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1 October 2024

Jude Ball

By email: [jude.ball@otago.ac.nz](mailto:jude.ball@otago.ac.nz)

Ref: H2024050758

Tēnā koe Jude

### **Response to your request for official information**

Thank you for your request under the Official Information Act 1982 (the Act) to the Ministry of Health – Manatū Hauora (the Ministry) on 03 September 2024 for the Institute of Environmental Science and Research (ESR) vaping product testing data. You requested:

*“Copies of reports or data held by the Ministry of Health in relation to the testing of vaping products, including the content of vaping products, provided by ESR, and since 1 January 2021.*

*Any internal Ministry of Health analysis and/or further reports/presentations produced based on the ESR data.”*

ESR carries out research for the Ministry under contract. Within the period of your request, approximately 231 products have been tested. Due to the high number of reports, a summary of all vaping product test results is attached as document 1. All relevant data in the reports is included in the summary document.

The second document attached is an internal memo. There are no other reports, presentations or analysis relevant to your request. Please note, while the above memo refers to plans for a regulated products strategy, the development of this strategy has paused so no such document exists.

The third document attached is a summary document of results from an internal analysis of the ESR test results to date.

All documents are itemised in Appendix 1 and copies of the documents are enclosed. Where information is withheld, this is outlined in the Appendix and noted in the document itself. Where information is withheld under section 9 of the Act, I have considered the countervailing public interest in release in making this decision and consider that it does not outweigh the need to withhold at this time.

I trust this information fulfils your request. If you wish to discuss any aspect of your request with us, including this decision, please feel free to contact the OIA Services Team on: [oiagr@health.govt.nz](mailto:oiagr@health.govt.nz).

Under section 28(3) of the Act, you have the right to ask the Ombudsman to review any decisions made under this request. The Ombudsman may be contacted by email at: [info@ombudsman.parliament.nz](mailto:info@ombudsman.parliament.nz) or by calling 0800 802 602.

Please note that this response, with your personal details removed, may be published on the Manatū Hauora website at: [www.health.govt.nz/about-ministry/information-releases/responses-official-information-act-requests](http://www.health.govt.nz/about-ministry/information-releases/responses-official-information-act-requests)

Nāku noa, nā

A handwritten signature in blue ink, appearing to read 'Jane Chambers'.

Jane Chambers  
**Group Manager, Public Health Policy and Regulation**  
**Public Health Agency | Te Pou Hauora Tūmatanui**

## Appendix 1: List of documents for release

#	Date	Document details	Decision on release
1	June 2023 – June 2024	ESR vape testing data	Summary provided in accordance with section 16(1)(e) of the Act.
2	June 2024	Post-market surveillance testing of vaping products	Some information withheld under the following sections of the Act: <ul style="list-style-type: none"><li>• 9(2)(b)(ii) where its release would likely unreasonably prejudice the commercial position of the person who supplied the information; and</li><li>• 9(2)(f)(iv) maintain the constitutional conventions for the time being which protect the confidentiality of advice tendered by officials.</li></ul>
3		Descriptive summary of tables and figures - ISK Review of ESR Test Results - Vaping	Released in full.

## Document 1

Report	Report date	Product HAR P Code	Product Type	Batch Code	Expiry of Product (BB)	Test date	Reported PG-VG	Actual PG-VG	Reported Nic conc mg/mL	Reported Nic as	Actual Nic conc (FB) mg/mL	Ethanol	Product Notification Status	Brand	Type & Flavour Variant	Other
PHA231 64/35	21/06/2023	NPR D-10046	vaping device	IPF20230115	Jan-25	Jun-23	60-40	52-48	50	mg nic salt	25.5			iPuff	iPuff Strawberry Ice 2500 Puffs	
PHA231 64/5	21/06/2023	NPR D-1146	Nic salt vaping substance	220201	21062025	Jun-23	50-50	59-41	5 (50)	% (mg)	41.9			TYPHOON	Smooth Tobacco 5 %	
PHA231 64/42	21/06/2023	NPR D-11507	Nic salt vaping substance	EP017200	2023.04.27	Jun-23	55-45	49-51	50	mg/mL Nic salt	51.4			ELFBAR	Pink Lemonade 800 Puff, Pink Lemonade 1500 Puff, Pink Lemonade BC3000 Puff, Pink Lemonade BC5000	
PHA231 64/18	21/06/2023	NPR D-11509	Nic salt vaping substance	EP017200	27/04/2023	Jun-23	55-45	56-44	50	mg/mL Nic salt	49.3			ELFBAR	Cream Tobacco 800 Puff, Cream Tobacco 1500 Puff, Cream Tobacco BC3000 Puff, Cream	

