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WORKING WITH NATURAL AROMATIC MATERIALS

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Summary Update on Tagetes Oil & Extracts.

Taken from "Safety Issues 2009" by Tony Burfield Pt II (in press) *Aromatherapy Times*
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Tagetes oil phototoxicity under SCCP Opinion 0869/05.

The SCCP Opinion noted above concluded that. "*Tagetes erecta*, *Tagetes minuta* and *Tagetes patula* extracts and oils should not form part of cosmetic products," as no safe usage level could be determined. This conclusion is at variance with the 2001 IFRA Standard of 0.01% tagetes oil max. concentration in finished cosmetic products not washed off the skin. After a wide literature search, Cropwatch had previously concluded that there are no instances of photo-sensitivity from tagetes oil in perfumes, or from dermal plant-contact involving with *Tagetes* spp. reported in the literature (see <http://www.cropwatch.org/tageteclarify.htm>) and that IFRA had proposed a Standard for a problem that doesn't actually exist. However there is some evidence that a minor component of some Tagete absolutes & essential oils, α -terthienyl, is photo-toxic & sensitizing, and Cropwatch is engaged in a project to produce α -terthienyl-free tagetes oil. If this proves successful, it should provide a way out of the situation. There is aromatherapy interest here, since a Cropwatch appeal for information in 2007 on tagetes use in aromatherapy revealed the use of neat tagetes oil, or tagetes oil mixed with tea tree oil by therapists for treatment of fungal infections and warts. No reports of adverse effects were described by correspondents, although the number of reports and manner of information-gathering was not robust enough for any scientific conclusions to be drawn.

Meanwhile RIFM (2008) issued test results for *Tagetes* qualities using the artificial EpiDerm human skin test model, in the presence & absence of UV light. Results indicated a potential for phototoxic effects for *Tagetes minuta* absolute (South Africa) and *Tagetes patula* absolute (Egypt), but no phototoxic potential for *Tagetes minuta* oil (Egypt) and *Tagetes minuta* oil (South Africa). REXPAN decided that the *in vitro* tests were not robust enough to determine any NOEL's, and subsequently RIFM have contracted further studies out to two private laboratories for *in vivo* work on animals (hairless mice), which was due to be published in April 2008. No psoralen content was found in any of the samples in contrast to the RIFM information previously given for *Tagetes* oil. It appears that

toxicologists have been working very hard to devise tests to prove any photo-toxic properties for Tagetes qualities exist at all, which, because of their powerful effects, are only used in minutest concentrations in fragrances & flavourings anyway. Cropwatch can think of better ways to spend research money.