

From: Karson [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Sent: Tuesday, 18 April 2023 3:02 PM
To: Rebecca [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Cc: Mark [redacted] [@health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Mark [redacted] [@health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Colleen [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Jim [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Elizabeth [redacted] [@health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Subject: Re: Health and Environment Committee - testing of smoking products

Hi Rebecca,

Thanks for the update. That sounds like a good plan.

We weren't planning to draft the brief since the Committee's request relates as much to the vaping inquiry as to [redacted] and we probably wouldn't add much value and may just slow you down.

That said, we are happy to help in any way that we can. If you'd like us to draft or review the brief we are more than happy to do so. Please let us know if there's anything we can do to support you.

Best,
Karson

Karson [redacted]
 Director, Legislative Policy Unit
 Queensland Health
 (07) 3708 5581
[health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)

From: Rebecca [redacted] [@health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Sent: Tuesday, April 18, 2023 11:35 am
To: Karson [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Cc: Mark [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Mark [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Colleen [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Jim [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>; Elizabeth [redacted] [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)>
Subject: RE: Health and Environment Committee - testing of smoking products

Hello Karson,

Just to provide an update on this request from the HEC for [redacted] and e-cigarette analysis.

Sample e-cigarettes and [redacted] have been secured and are currently with the lab for analysis.

Given the short timeframes and public holiday next week I spoke with Lou at CLLO and we negotiated an extension with the secretary of the HEC of a response to the Health and Environment Committee no later than 10am Friday 28 April.

Our plan to achieve this time-frame is as follows

- PSB receive the analysis report by end of Thursday 20 April

- PSB/HProt make any additions/context required for report on Friday 21 April – cleared by PSB.
- Final report, DG covering letter and Brief provided for ADG clearance by 10am Monday 24 April
- Tuesday 25 April is a public holiday.
- Cleared package provided to DG for approval by 10am Wednesday 26 April.
- Cleared package provided by CLLO to HEC by 10am Friday 28 April.

Can I ask if LPU will prepare the Brief and letter, consistent with other HEC requests? Or if you would like us to prepare?

Happy to discuss.

Best Regards
Rebecca



Rebecca s.73 - Irrelevant information
Advanced Health Promotion Officer
 Prevention Strategy Branch | Queensland Health
 Working hours Monday to Friday

P s.73 - Irrelevant information
E s.73 - Irrelevant information @health.qld.gov.au
W health.qld.gov.au
A [15 Butterfield Street, Herston](#)

From: CLLO s.73 - Irrelevant information [@health.qld.gov.au](mailto:CLLO@health.qld.gov.au)>
Sent: Wednesday, 5 April 2023 10:38 AM
To: Karson s.73 - Irrelevant information [health.qld.gov.au](mailto:Karson@health.qld.gov.au)>
Cc: Rebecca s.73 - Irrelevant information [health.qld.gov.au](mailto:Rebecca@health.qld.gov.au)>; Mark s.73 - Irrelevant information [@health.qld.gov.au](mailto:Mark@health.qld.gov.au)>
Subject: RE: Health and Environment Committee - testing of smoking products

Hi Karson

FYI – apologies – as you are technically the contact person on the Bill I probably should of cced you on this so you had line of sight!

Cheers
Lou



Louise s.73 - Irrelevant information (she/her)
a/Manager Cabinet and Parliamentary Services
 Cabinet and Parliamentary Services Strategy, Policy and Reform Division | Queensland Health

P s.73 - Irrelevant information
E s.73 - Irrelevant information [health.qld.gov.au](mailto:Louise@health.qld.gov.au)
W health.qld.gov.au
A [Lvl 37 1 William St Brisbane](#)



DOH DISCLOSURE LOG

**CLOSING
THE GAP**Improving health equity
for First Nations Queenslanders

Queensland Health acknowledges the Traditional Custodians of the land across Queensland, and pays respect to First Nations Elders past, present and future.

From: CLLO**Sent:** Wednesday, 5 April 2023 9:21 AM**To:** Mark ^{s.73 - Irrelevant information} [health.qld.gov.au](mailto:mark@health.qld.gov.au)>**Cc:** Rebecca ^{s.73 - Irrelevant information} [@health.qld.gov.au](mailto:rebecca@health.qld.gov.au)>**Subject:** Health and Environment Committee - testing of smoking products**Importance:** High

Morning Mark

Hope you are well!

Late yesterday afternoon CAPS receiving further correspondence from the HEC Chair in relation to testing of chemical composition of smoking products, please see attached, where the committee is seeking assistance in analysis of e-cigarette liquids and ^{s.73 - Irrelevant information}.

Could I please seek your advice and assistance on the attached request as to the following:

1. E-cig liquids
 - a. Do you already have access to this type of data being requested?
 - b. If not, is Preventative Health able to liaise with QPHaSS as to whether this request can be accommodated and if possible if information can be obtained as to the correct procedures and costs

2. **s.73 - Irrelevant information**

Is QPS able to provide this information to QH to assist with the committee deliberations?

Noting that the requested timeframe for a response is **26 April 2023, however I feel this deadlines is based on the assumption the information and analysis can be completed**, and the number of scenarios that might be relevant could I please seek, as a matter of urgency, the expected approach to the request as we will then need to discuss timeframes etc.

If easier, and as always, happy to chat via the phone to talk through the options and response times etc.

Cheers

Lou

DOH DISCLOSURE LOG



Louise s.73 - Irrelevant information (she/her)

a/Manager Cabinet and Parliamentary Services

Cabinet and Parliamentary Services Strategy, Policy and Reform Division | Queensland Health

P s.73 - Irrelevant information
E s.73 - Irrelevant information health.qld.gov.au
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A [Lvl 37 1 William St Brisbane](#)



Queensland Health acknowledges the Traditional Custodians of the land across Queensland, and pays respect to First Nations Elders past, present and future.

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DOH DISCLOSURE LOG

Assessment of e-liquid composition

For the Queensland Parliament - Health & Environment Committee

1. Purpose

To assess the chemical composition of e-liquids that are currently in vaping products available in Queensland.

2. Scope

To analyse the chemical composition of seventeen (17) e-liquid samples currently available in the Queensland vape market.

Seven (7) e-liquid samples were sourced from Health & Environment Committee (the Committee) and ten (10) samples were sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).