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														Tobacco BC5000
PHA231 64/44	21/06/ 2023	NPR D- 1151 0	Nic salt vaping substa nce	EP017200	2023.04.27	Jun- 23	50-50	46- 54	50	mg/m L Nic salt	48.7		ELFBAR	Energy Ice 800 Puff, Energy Ice 1500 Puff, Energy Ice BC3000 Puff, Energy Ice BC5000
PHA231 64/32	21/06/ 2023	NPR D- 1183 5	Nic salt vaping substa nce	EP017200	2023.04.27	Jun- 23	55-45	55- 45	50	mg/m L Nic salt	49.8		ELFBAR	Watermelon 1500 Puff
PHA231 64/54	21/06/ 2023	NPR D- 1184 1	Nic salt vaping substa nce	EP018442	2023 08 09	Jun- 23		53- 47	50	mg/m L	29.4		ELF BAR	Cola 1500 Puff
PHA231 64/24	21/06/ 2023	NPR D- 1242 4	vaping device	2302B2308	15/09/2024	Jun- 23		50- 50	50	mg/m L Nic salt	23.5		SMOK	MINIONE 20 MG/50 MG(NZ VERSION)- Blueberry Raspberry
PHA231 64/21	21/06/ 2023	NPR D- 1242 7	vaping device	2302B2408	15/09/2024	Jun- 23		37- 63	50	mg/m L Nic salt	17.9		SMOK	MINIONE 20 MG/50 MG(NZ VERSION)- Cola Ice
PHA231 64/50	21/06/ 2023	NPR D- 1242 8	vaping device	2301C0301	1/07/2024	Jun- 23		59- 41	50	mg/m L Nic salt	22.4		SMOK	MINIONE 20 MG/50 MG(NZ VERSION)- Honeydrew Bubble

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PHA231 64/33	21/06/ 2023	NPR D- 1255 8	Nic salt vaping substa nce	EP017200	2023.04.27	Jun- 23	55-45	49- 51	50	mg/m L Nic salt	50		ELFBAR	Spearmint 1500 Puff
PHA231 64/60	21/06/ 2023	NPR D- 1429 5	Nic salt vaping substa nce	M603532207 2501	2023.09.29	Jun- 23	60-40	47- 53	50	mg/m L	42.1		ZOVOO CUBEBA R	Passion Fruit Lime - 600 Puff, 2500 Puff & 4000 Puff
PHA231 64/45	21/06/ 2023	NPR D- 1429 8	Nic salt vaping substa nce	M603532208 0201	2023.09.28	Jun- 23	60-40	43- 57	50	mg/m L	42.6		ZOVOO CUBEBA R	Melon Lemon Cocotail - 600 Puff, 2500 Puff & 4000 Puff
PHA231 94/8	21/06/ 2023	NPR D- 1507 3	Nic salt vaping substa nce	PG20220810_ 2	Aug-25	Jun- 23	30-70	31- 369	6	mg/m L Nic salt	5.7		Aisu	Pink Guava
PHA231 64/15	21/06/ 2023	NPR D- 1534 3	vaping device	PO6426	Jun-24	Jun- 23	60-40	53- 47	50	mg/m L	42.4		Joost SU	Joost SU Device 5 ml
PHA231 64/38	21/06/ 2023	NPR D- 1625 6	Nic salt vaping substa nce	202301B0201	1/07/2024	Jun- 23		59- 41	50	mg/m L Nic salt	23		SMOK	MAVIC M2500(NZ VERSION) Ice Blue Razz
PHA231 64/55	21/06/ 2023	NPR D- 1626 0	Nic salt vaping substa nce	202301B0201	1/07/2024	Jun- 23		59- 41	50	mg/m L Nic salt	23		SMOK	MAVIC M2500(NZ VERSION) Ice Blueberry
PHA231 94/7	21/06/ 2023	NPR D- 1714	Nic salt vaping	BN2072107	Jul-24	Jun- 23	50-50	43- 57	50	mg/m L	25.7		FROZEN CHOSEN - Salts	Blue Raspberry

