CHAPTER 6 – ADVICE ON INGREDIENTS IN NICOTINE-CONTAINING LIQUIDS IN ELECTRONIC CIGARETTES AND REFILL CONTAINERS

INTRODUCTION

Part 6 of the Tobacco and Related Products Regulations 2016 (TRPR) places an obligation on the manufacturers and importers of electronic cigarettes to submit a notification to the competent authority of such products they intend to market.

Regulation 31 (3)b & c requires the notification to include a list of all ingredients in the product and toxicological data regarding the product’s ingredients and emissions.

Great Britain will remain in alignment with the common format set out within Commission Implementing Decision (EU) 2015/2183 of 24 November 2015 establishing a common format for the notification of electronic cigarettes and refill containers. The submission format is set out in the annex to that Decision and the information required on ingredients is set out in section 4 of the annex.

The TRPR places a requirement on producers to ensure that nicotine-containing liquid in electronic cigarettes and refill containers does not contain additives listed in Regulation 16 of the TRPR and, except for nicotine, only includes ingredients that do not pose a risk to human health in heated or unheated form.

Regulation 16) states the following:

No person may produce or supply a tobacco product containing:

1 (a) vitamins or other additives that create the impression that a tobacco product has a health benefit or presents reduced health risks;

(b) caffeine or taurine or other additives and stimulant compounds that are associated with energy and vitality;

(c) additives having colouring properties for emissions;

(d) [in the case of tobacco products for smoking, additives that facilitate inhalation or nicotine uptake;] and

2 (a) additives that have CMR properties in unburnt form.

(b) additives in quantities that increase, to a significant or measurable degree, the toxic or addictive effect or CMR properties of the product when it is consumed.

**WHAT IS REQUIRED**

The TRPR requires information about each ingredient in notifiable products to be included within the submission. The information should include identifying details, the quantity and function of the ingredient and further information about its classification and various aspects of its toxicity. Details of all available toxicological studies on the ingredient in unheated and heated form and emissions should be submitted.

The notifier should consider carefully the implications for their product of the toxicological data for the safety of each ingredient and its associated emissions as part of their responsibilities under the TRPR and general consumer safety legislation to ensure that products supplied to consumers are safe. Submitters must include in their notification a declaration that they bear full responsibility for the quality and safety of the product when placed on the market and used under normal or reasonably foreseeable conditions.

The notifier should make their own assessment of the safety of each ingredient in their product and the need to control for levels of substances such as formaldehyde that are not present as an ingredient. Although the requirements for the provision of toxicology data for ingredients remain in alignment with the common European format, the mandatory fields are different. When using the MHRA submission portal, uploaded documents are now mandatory for each aspect of toxicology data (CMR, cardiopulmonary etc).

Whilst there might not be relevant data for each field, the system still requires an upload. If there are no available data for one aspect of the toxicology requirements, then details of searches performed (including details of the search terms and databases used) can be uploaded. Searches should be wide ranging, looking for data from multiple sources. Information from published studies which showed no harmful effect is valid.

Where no toxicity studies or information can be found for any of the required aspects, the suitability of the ingredient for use in a product should be questioned. Notifiers are required to ensure their products can be considered safe and safety cannot be assumed in the absence of available data. Notifiers should carry out their own safety assessment where no information is available. Toxicology uploads with vague statements about lack of data/studies and no evidence of assessment will not be acceptable, nor will placeholder documents.

Notifiers unsure how to meet this requirement should seek specialist advice or review and assess their products using the [Framework for risk assessment of flavouring compounds in electronic nicotine (and non-nicotine) delivery systems (E(N)NDS – e-cigarettes)](https://cot.food.gov.uk/sites/default/files/2020-08/frameworkforriskassessingflavourings_0_madeaccessibleinadobepro_to%20be%20uploaded_.pdf) published by the Committee on Toxicology.

SUBSTANCES NOT PERMITTED AS INGREDIENTS IN E-LIQUIDS

A list of substances that should not be included as ingredients in electronic cigarettes and refill containers is set out below. This list is not exhaustive and may be added to in future as more information becomes available. For the avoidance of doubt, the fact that an ingredient does not appear in this list does not mean that it is safe for use in e-liquids.

From the TRPR:

• any ingredient that poses a risk to human health in heated or unheated form

• vitamins or other additives that create the impression that a tobacco product has a health benefit or presents reduced health risks;

• caffeine or taurine or other additives and stimulant compounds that are associated with energy and vitality;

• additives having colouring properties for emissions;

• additives that have carcinogenic, mutagenic or reprotoxic (CMR) properties in unburnt form.

From other standards:

• Substances classified as carcinogenic, mutagenic or reprotoxic (CMR categories 1 and 2)

• Substances classified with specific target organ toxicity for the respiratory tract (STOT category 1)

• Respiratory sensitizers

• Vitamins used as food supplements

• Stimulant additives such as caffeine or taurine

• Diacetyl

• Pentane 2,3 dione

• Diethylene glycol

• Ethylene glycol

• Formaldehyde\*

• Acetaldehyde\*

• Acrolein\*

• Metals, including cadmium, chromium, iron, lead, mercury and nickel

• Preservatives liable to release formaldehyde.

\*See also requirements for testing these substances in the emissions guidance.

See https://www.gov.uk/guidance/product-liability-and-safety-law

Definitions of these terms and listings of hazardous substances can be found in Regulation (EC) No. 1272/2008 (as amended) on classification, labelling and packaging of substances and mixtures at http://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX%3A02008R1272-20150601.

FLAVOURINGS

Below the level of 0.1% of the final product formulation, MHRA will allow ingredients to be considered as confidential in the notification. As such, ingredients present at a level below 0.1% of the final formulation can now be described collectively in the notification by an umbrella term such as ‘strawberry flavouring’.

In these cases, the notifier must gain the following from the ingredient supplier:

(i) adequate assurance of quality and safety to allow the notifier to accept full responsibility for the product under regulation 31(3)(g) of the TRPR and

(ii) an assurance that the ingredient supplier would disclose the composition to the competent authority in confidence the event of a safety problem with the product.

Notifiers must satisfy themselves as to the safety and quality of their product but may wish to seek assurances that:

a) the ingredient complies with applicable EU food flavouring legislation (Regulation EC 1334/2008).

b) the flavouring substances contained within the flavour are listed in the EU list of flavouring substances as defined by Regulation EU 872/2012.

c) The ingredient formulation does not include any substance banned under Regulation 16 of the TRPR.

The notifier and flavour supplier should in particular consider the safety of the flavour ingredients when used in an e-cigarette. See also the advice above about toxicological studies. Where details of ingredients present at levels below 0.1% are not submitted with the notification, toxicological data on each ingredient must be provided if requested by the competent authority.

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