3. Background

E-cigarette products marketed and sold in Queensland are not assessed in relation to their quality or safety.

Public health concerns have been raised by the community and by health practitioners regarding the risks of vaping products and their aerosols. In addition to nicotine, liquids used in electronic cigarettes also contain other chemical additives which have the potential to pose serious health risks to users. E-liquids are reported to contain other chemical additives such as flavours, solvents, preservatives, and contaminants that may be harmful to health when inhaled as part of vaping.

4. Laboratory Analysis

The 17 e-liquid samples were analysed by Queensland Health Forensic and Scientific Services (QH FSS) using the available laboratory methods. Qualitative or quantitative analyses were undertaken for nicotine, prohibited substances under the Therapeutic Goods Administration's - Therapeutic Goods (Standard for Nicotine Vaping Products) (TGO 110) Order 2021 (TGO 110), and other substances of concern such as carbonyl compounds, volatile organic compounds (VOCs), pesticides/fungicides/herbicides, and heavy metals.

The detection limit for the analytes was determined by QHFSS based on its current analytical capability. This may vary from the compliance limits established for the substances.

5. Results and Discussion

The 17 samples were analyzed for nicotine and other substances of concern such as carbonyl compounds, VOCs, pesticides, and heavy metals, and eight substances that are prohibited ingredients in vapes under the TGO 110.

E-liquids are also known to contain other chemical additives (flavourings and preservatives) and contaminants that have the potential to pose a serious health risk to vape users. These chemical additives and contaminants typically include various carbonyl compounds, VOCs, and heavy metals.

The results of the 17 samples are discussed below.

5.1 Nicotine

Nicotine was found in all e-liquid samples, as shown in Table 1. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg to trace levels.

Under Queensland's *Medicines and Poisons Act 2019*, vaping devices containing nicotine may only be obtained at a pharmacy under the prescription of a medical practitioner. Such devices may contain up to 100 mg/ml (100,000 mg/kg) of nicotine. Vaping products which contain nicotine and are sourced from other retailers are illegal under the *Medicines and Poisons Act 2019*. As these samples were NOT obtained through a pharmacy via a prescription, **nicotine should not have been present in any samples.**

The capacity of e-cigarettes to deliver nicotine and other harmful chemicals into the body varies widely, ranging from very low to levels like that of cigarettes, depending on product characteristics, user inhalation behaviour, and nicotine solution concentration.

The health risks of nicotine include neurological, cardiovascular, respiratory (impaired lung function), renal, and reproductive health effects. In some cases, high levels of exposure can lead to death. Young children, adolescents, pregnant and breastfeeding mothers, and the elderly are considered the most vulnerable to nicotine exposure. According to the World Health Organisation, nicotine itself is not a carcinogen, however, it may function as a "tumor promoter". Nicotine seems involved in fundamental aspects of the biology of malignant diseases, and neurodegeneration.

4.2 Prohibited ingredients

There are eight chemical compounds listed as prohibited ingredients under the TGO 110. These include 2,3-pentanedione, acetoin, benzaldehyde, cinnamaldehyde, diacetyl, diethylene glycol, dl-alpha-tocopheryl acetate (Vit E), and ethylene glycol. The compliance limit set under the TGO 110 is less than 10 parts per million (ppm).

The laboratory analysis in **Table 2** revealed that none of the seventeen (17) samples contained prohibited ingredients above the laboratory limit of reporting (LoR) or limit of detection of 2000ppm which is significantly higher (x200) than the compliance limit set under the TGO 110.

Further analysis would need to be undertaken to ascertain that the samples do not contain prohibited ingredients above the detection limit set under TGO 110.

It should be noted that a different analytical method, which is used to assess carbonyls, benzaldehyde (which is also a carbonyl) was detected in two of the samples, at 28ppm and 66ppm (note 1 mg/kg = 1ppm). Benzaldehyde is a prohibited ingredient under TGO 110 with a compliance limit of <10 ppm, set by TGO 110.

There are known health risks associated with inhaling these prohibited ingredients identified in the TGO 110. These include irreversible lung damage; respiratory failure; toxicity of the brain, heart, and kidneys; and impairment of the immune cell function.

DOH DISCLOSURE LOG

Table 1 - Nicotine

Lab Analysis (Limit of Reporting: 200 mg/kg)	IGET Bar Strawberry Watermelon Ice	Vorteke Melon	IGET Bar Strawberry Lemon Ice	IGET Legend Passionfruit Watermelon Ice	IGET Bar Grape Ice	IGET Bar Kiwi Pineapple Ice	IGET Legend Blueberry Blackberry Ice	HQD Cuvie Plus - Strawberry Watermelon	HQD Cuvie Plus - Passionfruit
Nicotine	Present	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	43,000	<200	45,000	47,000	47,000	45,000	44,000	38,000	44,000

Lab Analysis	IGET Bar - Peach Ice - 3500 puffs	IGET Bar - Blackberry Ice - 3500 puffs	IGET XXL - Lush Ice - 1800 puffs	IGET Goat - Cherry Ice - 5000 puffs	Gunnpod Meta - Grape Ice - 4500 puffs	Gunnpod Wave - Summer Breeze - 3500 puffs	IGET Mega - Strawberry Banana Ice - 3000 puffs	Waka Smash - Apple surge - 6000 puffs
Nicotine	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	37,000	33,000	<200	28,000	30,000	12,000	35,000	30,000

Table 2 – Prohibited substances under TGO 110

Vaping liquid Samples tested (Limit of Reporting 2000mg/kg except for Vitamin E acetate 50 mg/kg))	TGO110 - Prohibited Substances							
	2,4-Butadione	2,3-Pentadione	Acetoin	Benzaldehyde	Cinnamaldehyde	Vitamin E acetate	Ethylene glycol	Diethylene glycol
IGET Bar Strawberry Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Vorteke Melon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Strawberry Lemon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Passionfruit Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Grape Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Kiwi Pineapple Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Blueberry Blackberry Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
HQD Cuvie Plus - Strawberry Watermelon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
HQD Cuvie Plus – Passionfruit	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar - Peach Ice - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar - Blackberry Ice - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET XXL - Lush Ice - 1800 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Goat - Cherry Ice - 5000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Gunnpod Meta - Grape Ice - 4500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Gunnpod Wave - Summer Breeze - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Mega - Strawberry Banana Ice - 3000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Waka Smash - Apple surge - 6000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR

Assessment of e-liquid composition – Queensland Health

5.3 Other Chemicals of Concern

5.3.1 Carbonyl compounds

All 17 samples of e-liquids were found to contain carbonyl compounds. All samples contained at least two (formaldehyde and acetaldehyde) and 16 samples contained acrolein.

