

TOBACCO AND SMOKE CHEMISTRY

In the general field of consumer products, there tend to be two starting points for defining what is allowed or permitted in a product -

lists which state what is allowed - the permitted list

lists stating what is not allowed - the negative list

With tobacco goods, the former operates in the U.K. whilst a combined approach is seen in Germany.

There is a third approach which may seldom appear in legislation, but is equally important and could be more so in any legal dispute over products - what could it reasonably be expected to contain?

Reasonableness is difficult to define with confidence, but we can suggest that -

1. Tobacco products are made substantially or mainly from tobacco (i.e. the dried parts of the plant *Nicotiana tabacum*), or are derived from the tobacco when the product comprises tobacco etc. in a more permanent holder which is not directly consumed.
2. Contaminating materials are generally excluded both in terms of the primary parts of the product - tobacco, paper, filter and of the additives.

In legislation on additives, whether for food or tobacco, and even public expectation about additives, substances natural or nature-identical with those of the product are seen as admissible/acceptable whereas artificial attract suspicion. It becomes evident that the ability to support the former designation is of increasing significance, and not just in terms of West German and French legislation.

To move to the more complex subject of tobacco treatments, there are no generally agreed procedures for defining what is 'reasonable' or how that evidence can be obtained.

From our own discussions with the U.K. ISC on DEER it is obviously recognised that some types of additive must be evaluated with regard to effects on combustion, but no prior standard to be aimed for. Substantial uses of novel additives or treatments then require an *ad hoc* approach of trial and error to persuade regulators to agree their use and may equally lead to excessive caution on their part over their introduction. Examples of topics currently known to us where this is likely to be important include:-

1. Use of DEER recon at high levels (e.g. >10%)
2. Development of ammonia treated tobaccos or comparable systems
3. Any GREENDOT concept with gross or individual additive levels above current permitted levels - in U.K. 15% maximum

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BATCo document for Province of British Columbia 19 April 1999

By themselves, smoke scans are seldom adequate and limited lists of noxae, whilst useful, cannot be expected to meet the need.

There is a clear need for a method/s for defining the changes brought about as a result of such treatments in order to allow good comparative evidence to be available to meet the concerns of external regulators. Such a methodology must be capable of standing expert independent and even hostile scrutiny in terms of the standards and approach used.

Proposal

Three topics can be defined in which there are both existing and prospective needs for the development of specific methods in tobacco and smoke chemistry. These are:

1. For support of flavour usage, to demonstrate that substances are nature-identic
2. For advanced reconstituted tobaccos (e.g. DEER, ammoniated tobaccos) to demonstrate tobacco-natural composition as far as possible
3. For advanced products (e.g. GREENDOT) to show that smoke composition in detail is not untoward or of concern relative to that of standard products.

It is envisaged that ultimately individual cases of investigation might be supported by their own particular projects. What is needed at present is research to define the methods and standards which can be agreed by the group to be both realistic and supportable. The requirement is to combine the relevant professional expertise with hardware and appropriate projects to enable this base to be firmly established.

There is some existing effort underway at Southampton in support of GREENDOT. It is proposed that it is both necessary and appropriate to develop this area at Southampton as part of the group-funded research. The reasons are:

- (a) Availability of expertise
- (b) Availability of hardware
- (c) Group-wide access
- (d) Current need perceived for several R&DC-based projects, specifically GREENDOT, DEER and related extrusion-based products in order to proceed to commercial development and obtain external regulatory agreement

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