



### Statement regarding Elemental Analysis results for Blueberry and American Red eLiquid Flavours for E-Burn

Hall Analytical Laboratories conducted elemental analysis on the following eliquid flavours and found trace amounts of the elements aluminium and iron:

#### American Red (18 mg/mL):

MEASURED ELEMENT			
NAME	CAS	DETECTED QUANTITY (µg/puff)	INHALATION PDE (µg/day)
Aluminium (Al)	7429-90-5	0.0203	82.5

#### Blueberry (18 mg/mL):

MEASURED ELEMENT			
NAME	CAS	DETECTED QUANTITY (µg/puff)	INHALATION PDE (µg/day)
Aluminium (Al)	7429-90-5	0.0246	82.5
Iron (Fe)	7439-89-6	0.0028	82.5

Aluminium ranges third in abundance of the chemical elements in the lithosphere. It is an amphoteric element without any established biological function and it is well tolerated by plants and animals<sup>1</sup>. Iron is one of the 16 essential elements for plant growth and reproduction and is one of the most abundant elements on the planet. It is a universal nutritional requirement for virtually all organisms<sup>2</sup>. Both aluminium and iron are also common elements used in the manufacture of electronic cigarette coils.

The detected values are significantly below the pharmaceutical drug permitted daily exposure (PDE) threshold levels detailed in the “**Q3D Elemental Impurities Guidance for Industry**” which was developed within the Quality Expert Working Group of the International Conference of Harmonisation of Technical Requirements for Registration of Pharmaceuticals for Human Use (ICH).

User studies have indicated that vapers take on average 300 puffs of their electronic cigarette per day. To put the elemental analysis results into perspective, in order to breach the PDE for aluminium, a user would need to take 4,064 puffs in a day of the American Red eLiquid product based on the detected quantity and 3,354 puffs in a day of the Blueberry eLiquid product. In order to breach the PDE for iron, a user would need to take 29,464 puffs of the Blueberry eLiquid product.

1 Poschenrieder C, Barcelo, J, 2013, Aluminum in Plants, Encyclopedia of Metalloproteins, pp 34-38

2 Hochmuth G, 2014, Iron (Fe) Nutrition of Plants, This document is SL353, one of a series of the Soil and Water Science Department, UF/IFAS Extension





Both products (liquids and emissions) have undergone extensive and comprehensive analytical testing and have been approved by the MHRA under the EU's Tobacco Products Directive (2014) and the UK's Tobacco and Related Products Regulations (2016). They also both contain no ingredients above health criteria values (HCVs) as determined by [Bibra Toxicology Advice and Consulting](#).

For further information or if you have any questions relevant to the above please contact me via +44 (0) 1733 352 553 or [jaydenhalliday@elscience.co.uk](mailto:jaydenhalliday@elscience.co.uk).

Sincerely,

A handwritten signature in black ink that reads "Jaydene Halliday".

**Dr Jaydene Halliday BSc (Hons) MRSC**  
Chief Scientific Officer  
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