Carbonyl compounds are considered irritants of the mucosal tissue of the lungs. Some of these compounds are potentially harmful to health. For example, formaldehyde is classified as a Group 1 human carcinogen by the International Agency for Research on Cancer, and acetaldehyde is classified as possibly carcinogenic to humans (Group 2B); while acrolein causes irritation of the nasal cavity and damages the lining of the lungs.

5.3.2 Volatile Organic Compounds

VOCs are a class of organic compound chemicals (usually found in gaseous form) that are typically used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.

All 17 samples contained various VOCs. Five VOCs are common to all 17 samples: propylene glycol, glycerin, 2-isopropyl-N,2,3-trimethylbutanamide, benzoic acid, and 3-hexene-1-ol.

Propylene glycol and glycerin are the main components of e-liquids. They are known to be hazardous when inhaled. Heating propylene glycol and glycerin in e-cigarettes produces lung disease hazards and inhaling these compounds makes the lungs vulnerable to infections. Breathing aerosolised propylene glycol can affect the risk of asthma development.

While some of the VOCs detected are not known to pose health risks, many of these have been flagged for critical health concerns. For example, methyl anthranilate (found in three products) and ethyl propanoate (found in one product) are suspected carcinogens and either a mutagen, skin sensitiser or toxic to reproduction. Further, neomenthol (found in 7 products) and ethyl lactate have also been suspected to be toxic to reproduction.

5.3.3 Heavy Metals

All samples contained between five to fifteen heavy metals. Arsenic and zinc were detected in all samples. Other toxic heavy metals identified include lead, mercury, nickel, chromium, antimony, aluminium, iron, nickel, barium, manganese, copper, strontium, and vanadium.

A number of these heavy metals are known to be carcinogenic, mutagenic, toxic to reproduction and development, and cause neurological anomalies. Arsenic and nickel are carcinogens, while chromium and nickel are linked to respiratory diseases. Manganese, lead, and mercury are known to cause neurological and developmental defects. Barium may cause kidney problems, while vanadium may be toxic to the respiratory system.

6. Summary of Results

Several chemical compounds detected in e-liquids tested as part of this analysis have been reported to pose serious health risks to vape users. The analysis identified that:

- All 17 samples of e-liquid products analysed contained nicotine. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg.

- None of the 17 samples analysed recorded prohibited ingredients above the laboratory detection limit of 2000 ppm. The detection limit employed by QHFSS is significantly higher (x 200) than the compliance limit set under the TGO 110 which is less than 10 ppm.
- Using a different analysis method, benzaldehyde, which is a prohibited ingredient under TGO 110, was detected through the carbonyl analysis in two of the samples, at 28ppm and 66ppm which is above the limit set by TGO 110 (<10 ppm).
- All 17 samples contained various VOCs. Five (5) VOCs are common to all 17 samples.
- All samples contained between five 5 to 15 heavy metals. A number of these heavy metals are considered toxic when inhaled including arsenic and zinc, which were detected in all samples.

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Assessment of e-liquid composition – Queensland Health
Division Name: Qld Public Health & Scientific Services

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David W [REDACTED]

From: Suzanne [REDACTED] s.73 - Irrelevant information
Sent: Thursday, 18 May 2023 7:13 AM
To: David W [REDACTED]
Subject: Final Draft Assessment of e-liquid composition_
Attachments: Final Draft Assessment of e-liquid composition_.docx

Hi Dave

I made a few tracked changes but if it is too late to make the updates I can live with what has already been sent.

Cheers

Suzanne

RTI Release

DOH DISCLOSURE LOG

Assessment of e-liquid composition

For the Queensland Parliament - Health & Environment Committee

1. Purpose

To assess the chemical composition of e-liquids that are currently in vaping products available in Queensland.

2. Scope

To analyse the chemical composition of seventeen (17) e-liquid samples currently available in the Queensland vape market.

Seven (7) e-liquid samples were sourced from Health & Environment Committee (the Committee) and ten (10) samples were sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).

3. Background

E-cigarette products marketed and sold in Queensland are not assessed in relation to their quality or safety.

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4. Laboratory Analysis

The 17 e-liquid samples were analysed by Queensland Health Forensic and Scientific Services (QH FSS) using the available laboratory methods. Qualitative or quantitative analyses were undertaken for nicotine, prohibited substances under the Therapeutic Goods Administration's - Therapeutic Goods (Standard for Nicotine Vaping Products) (TGO 110) Order 2021 (TGO 110), and other substances of concern such as carbonyl compounds, volatile organic compounds (VOCs), pesticides/fungicides/herbicides, and heavy metals.

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5. Results and Discussion

The 17 samples were analyzed for nicotine and other substances of concern such as carbonyl compounds, VOCs, pesticides, and heavy metals, and eight substances that are prohibited ingredients in vapes under the TGO 110.

E-liquids are also known to contain other chemical additives (flavourings and preservatives) and contaminants that have the potential to pose a serious health risk to vape users. These chemical additives and contaminants typically include various carbonyl compounds, VOCs, and heavy metals.

The results of the 17 samples are discussed below.

5.1 Nicotine

Nicotine was found in all e-liquid samples, as shown in Table 1. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg to trace levels.

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4.2 Prohibited ingredients

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The laboratory analysis in **Table 2** revealed that none of the seventeen (17) samples contained prohibited ingredients above the laboratory limit of reporting (LoR) or limit of detection of 2000ppm which is significantly higher (x200) than the compliance limit set under the TGO 110.

Further analysis would need to be undertaken to ascertain that the samples do not contain prohibited ingredients above the detection limit set under TGO 110.

It should be noted that a using a different analytical method, which is used to assess carbonyls, benzaldehyde (a carbonyl) was detected in two of the samples, at 28ppm and 66ppm (note 1 mg/kg = 1ppm). Benzaldehyde is a prohibited ingredient under TGO 110 with a compliance limit of <10 ppm, set by TGO 110.