			substance											
PHA231 94/2	21/06/ 2023	NPR D- 5182	Nic salt vaping substance	15FBB-001	09-14-2024	Jun- 23	25-75	21- 79	6	mg/m L	5.6		Monster Bar – Fruit Monster	Strawberry Kiwi Pomegranate
PHA231 94/5	21/06/ 2023	NPR D- 5194	Nic salt vaping substance	136A4-001	09/14/2024	Jun- 23	25-75	25- 75	6	mg/m L	2.9		Monster Bar - Frozen Fruit Monster	Mango Peach Guava Ice
PHA231 64/8	21/06/ 2023	NPR D- 5286	vaping device	2202A2008	20/08/2023	Jun- 23		51- 49	50	mg/m L	45.4		SMOK	IGEE Prefilled Pod 5 %
PHA231 94/9	21/06/ 2023	NPR D- 5426	Nic salt vaping substance	132381	BBE 04/25	Jun- 23		27- 73	6	mg/m L	5.7		Dinner Lady	Pink Wave
PHA231 64/4	21/06/ 2023	NPR D- 6351	Nic salt vaping substance	HY225C060A	2024.07.01	Jun- 23		50- 50	50	mg/m L	31.7		VOZOL BAR 1200 puff	Lemon Tart 5 %
PHA231 94/14	21/06/ 2023	NPR D- 669	Nic salt vaping substance	NZ-ED- 122034	25/07/2024	Jun- 23		60- 40	40	mg	32.4		Edmund	Lychee
PHA231 64/19	21/06/ 2023	NPR D- 9318	Nic salt vaping substance	211201	20221224	Jun- 23	50-50	45- 55	5 (50)	% (mg)	41.8		Typhoon	Mentos Mint 5 %
PHA231 94/4	27/06/ 2023	NPR D-	Nic salt vaping		2 years from date of manufacture	Jun- 23	50-50	47- 53	30	mg/m L	26.5		XIYO	X1 Iced Grape

		1023 7	substa nce										
PHA231 64/30	27/06/ 2023	NPR D- 1040 3	Nic salt vaping substa nce	M603532201 0601	2023.06.05	Jun- 23	55- 45	50	mg/m L	37.3		ZOVOO Dragbar	Peach Ice 1000, Peach Ice 2200, Peach Ice 4000, Peach Ice 4000c, Peach Ice 5000, Peach Ice 5000c
PHA231 94/1	27/06/ 2023	NPR D- 1042 7	vaping device			Jun- 23	50-50	57- 43	5 % nic salt	35.2		Pachama ma	Pachamama SYN Disposable
PHA231 64/14	27/06/ 2023	NPR D- 1151 5	Nic salt vaping substa nce			Jun- 23	60-40	54- 46	50 mg/m L Nic salt	17.1		ELFBAR	Cranberry Grape 800 Puff, Cranberry Grape 1500 Puff, Cranberry Grape BC3000 Puff, Cranberry Grape BC5000
PHA231 64/13	27/06/ 2023	NPR D- 1151 6	Nic salt vaping substa nce	EP016845	26/04/2023	Jun- 23	55-45	45- 55	50 mg/m L Nic salt	36.7		ELFBAR	Red Mojito 800 Puff, Red Mojito 1500 Puff, Red Mojito BC3000 Puff, Red Mojito BC5000
PHA231 64/41	27/06/ 2023	NPR D-	vaping device	2112B0249	2/01/2023	Jun- 23	56- 44	5	%	47.5		SMOK	NORD BAR 20 MG/50



		1186 1											MG?NZ VERSION)- Peach Pineapple
PHA231 64/12	27/06/ 2023	NPR D- 1186 2	vaping device	2207B2329	23/07/2024	Jun- 23	36- 64	50	mg/m L	48.8		SMOK	NORD BAR 20 MG/50 MG?NZ VERSION)- energy Ice
PHA231 64/10	27/06/ 2023	NPR D- 1186 3	vaping device	2205D0718	7/11/2023	Jun- 23	57- 43	50	mg/m L	45.1		SMOK	NORD BAR 20 MG/50 MG?NZ VERSION)- mango Ice
PHA231 94/11	27/06/ 2023	NPR D- 1233 7	Nic salt vaping substa nce	OP-PA0009	9/06/2024	Jun- 23	60-40	53- 47	40 mg/m L Nic salt	34.9		AirsPops 313	15 - Peach Ice
PHA231 64/2	27/06/ 2023	NPR D- 1242 3	vaping device	2302B2308	15/09/2024	Jun- 23	56- 44	50	mg/m L Nic salt	17.9		SMOK	MINIONE 20MG/50MG (NZ VERSION)- Kiwi Passionfruit Guava
PHA231 64/49	27/06/ 2023	NPR D- 1270 7	Nic salt vaping substa nce	M603532210 1103	2023.10.17	Jun- 23	70-30	65- 35	50 mg/m L	38.3		ZOVOO	Vincibar F2500(Pinea pple Grapefruit)/ Dragbar F8000(Pinea pple Grapefruit)
PHA231 64/9	27/06/ 2023	NPR D- 1271 4	vaping device	M603532208 2602	2023.10.18	Jun- 23	70-30	67- 33	50 mg/m L	36		ZOVOO	VINCIBAR F2500

