING WITH NATURAL AROMATIC MATERIALS

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Opoponax & Styrax Face 'The Chop' from IFRA.

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IFRA's Information Letter 815.

Opoponax.

The letter identified above indicates that opoponax (which they claim botanically derives from 'Commiphora Erythraea var. glabrescens Engler' – we have reproduced IFRA's incorrect botanical formatting) does not have robust enough data to allow application of Quantitative Risk Assessment (QRA) methodology, and that there is a need for more 'up to date' sensitization data. IFRA claims it cannot support the required studies financially, and without these studies there is a high risk that IFRA will simply prohibit the material. Similarly for styrax (which they claim, with only slightly more botanical accuracy, is obtained from exudations of 'Liquidambar Styraciflua L. var. macrophylla or Liquidambar Orientalis Mill.'). It is not our fault, however, that IFRA have adopted a policy for sensitiser potency estimation (i.e. the QRA methodology) which it seemingly can't afford, and which both the SCCP & Cropwatch have widely criticised as being deeply flawed in practice (see *Cropwatch Newsletter* at <http://www.cropwatch.org/newslet13.pdf>).

Bear with us, whilst we revisit the botany. Mabberley (1998), Langenham (2003), Gachathi (1997) and others, describe opoponax qualities deriving not only from *Commiphora erythraea* Engl. var. *glabrescens* Engl. growing in Somalia, Kenya, E. Ethiopia, and S. Arabia, but also from other species such *C. guidottii* (Chiov) from S. Somalia & Ethiopia, which Mabberley, the ANLAP data-base and Cropwatch regard as the primary source of opoponax. Other species used as a source of opoponax include *C. kataf* (Forssk.) Engl., *C. holtziana* Engl. spp. *holtziana* & *C. pseudopaoli* JB Gillet. Cropwatch previously briefly reviewed the chemistry of the essential oils from these *Commiphora* species at <http://www.cropwatch.org/cropwatch11.htm>. Let's also remember that the SCCP Opinion on opoponax oil (Sensitisation only) SCCP/0871/05 adopted 15th March 2005 can be found at: http://europa.eu.int/comm/health/ph_risk/committees/04_sccp/docs/sccp_o_025b.pdf. Here the SCCP committee concluded that "The provided data do indicate 10 that *Commiphora Erythraea Glabrescens* has an allergenic potential."

Cropwatch, you might remember, declared the SCCP Opinion on opoponax sensitization scientifically invalid on a number of points, not the least that the RIFM evidence cited failed to accurately identify the botanical & geographic origins of opoponax qualities used in the sensitivity protocol testing, and also failed to establish their authenticity (i.e. absence of adulteration), and dismissed the remainder of the provided evidence too flimsy to merit serious consideration. IFRA's latest admission in its' Information Letter 815 suggests that Cropwatch's independent judgment of the SCCP Opinion SCCP/0871/05 was indeed correct.

Opoponax oil is a useful material that the perfumery art cannot afford to lose. Freshly dipped on a perfumer's strip it appears sweet, oily, balsamic and almost effervescent in character, and is used in oriental accords, and to reinforce opoponax resinoids. It also finds use to freshen top notes in apple accords and to give a sweet lift to chypre fragrances. Whereas opoponax oil is primarily a topnote material, the sweeter, buttery, toffee-like and balsamic opoponax absolute is used in oriental-type fragrances as part of the sweet balsamic base notes. Under the existing IFRA Standard, opoponax extracts and distillates prepared from the gum must not exceed 0.6% concentration in product.

Styrax.

Styrax also is apparently to be potentially abandoned by IFRA on QRA testing cost grounds, & is another aroma ingredient with an important place in the art of perfumery, being derived from a number of *Liquidambar* spp. including *Liquidambar styraciflua* L.; *L. orientalis* var. *orientalis*; *L. orientalis* var. *integriloba* & *L. formosana* H. Styrax oleoresin is produced either by boiling the *Liquidambar* tree bark in water, and collecting the oleoresin which collects in the bottom of the vessel, or by tapping the trees, where the resin is usually collected in cans. The former type of crude gum styrax is especially used as a fumigant (purifying incense). Styrax gum oleoresins have been banned IFRA since 1977; only extracts & distillates are permitted under the existing IFRA Standard; under this guideline the final concentration in product must not exceed 0.6%. Solvent extracted styrax resinoid has a complex odour comprising sweet, balsamic & fresh elements and possesses a great deal of lift & radiance. It has been used in perfumery as a fixative in oriental fragrances, and in chypres. It is also useful in constructing hyacinth and leather notes, and for powdery accords, with vanillin, heliotropin etc.

As Cropwatch points out in its latest *Updated List of Threatened Aromatic Plants Used in the Aroma & Cosmetic Industries v1.09 Dec. 2008*, styrax qualities used to be heavily used as fragrance ingredients, but IFRA requirements to produce a skin-neutral product devoid of free cinnamic acid, have resulted in chemically treated ingredients with less useful attractive odour characteristics, and so its deployment in fragrances has plummeted. So not only has IFRA been instrumental in the decline of styrax usage in perfumery, it is now apparently performing the last rites over a fatally disabled ingredient. Although commercially available from several producing areas, the "American" type of styrax produced from *Liquidambar styraciflua* L., is mainly exported from Honduras & Guatemala,

and the 'Asian' type styrax from *L. orientalis* Mill. From Turkey, and it is these two types effectively dominate the market, the US always favouring the Honduras material. However with worries that the *Liquidambar orientalis* forest in the Eastern Mediterranean (i.e. the private & State owned forest centered in S.E. Anatolia in Turkey) is now greatly reduced through woodfelling and resin extraction, to the extent that Topal *et al.* 2008 say the species is facing extinction). Cropwatch can therefore no longer support the use of commodities from *Liquidambar orientalis* in perfumery. The inevitable reduction in availability of Asian styrax as the Turkish forests disappear will probably result in the increased extraction of other styrax sources. Just as long as they leave the styrax trees alone in the wonderful Valley of the Butterflies on the island of Rhodes,...

References.

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