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DOH DISCLOSURE LOG

Table 1 - Nicotine

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Nicotine	Present	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	43,000	<200	45,000	47,000	47,000	45,000	44,000	38,000	44,000

Lab Analysis	IGET Bar - Peach Ice - 3500 puffs	IGET Bar - Blackberry Ice - 3500 puffs	IGET XXL - Lush Ice - 1800 puffs	IGET Goat - Cherry Ice - 5000 puffs	Gunnpod Meta - Grape Ice - 4500 puffs	Gunnpod Wave - Summer Breeze - 3500 puffs	IGET Mega - Strawberry Banana Ice - 3000 puffs	Waka Smash - Apple surge - 6000 puffs
Nicotine	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	37,000	33,000	<200	28,000	30,000	12,000	35,000	30,000

Table 2 – Prohibited substances under TGO 110

Vaping liquid Samples tested (Limit of Reporting 2000mg/kg except for Vitamin E acetate 50 mg/kg))	TGO110 - Prohibited Substances							
	2,4-Butadione	2,3-Pentadione	Acetoin	Benzaldehyde	Cinnamaldehyde	Vitamin E acetate	Ethylene glycol	Diethylene glycol
IGET Bar Strawberry Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Vorteke Melon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Strawberry Lemon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Passionfruit Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Grape Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Kiwi Pineapple Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Blueberry Blackberry Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
HQD Cuvie Plus - Strawberry Watermelon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
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IGET Bar - Peach Ice - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
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IGET XXL - Lush Ice - 1800 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
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Gunnpod Meta - Grape Ice - 4500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Gunnpod Wave - Summer Breeze - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Mega - Strawberry Banana Ice - 3000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Waka Smash - Apple surge - 6000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR

5.3 Other Chemicals of Concern

5.3.1 Carbonyl compounds

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Carbonyl compounds are considered irritants of the mucosal tissue of the lungs. Some of these compounds are potentially harmful to health. For example, formaldehyde is classified as a Group 1 human carcinogen by the International Agency for Research on Cancer, and acetaldehyde is classified as possibly carcinogenic to humans (Group 2B); while acrolein causes irritation of the nasal cavity and damages the lining of the lungs.

5.3.2 Volatile Organic Compounds

VOCs are a class of organic compound chemicals (usually found in gaseous form) that are typically used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.

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Propylene glycol and glycerin are the main components of e-liquids. They are known to be hazardous when inhaled. Heating propylene glycol and glycerin in e-cigarettes produces lung disease hazards and inhaling these compounds makes the lungs vulnerable to infections. Breathing aerosolised propylene glycol can affect the risk of asthma development.

While some of the VOCs detected are not known to pose health risks, many of these have been flagged for critical health concerns. For example, methyl anthranilate (found in three products) and ethyl propanoate (found in one product) are suspected carcinogens and either a mutagen, skin sensitiser or toxic to reproduction. Further, neomenthol (found in 7 products) and ethyl lactate have also been suspected to be toxic to reproduction.

5.3.3 Heavy Metals

All samples contained between five to fifteen heavy metals. Arsenic and zinc were detected in all samples. Other toxic heavy metals identified include lead, mercury, nickel, chromium, antimony, aluminium, iron, nickel, barium, manganese, copper, strontium, and vanadium.

A number of these heavy metals are known to be carcinogenic, mutagenic, toxic to reproduction and development, and cause neurological anomalies. Arsenic and nickel are carcinogens, while chromium and nickel are linked to respiratory diseases. Manganese, lead, and mercury are known to cause neurological and developmental defects. Barium may cause kidney problems, while vanadium may be toxic to the respiratory system.

6. Summary of Results

Several chemical compounds detected in e-liquids tested as part of this analysis have been reported to pose serious health risks to vape users. The analysis identified that:

- All 17 samples of e-liquid products analysed contained nicotine. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg.

- None of the 17 samples analysed recorded prohibited ingredients above the laboratory detection limit of 2000 ppm. The detection limit employed by QHFSS is significantly higher (x 200) than the compliance limit set under the TGO 110 which is less than 10 ppm.
- Using a different analysis method, benzaldehyde, which is a prohibited ingredient under TGO 110, was detected in two of the samples, at 28ppm and 66ppm which is above the limit set by TGO 110 (<10 ppm).
- All 17 samples contained various VOCs. Five (5) VOCs are common to all 17 samples.
- All samples contained between five 5 to 15 heavy metals. A number of these heavy metals are considered toxic when inhaled including arsenic and zinc, which were detected in all samples.

RTI Release

DOH DISCLOSURE LOG

Assessment of e-liquid composition – Queensland Health
Division Name: Qld Public Health & Scientific Services

Page 6

PRINTED COPIES ARE UNCONTROLLED

David W

From: Rebecca s.73 - Irrelevant information
Sent: Thursday, 18 May 2023 7:29 AM
To: David W s.73 - Irrelevant information; Suzanne s.73 - Irrelevant information; EDHPU
Cc: U s.73 - Irrelevant information; Mark s.73 - Irrelevant information; Colleen s.73 - Irrelevant information
Subject: URGENT: Health and Environment Committee - testing of smoking products
Attachments: DG Brief HEC request e-cigarettes.docx; Attachment 1 Letter HEC e-cigarette analysis.docx; Attachment 2 - Assessment of e-cigarette composition.docx; 230404 - Queensland Health - request for assistance - Testing for vaping inquiry and s.73 - Irrelevant information.pdf

Importance: High

Good morning David and team,

I have prepared a DG Brief and Letter to accompany the report – see attached. Can you please review and advise if you are happy with the representation of the analysis.

I have reviewed the report and had a couple of suggested very minor edits.

The report is required by the HEC Committee by 23 May – prior to this it needs to clear our ADG SPR and go to CLLO for DG approval.

To achieve this we need to finalise around lunch-time for Mark s.73 - Irrelevant information to consider and clear.

Thank you very much for your swift consideration and work on this I know we all have competing priorities – it is greatly appreciated.

