



## **DIRECTIVE 98/8/EC**

### **BIOCIDE MINOR USES: A POSITION PAPER with PARTICULAR REFERENCE to SEMIOCHEMICALS mainly PHEROMONES and other ATTRACTANTS -**

Most pest **control** products using pheromones will fall into the “minor” uses category. However, whether the use is minor or not, all regulatory authorities should overtly accept that the **maximum** registration requirements applicable are given in the “OECD Series on Pesticides Number 12: Guidance for Registration Requirements for Pheromones and Other Semiochemicals Used for Arthropod Pest Control”<sup>†</sup>. This document, which is applicable to agricultural and biocide pest control, was prepared and agreed by the regulators in close co-operation with industry and it is logical and indeed essential that the regulatory fraternity publicly recognise the universal applicability of these requirements.

Of course, there will be many occasions when the appropriate regulatory requirements for pheromones and food based semiochemicals will be a much-reduced subset of the OECD document, for example, when

- (i) minute (milligram) quantities of a benign pheromone active substance are used in the product,
- (ii) the active substance functions via a non-toxic mode, e.g. mass trapping, mating disruption or attract & kill (where the lethality of the conventional insecticide is unaffected by the use of the attractant active substance; indeed the selectivity of the conventional insecticide is enhanced)
- (iii) non-food crops are being protected
- (iv) the active substance is a permitted food ingredient or is a component of food

By definition, pheromones are “species-specific” and therefore only affect a given pest, often in connection with a particular crop or product and almost inevitably fall into the “Minor Uses” category. For example, control of *Tineola bisselliella* the Clothes Moth, may be affected by “Mass Trapping” using minute quantities (1 milligram) of the pheromones trans-2-octadecenal + trans-2,cis-13-octadecadienal. This pheromone is released over period of 6 – 8 weeks and therefore the system releases on average less than 30 micrograms of pheromone **per day**. Given this information, coupled with the fact that many structurally similar aldehydes are permitted food ingredients (flavours/fragrances) for example, from acetaldehyde to dodecyl aldehyde and trans-2-pentenal to trans,trans-2,4-decadienal; it is therefore over-zealous in the extreme to treat such pheromones as if they were toxic killing agents.

Clearly, as in the above example where such minuscule quantities of aldehyde “biocidal active substances” are used, regulation should be the minimum possible.

It would also be helpful and realistic for biocidal products (and plant protection products) legislation to recognise the various modes of action of pheromones. Pheromones are not just attractants and they are certainly not pesticides, i.e. they are not in themselves lethal and they function in a completely harmless way; a (non-exhaustive) list of the modes of action of pheromones is given below:

- (a) aggregation,
- (b) trail following,
- (c) calling signal,
- (d) oviposition marker,
- (e) alarm
- (f) mating stimulation
- (g) female fecundity control
- (h) mating disruption
- (i) Epideictic (spacing)

None of the above effects are toxic in nature; (a), (b) & (c) are attractive but none of the other modes of operation function by attraction indeed some actually interfere with the normal attractive mechanism of insects using pheromones and others, although not all, are repellent.

We have to move away **from** the mind-set of treating all pest control agents as guilty until proven innocent **to** that of making a real cost/benefit analysis in terms of the effect on individuals coming into contact with the product/active substances and the overall effect on the environment, with the benefit achieved. The most logical product area to start this re-alignment is semiochemicals in general and, specifically, pheromones/food-based attractants. This is an easy area to manage because these pheromone active substances are discrete chemicals with known/predictable properties and they are natural in the sense of not being “exotic”. If the pest is present, then so will the pheromone. The cost benefit analysis can be carried out generically using relatively broad categories of substances, for example lepidopteran pheromones would be an ideal class to select initially.

It is unfortunate that the Notification process currently appears to ignore the small amount of benign active substance\* contained in a formulated pheromone-based product that will have to undergo the registration process. Notification, unlike registration, does not take into account the final application rate and presumably will be oblivious of whether the formulation dispenses 1 mg or 1 tonne of active substance per unit of protected area.

\* The small amount of active substance that would be present in the formulation should be contrasted to the greater quantities arising from a natural infestation, please see accompanying document, “Calculations of Quantities of Pheromone Naturally Occurring in the Environment Compared to Artificially Released Pheromone”.

The problems of minor uses of pest control agents is better recognised in agriculture, for example the recent paper “Minor Crops Face Major Challenges” (pdf copy attached) which extols the US minor crops programme (IR-4) to facilitate registration of such products. However, there are similar concerns in the biocides area, not only with the loss of existing active substances used in minor areas, but also the obstacles

to introducing new biorational products. It is noteworthy that the USDA IR-4 programme extends to US Government funding of safety and efficacy tests to support Minor Use products which would otherwise not be developed because of their niche, i.e. Minor Use status. The IBMA therefore proposes that the EU examine the possibility of setting up a Centre of Excellence to be responsible for the co-ordination, facilitation and championing of Minor Use product registration/development.

The EU recently canvassed opinion in respect of the sustainable use of pesticides, viz “Towards a Thematic Strategy on the Sustainable Use of Pesticides”, copy attached. Although that document concentrated on agricultural issues, biocides were also discussed; our response to that document entitled “Thematic Response 1” is also attached.

If the facilitation of the registration of biorational pest control systems means anything, it must mean “appropriate requirements, low cost and no delay”.

Once the Commission Biocides Minor Uses Group has had an opportunity to review the comments and proposals in this document, it may be appropriate to meet with the IBMA to explore how to reduce the impact of the Directive on minor use/biorational biocides.

† [http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-jm-mono\(2001\)12](http://www.oilis.oecd.org/oilis/2001doc.nsf/LinkTo/env-jm-mono(2001)12)

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