Best Regards
Rebecca



Rebecca s.73 - Irrelevant information
 Advanced Health Promotion Officer
 Prevention Strategy Branch | Queensland Health
 Working hours Monday to Friday

P s.73 - Irrelevant information
E s.73 - Irrelevant information @health.qld.gov.au
W health.qld.gov.au
A [15 Butterfield Street, Herston](#)

From: David W s.73 - Irrelevant information @health.qld.gov.au>
Sent: Wednesday, 17 May 2023 4:51 PM
To: Rebecca s.73 - Irrelevant information s.73 - Irrelevant information health.qld.gov.au>; Suzanne s.73 - Irrelevant information s.73 - Irrelevant information n.qld.gov.au>; EDHPU <s.73 - Irrelevant information health.qld.gov.au>
Cc: U s.73 - Irrelevant information <s.73 - Irrelevant information health.qld.gov.au>
Subject: FW: Health and Environment Committee - testing of smoking products

Hi Rebecca,

Please find attached a Draft Assessment of e-liquid composition.

As I understand Suzanne [redacted] would like another review (tomorrow morning) prior to adding it to the DG brief that you are preparing.

From: Rebecca [redacted] <[redacted]@health.qld.gov.au>
Sent: Thursday, 20 April 2023 9:51 AM
To: Karson [redacted] <[redacted]@health.qld.gov.au>
Cc: Mark [redacted] <[redacted]@health.qld.gov.au>; Mark [redacted] <[redacted]@health.qld.gov.au>; Colleen [redacted] <[redacted]@health.qld.gov.au>; Jim [redacted] <[redacted]@health.qld.gov.au>; Elizabeth [redacted] <[redacted]@health.qld.gov.au>

Subject: RE: Health and Environment Committee - testing of smoking products


Hello Karson,

Further to this update, we have been asked through CLLO to split the request and undertake some further analysis of vapes provided by the committee. The timeframes are now [redacted] and vapes related to the vape inquiry mid/late May:

1. [redacted] report by 10am 28 April 2023
2. **E-cigarette report** – including Qld Health and HEC samples by mid/late May 2023 (date to be confirmed)

Given this matter has now neem split can you advise if you prefer our team to progress both, or if your team will progress the [redacted] report? We can accommodate either option but wanted to ask as you are lead on the Bill and have been progressing the other requests specific to the Bill.

Best Regards
Rebecca



Rebecca [redacted]
 Advanced Health Promotion Officer
 Prevention Strategy Branch | Queensland Health
 Working hours Monday to Friday

P [redacted]
E [redacted]@health.qld.gov.au
W health.qld.gov.au
A 15 Butterfield Street, Herston

DOH DISCLOSURE LOG



Health and Environment Committee

Parliament House
George Street
Brisbane Qld 4000
Ph: 07 3553 6626
Email: hec@parliament.qld.gov.au
W: <https://www.parliament.qld.gov.au/HEC>

Our Ref: A1085328, A1076556

4 April 2023

Mr Shaun Drummond
Director-General
Department of Health
1 William Street
Brisbane QLD 4000
By email: dg_correspondence@health.qld.gov.au

Dear Mr Drummond

Testing of chemical composition of smoking products

I write on behalf of the Health and Environment Committee to seek your advice on whether your department's Forensic and Scientific Services, or another Queensland Health unit, can assist the committee with analysis of electronic cigarette (e-cigarette) liquids (e-liquids), and s.73 - Irrelevant information

s.73 - Irrelevant information

E-cigarette liquids

As explained in my previous letter of 21 March 2023, the committee is inquiring into reducing rates of e-cigarette use in Queensland. The terms of reference, agreed by the Legislative Assembly on 14 March 2023 when establishing the inquiry, require the committee to consider a number of aspects of e-cigarettes, including:

- the risks of vaping harmful chemicals, including nicotine, to individuals, communities, and the health system, and
- waste management and environmental impacts of e-cigarette products.

The committee is required to report its findings to the Legislative Assembly by 31 August 2023.

To understand the health risks and environmental and waste management impacts of e-cigarettes in Queensland, the committee is considering findings from a number of published studies of e-liquids. The committee is also seeking to arrange for analysis of the chemical composition of 10 e-liquid samples currently available to Queensland users. The objectives of this testing are to assess the health risks of e-cigarettes and e-liquids currently available and used for vaping in Queensland, and give contemporary context to the findings from previous research studies.

The committee considers this further testing of e-liquids to be essential to its assessment of the current health and environmental risks that the liquids and the e-cigarettes they are used in may pose in Queensland. The findings from this testing will also assist the committee to shape its inquiry findings as to the need for government restrictions or controls on the availability of e-cigarettes and e-liquids, on public health and/or environmental grounds.

Please advise whether a Queensland Health unit can analyse the substances in 10 e-liquids, the timeframe for obtaining results of the analysis, and the cost for this work. The committee would require a brief report of the analysis conducted and results, and may, in the interests of transparency, resolve to publish that report as a related publication for the inquiry.

s.73 - Irrelevant information

Information about the committee's inquiries can be found on the committee's [webpage](#). If you have questions about this letter or either inquiry generally, please contact the Committee Secretary, Ms Renee Easten, on [REDACTED] or by email at HEC@parliament.qld.gov.au.

I look forward to your urgent advice on the committee's requests for assistance.

Yours sincerely

s.73 - Irrelevant information

Aaron Harper MP

Chair

cc: Hon Yvette D'Ath MP, Minister for Health and Ambulance Services [\[REDACTED\]@ministerial.qld.gov.au](mailto:[REDACTED]@ministerial.qld.gov.au)

Ms Loretta Carr, Director and CLLO, Queensland Health [\[REDACTED\]@health.qld.gov.au](mailto:[REDACTED]@health.qld.gov.au);

[\[REDACTED\]@health.qld.gov.au](mailto:[REDACTED]@health.qld.gov.au)

DOH DISCLOSURE LOG

Queensland Health

Assessment of e-liquid composition

For the Queensland Parliament - Health & Environment Committee

1. Purpose

To assess the chemical composition of e-liquids that are currently in vaping products available in Queensland.

2. Scope

To analyse the chemical composition of seventeen (17) e-liquid samples currently available in the Queensland vape market.

Seven (7) e-liquide-cigarette samples were sourced from Health & Environment Committee (the Committee) and ten (10) samples were sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).

3. Background

E-cigarette products marketed and sold in Queensland are not routinely assessed in relation to their quality or safety.

Public health concerns have been raised by the community and by health practitioners regarding the risks of vaping products and their aerosols. In addition to nicotine, liquids used in electronic cigarettes also contain other chemical additives which have the potential to pose serious health risks to users. E-liquids are reported to contain other chemical additives such as flavours, solvents, preservatives, and contaminants that may be harmful to health when inhaled as part of vaping.

4. Laboratory Analysis

The 17 e-liquid samples were analysed by Queensland Health Forensic and Scientific Services (QH FSS) using the available laboratory methods. Qualitative or quantitative analyses were undertaken for nicotine, prohibited substances under the Therapeutic Goods Administration's - Therapeutic Goods (Standard for Nicotine Vaping Products) (TGO 110) Order 2021 (TGO 110), and other substances of concern such as carbonyl compounds, volatile organic compounds (VOCs), pesticides/fungicides/herbicides, and heavy metals.



The detection limit for the analytes was determined by QHFSS based on its current analytical capability. This may vary from the compliance limits established for the substances.

5. Results and Discussion

The 17 samples were analyzed for nicotine and other substances of concern such as carbonyl compounds, VOCs, pesticides, and heavy metals, and eight substances that are prohibited ingredients in vapes under the TGO 110.

E-liquids are also known to contain other chemical additives (flavourings and preservatives) and contaminants that have the potential to pose a serious health risk to vape users. These chemical additives and contaminants typically include various carbonyl compounds, VOCs, and heavy metals.

The results of the 17 samples are discussed below.

5.1 Nicotine

Nicotine was found in all e-liquid samples, as shown in Table 1. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg to trace levels.

Commented [RW1]: double up error?

Under Queensland's *Medicines and Poisons Act 2019*, vaping devices containing nicotine may only be obtained at a pharmacy under the prescription of a medical practitioner. Such devices may contain up to 100 mg/ml (100,000 mg/kg) of nicotine. Vaping products which contain nicotine and are sourced from other retailers are illegal under the *Medicines and Poisons Act 2019*. As these samples were NOT obtained through a pharmacy via a prescription, **nicotine should not have been present in any samples.**

The capacity of e-cigarettes to deliver nicotine and other harmful chemicals into the body varies widely, ranging from very low to levels like that of cigarettes, depending on product characteristics, user inhalation behaviour, and nicotine solution concentration.

The health risks of nicotine include neurological, cardiovascular, respiratory (impaired lung function), renal, and reproductive health effects. In some cases, high levels of exposure can lead to death. Young children, adolescents, pregnant and breastfeeding mothers, and the elderly are considered the most vulnerable to nicotine exposure. According to the World Health Organisation, nicotine itself is not a carcinogen, however, it may function as a "tumor promoter". Nicotine seems involved in fundamental aspects of the biology of malignant diseases, and neurodegeneration.

4.2 Prohibited ingredients

There are eight chemical compounds listed as prohibited ingredients under the TGO 110. These include 2,3-pentanedione, acetoin, benzaldehyde, cinnamaldehyde, diacetyl, diethylene glycol, dl-alpha-tocopheryl acetate (Vit E), and ethylene glycol. The compliance limit set under the TGO 110 is less than 10 parts per million (ppm).

The laboratory analysis in **Table 2** revealed that none of the seventeen (17) samples contained prohibited ingredients above the laboratory limit of reporting (LoR) or limit of detection of 2000ppm. This limit -which is significantly higher (x200) than the compliance limit set under the TGO 110.

Further analysis would need to be undertaken to ascertain that the samples do not contain prohibited ingredients above the detection limit set under TGO 110.

It should be noted that a different analytical method, which is used to assess carbonyls, benzaldehyde (which is also a carbonyl) was detected in two of the samples, at 28ppm and 66ppm (note 1 mg/kg = 1ppm). Benzaldehyde is a prohibited ingredient under TGO 110 with a compliance limit of <10 ppm, set by TGO 110.

There are known health risks associated with inhaling these prohibited ingredients identified in the TGO 110. These include irreversible lung damage; respiratory failure; toxicity of the brain, heart, and kidneys; and impairment of the immune cell function.

Commented [RW2]: Detection?

Table 1 - Nicotine

Lab Analysis (Limit of Reporting: 200 mg/kg)	IGET Bar Strawberry Watermelon Ice	Vorteke Melon	IGET Bar Strawberry Lemon Ice	IGET Legend Passionfruit Watermelon Ice	IGET Bar Grape Ice	IGET Bar Kiwi Pineapple Ice	IGET Legend Blueberry Blackberry Ice	HQD Cuvie Plus - Strawberry Watermelon	HQD Cuvie Plus - Passionfruit
Nicotine	Present	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	43,000	<200	45,000	47,000	47,000	45,000	44,000	38,000	44,000

Lab Analysis	IGET Bar - Peach Ice - 3500 puffs	IGET Bar - Blackberry Ice - 3500 puffs	IGET XXL - Lush Ice - 1800 puffs	IGET Goat - Cherry Ice - 5000 puffs	Gunnpod Meta - Grape Ice - 4500 puffs	Gunnpod Wave - Summer Breeze - 3500 puffs	IGET Mega - Strawberry Banana Ice - 3000 puffs	Waka Smash - Apple surge - 6000 puffs
Nicotine	Present	Present	Present	Present	Present	Present	Present	Present
Concentration (mg/kg)	37,000	33,000	<200	28,000	30,000	12,000	35,000	30,000

Table 2 – Prohibited substances under TGO 110

Vaping liquid Samples tested (Limit of Reporting 2000mg/kg except for Vitamin E acetate 50 mg/kg)	TGO110 - Prohibited Substances							
	2,4-Butadione	2,3-Pentadione	Acetoin	Benzaldehyde	Cinnamaldehyde	Vitamin E acetate	Ethylene glycol	Diethylene glycol
IGET Bar Strawberry Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Vorteke Melon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Strawberry Lemon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Passionfruit Watermelon Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Grape Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar Kiwi Pineapple Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Legend Blueberry Blackberry Ice	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
HQD Cuvie Plus - Strawberry Watermelon	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
HQD Cuvie Plus - Passionfruit	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar - Peach Ice - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Bar - Blackberry Ice - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET XXL - Lush Ice - 1800 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Goat - Cherry Ice - 5000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Gunnpod Meta - Grape Ice - 4500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Gunnpod Wave - Summer Breeze - 3500 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
IGET Mega - Strawberry Banana Ice - 3000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR
Waka Smash - Apple surge - 6000 puffs	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR	> LOR

Assessment of e-liquid composition – Queensland Health

5.3 Other Chemicals of Concern

5.3.1 Carbonyl compounds

All 17 samples of e-liquids were found to contain carbonyl compounds. All samples contained at least two [compounds](#) (formaldehyde and acetaldehyde) and 16 samples contained acrolein.

Carbonyl compounds are considered irritants of the mucosal tissue of the lungs. Some of these compounds are potentially harmful to health. For example, formaldehyde is classified as a Group 1 human carcinogen by the International Agency for Research on Cancer, and acetaldehyde is classified as possibly carcinogenic to humans (Group 2B); while acrolein causes irritation of the nasal cavity and damages the lining of the lungs.

5.3.2 Volatile Organic Compounds

[Volatile organic compounds](#) (VOCs) are a class of organic compound chemicals (usually found in gaseous form) that are typically used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.

All 17 samples contained various VOCs. Five VOCs are common to all 17 samples: propylene glycol, glycerin, 2-isopropyl-N,2,3-trimethylbutanamide, benzoic acid, and 3-hexene-1-ol.

Propylene glycol and glycerin are the main components of e-liquids. They are known to be hazardous when inhaled. Heating propylene glycol and glycerin in e-cigarettes produces lung disease hazards and inhaling these compounds makes the lungs vulnerable to infections. Breathing aerosolised propylene glycol can affect the risk of asthma development.

While some of the VOCs detected are not known to pose health risks, many of these have been flagged for critical health concerns. For example, methyl anthranilate (found in three products) and ethyl propanoate (found in one product) are suspected carcinogens and either a mutagen, skin sensitiser or toxic to reproduction. Further, neomenthol (found in 7 products) and ethyl lactate have also been suspected to be toxic to reproduction.

5.3.3 Heavy Metals

All samples contained between five to fifteen heavy metals. Arsenic and zinc were detected in all samples. Other toxic heavy metals identified include lead, mercury, nickel, chromium, antimony, aluminium, iron, nickel, barium, manganese, copper, strontium, and vanadium.

A number of these heavy metals are known to be carcinogenic, mutagenic, toxic to reproduction and development, and cause neurological anomalies. Arsenic and nickel are carcinogens, while chromium and nickel are linked to respiratory diseases. Manganese, lead, and mercury are known to cause neurological and developmental defects. Barium may cause kidney problems, while vanadium may be toxic to the respiratory system.

6. Summary of Results

Several chemical compounds detected in e-liquids tested as part of this analysis have been reported to pose serious health risks to vape users. The analysis identified that:

- All 17 samples of e-liquid products analysed contained nicotine. The nicotine content ranged from trace levels (<200 mg/kg) to 47,000 mg/kg.
- None of the 17 samples analysed recorded prohibited ingredients above the laboratory detection limit of 2000 ppm. The detection limit employed by QHFSS is significantly higher (x 200) than the compliance limit set under the TGO 110 which is less than 10 ppm.
- Using a different analysis method, benzaldehyde, which is a prohibited ingredient under TGO 110, was detected through the carbonyl analysis in two of the samples, at 28ppm and 66ppm which is above the limit set by TGO 110 (<10 ppm).
- All 17 samples contained various volatile organic compounds ~~VOCs~~. Five (5) VOCs are common to all 17 samples.
- All samples contained between five 5 to 15 heavy metals. A number of these heavy metals are considered toxic when inhaled including arsenic and zinc, which were detected in all samples.



Queensland Health

Enquiries to: Mark [REDACTED]
 Executive Director
 Prevention Strategy Branch
 Telephone: [REDACTED] s.73 - Irrelevant information
 Our ref: C-ECTF-Number
 Your ref:

Mr Aaron Harper
 Chair
 Health and Environment Committee
 Parliament House
 George Street
 BRISBANE QLD 4000

Email: [REDACTED] s.73 - Irrelevant information parliament.qld.gov.au

Dear Mr Harper

Thank you for your letter dated 4 April 2023 seeking advice on whether the Department's Forensic and Scientific Services (FSS) can assist with analysis of electronic cigarettes. tobacco (chop-chop). We previously provided a report on the analysis of illegal tobacco, thank you for the acknowledgement of this report.

We received the seven e-cigarette samples sourced by the Committee, thank you. These samples have been analysed along with ten further samples sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).

The samples have been analysed using qualitative or quantitative analyses to test for nicotine and prohibited substances under the Therapeutic Goods Administration's Standard for Nicotine Vaping Products TGO 110. Tests were also included for other substances of concern such as carbonyl compounds, volatile organic compounds, and heavy metals.

This analysis is provided in the report at Attachment 1.

Thank you again for the opportunity to assist the Committee with its inquiry. I look forward to the Committee's report and recommendations on reducing rates of e-cigarette use in Queensland.

Yours sincerely

Shaun Drummond
 Director-General

DISCLOSURE LOG

Prepared by: Rebecca [REDACTED]
Advanced Health Promotion Officer
Prevention Strategy Branch
[REDACTED]
18 May 2023

Submitted through: Mark [REDACTED]
Executive Director
Prevention Strategy Branch
[REDACTED]
XX May 2023

Cleared by: Jasmina Joldić PSM
Associate Director-General
Strategy, Policy and Reform
[REDACTED]
XX May 2023

Document Name: C-ECTF-XXXXX

RTI Release

DOH DISCLOSURE LOG

SUBJECT: The Chair of the Health and Environment Committee requested analysis of e-cigarettes obtained in Queensland to inform current inquiry into reducing e-cigarette use in Queensland.

<input type="checkbox"/> Approved	Signed..... Date...../...../..... Shaun Drummond, Director-General, Queensland Health Comments:
<input type="checkbox"/> Not approved	
<input type="checkbox"/> Noted	
<input type="checkbox"/> Further information required (see comments)	

ACTION REQUIRED BY

The requested analysis of vapes must be provided by 23 May 2023, to the Health and Environment Committee (the Committee).

RECOMMENDATION

It is recommended the Director-General:

- **Sign** the attached letter to Mr Aaron Harper MP, Chair of the Committee, regarding the requested analysis of e-cigarettes (Attachment 1); and
- **Approve** the requested report of e-cigarettes analysis (Attachment 2)

ISSUES

Committee request

1. On 4 April 2023, the Chair of the Committee wrote to the Director-General seeking advice on whether the Department's Forensic and Scientific Services (FSS) can assist with analysis of disposable e-cigarettes and s.73 - Irrelevant information
2. The Committee secretary agreed to separate reports on analysis of s.73 - Irrelevant information and e-cigarettes:
 - 2.1. s.73 - Irrelevant information
 - 2.2. E-cigarette report to be provided to the Committee by 23 May 2023.

E-cigarette samples

3. Seven e-cigarette samples were sourced from the Committee, and ten samples were sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).
4. E-cigarette products marketed and sold in Queensland are not routinely assessed in relation to their quality or safety and are generally assessed for nicotine as a compliance measure.
5. The samples have been analysed by the Queensland Health FFS laboratory using available methods and a brief report of the results is provided (Attachment 2).

Report and findings

6. The report shows that:
 - 6.1. All 17 samples of e-liquid products analysed contained nicotine.
 - 6.2. Ingredients prohibited by the Therapeutic Goods Administration under their Standard for Nicotine Vaping Products TGO 110 were not detected initially detected using available laboratory methods.
 - 6.3. Testing with a different analysis method did find benzaldehyde, which is a prohibited under TGO 110.
 - 6.4. Further development of testing methods would be required to ascertain if samples contain prohibited ingredients above the detection limit set under TGO 110. This was not viable in the timeframe.
 - 6.5. All 17 samples contained various volatile organic compounds, typically used and produced in the manufacture of paints, pharmaceuticals, and refrigerants.
 - 6.6. All samples contained between five 5 to 15 heavy metals. A number of these heavy metals are considered toxic when inhaled including arsenic and zinc, these were detected in all samples.
7. A covering letter has been prepared from the Director-General to the Committee Chair (Attachment 1).

BACKGROUND

8. On 14 March 2023 the Legislative Assembly agreed to a motion that the Health and Environment Committee inquire into and report on reducing rates of e-cigarette use in Queensland. The Committee is due to table a report by 31 August 2023.
9. Public hearings on the Bill were conducted on 12 April 2023 in Townsville and 14 April 2023 in Brisbane.
10. At these public hearings the Committee has heard evidence and views from stakeholders on reducing e-cigarette use in Queensland.

11. On 3 May 2023 the Department appeared alongside the Chief Health Officer at a public briefing at the request of the Committee to provide evidence on health impacts of e-cigarette use and information on current measures to monitor and reduce use.

RESULTS OF CONSULTATION

12. Prevention Strategy Branch liaised with Hospital and Health Services to obtain clearance to use samples of e-cigarettes that had previously been seized by the Unit.

RESOURCE/FINANCIAL IMPLICATIONS

13. There are no resource or financial implications associated with this brief.

HUMAN RIGHTS

14. Human rights are not engaged in providing analysis of the e-cigarette samples.

SENSITIVITIES/RISKS

15. There are no sensitivities or risks associated with this brief.

ATTACHMENTS

16. Attachment 1 - Letter from the Director-General to the Chair of the Committee
Attachment 2 – Report on disposable e-cigarette

Author Name: Rebecca [REDACTED] Position: Advanced Health Promotion Officer Unit: Prevention Strategy Tel No: [REDACTED] <small>s.73 - Irrelevant information</small> Date Drafted: 18 May 2023	Cleared by (Dir/Snr Dir) Name: Mark [REDACTED] Position: Executive Director Branch: Prevention Strategy Branch Tel No: [REDACTED] <small>s.73 - Irrelevant information</small> Date Cleared: xx May 2023 <i>*Note clearance contact is also key contact for brief queries*</i>	Content verified by (DDG/CE) Name: Jasmina Joldić Position: Associate Director-General Division: Strategy, Policy and Reform Tel No: [REDACTED] <small>s.73 - Irrelevant information</small> Date Verified: xx May 2023
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DOH DISCLOSURE LOG

David W [redacted]

From: David W [redacted]
Sent: Thursday, 18 May 2023 8:12 AM
To: Rebecca [redacted] s.73 - Irrelevant information
Cc: Suzanne [redacted] s.73 - Irrelevant information; U [redacted] s.73 - Irrelevant information
Subject: URGENT: Health and Environment Committee - testing of smoking products
Attachments: Attachment 2 - Assessment of e-liquid composition Final.docx

Hi Rebecca,

Been trying to call you but no luck.

I have attached an updated Attachment 2 – with comments and a couple of agreed changes (still in tracked changes). Suzanne is happy with this version – she also made a couple of minor amendments this morning.

I would have liked to talk to you about these – can you let me know when you’re available?

I haven’t yet reviewed the brief.

Kind Regards



David W [redacted]
 Advanced Environmental Health Scientist
 Environmental Hazards Unit
 Health Protection Branch, Queensland Public Health
 and Scientific Services | Queensland Health

E [redacted] s.73 - Irrelevant information [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)
W [health.qld.gov.au](mailto:[redacted]@health.qld.gov.au)



Queensland Health acknowledges the Traditional Custodians of the land across Queensland, and pays respect to First Nations Elders past, present and future.

DOH DISCLOSURE LOG

Assessment of e-liquid composition

For the Queensland Parliament - Health & Environment Committee

1. Purpose

To assess the chemical composition of e-liquids that are currently in vaping products available in Queensland.

2. Scope

To analyse the chemical composition of seventeen (17) e-liquid samples currently available in the Queensland vape market.

Seven (7) e-liquid samples were sourced from Health & Environment Committee (the Committee) and ten (10) samples were sourced from state-wide compliance activities from government departments (Queensland Health and Queensland Police Service).

3. Background

E-cigarette products marketed and sold in Queensland are not assessed in relation to their quality or safety.

Public health concerns have been raised by the community and by health practitioners regarding the risks of vaping products and their aerosols. In addition to nicotine, liquids used in electronic cigarettes also contain other chemical additives which have the potential to pose serious health risks to users. E-liquids are reported to contain other chemical additives such as flavours, solvents, preservatives, and contaminants that may be harmful to health when inhaled as part of vaping.

4. Laboratory Analysis

The 17 e-liquid samples were analysed by Queensland Health Forensic and Scientific Services (QH FSS) using the available laboratory methods. Qualitative or quantitative analyses were undertaken for nicotine, prohibited substances under the Therapeutic Goods Administration's - Therapeutic Goods (Standard for Nicotine Vaping Products) (TGO 110) Order 2021 (TGO 110), and other substances of concern such as carbonyl compounds, volatile organic compounds (VOCs), pesticides/fungicides/herbicides, and heavy metals.