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PHA231 64/47	27/06/ 2023	NPR D- 1297 7	vaping device	20230109	Jul-24	Jun- 23	60- 40	50	mg/m L Nic salt	20.8		ammo	ammo GO 50 MG(NZ VERSION)- Mixed Berry ice
PHA231 64/39	27/06/ 2023	NPR D- 1298 1	vaping device	20230109	Jul-24	Jun- 23	56- 44	50	mg/m L Nic salt	20.6		ammo	ammo GO 50 MG(NZ VERSION)- Raspberry Watermelon
PHA231 64/37	27/06/ 2023	NPR D- 1343 4	Nic salt vaping substa nce			Jun- 23	56- 44	50	mg	28.2		CAK	CK1500/Blue berry Raspberr
PHA231 64/58	27/06/ 2023	NPR D- 1423 7	vaping device	IPF20230115	Jan-25	Jun- 23	50-50 65- 35	50 (5)	mg (%) nic salt	26.2		IPUFF 3500 PUFFS	STRAWBERR Y WATERMELO N 50 MG
PHA231 64/40	27/06/ 2023	NPR D- 1520 1	Nic salt vaping substa nce	20230217	Aug-24	Jun- 23	51- 49	50	mg/m L Nic salt	23.7		ammo GO	ammo GO 50 MG(NZ VERSION)- Raspberry Grape Ice
PHA231 64/11	27/06/ 2023	NPR D- 1520 4	Nic salt vaping substa nce	MFG: 20230213	EXP: 20250212	Jun- 23	46- 54	50	mg/m L Nic salt	26.6		ammo GT	ammo GT 50 MG(NZ VERSION)- Pink Lemonade
PHA231 64/48	27/06/ 2023	NPR D- 1549 2	Nic salt vaping substa nce	2301D1202	15/08/2024	Jun- 23	54- 46	50	mg/m L Nic salt	23.1		SMOK	MINIONE 50 MG(NZ VERSION)- Raspberry Watermelon
PHA231 64/52	27/06/ 2023	NPR D- 1549 6	Nic salt vaping	2301D1202	15/08/2024	Jun- 23	49- 51	50	mg/m L Nic salt	17.6		SMOK	Gum

			substance											
PHA231 64/3	27/06/ 2023	NPR D- 1551 1	Nic salt vaping substance	MB09012023	9/12/2024	Jun- 23	50-50	53- 47	50	mg/m L	48.3		MYPUFF	MEGA BOX- 16.5 ML- Banana Milkshak
PHA231 64/16	27/06/ 2023	NPR D- 1559 0	Nic salt vaping substance	32030 3H	Apr-24	Jun- 23	30-70	45- 55	50	mg/m L Nic salt	49.7		Phix Max	Grape Ice 28.5
PHA231 64/7	27/06/ 2023	NPR D- 1559 2	Nic salt vaping substance	32030 3	Apr-24	Jun- 23	41-59	50- 50	50	mg/m L Nic salt	48.8		Phix Max	Strawberry Kiwi 28.5
PHA231 64/1	27/06/ 2023	NPR D- 1601 6	Nic salt vaping substance	Qrd22 (text unclear)	26.4.23	Jun- 23		49- 51	5	% nic salt	42.4		HQD Cuvie Box	Lush Ice/5500 Puffs Disposable
PHA231 64/6	27/06/ 2023	NPR D- 1601 9	Nic salt vaping substance	H202209	17/09/2023	Jun- 23		66- 34	5	% nic salt	36.3		HQD Cuvie Box	Mango Ice/5500 Puffs Disposable
PHA231 94/13	27/06/ 2023	NPR D- 1641 4	Nic salt vaping substance	PO6423	Jun-24	Jun- 23	39-61	59- 41	50	mg/m L	46.7		INFZN	Berry Twist
PHA231 94/15	27/06/ 2023	NPR D- 2137	Nic salt vaping substance	# 221B	13/09/2024	Jun- 23	60-40	58- 42	50	mg/m L	41.7		Airis Mega Disposab le Vape	Strawberry Watermelon

PHA231 94/10	27/06/ 2023	NPR D- 3109	Nic salt vaping substa nce	B#9929	Nov-24	Jun- 23	50-50	43- 57	50	mg/m L Nic salt	32.2	PACHAM AMA Salts	Honeydew Melon
PHA231 94/12	27/06/ 2023	NPR D- 4335	vaping device		2023.06.24.	Jun- 23	60-40	69- 31	5	%	35	Nasty Fix	Butterscotch Coffee
PHA231 94/3	27/06/ 2023	NPR D- 9653	Nic salt vaping substa nce			Jun- 23	50-50	43- 57	30	mg/m L	30.4	Veik E- Liquid	Mango
PHA231 64/28	13/12/ 2023	NPR D- 1150 2	Nic salt vaping substa nce			Nov- 23	59-41	55- 45	50	mg/m L nic salt	18.4	ELFBAR	Kiwi Passion Fruit Guava
PHA231 64/31	13/12/ 2023	NPR D- 1550 4	Nic salt vaping substa nce	MB18112022	18/11/2023	Nov- 23	50-50	63- 37	50	mg/m L	37	MYPUFF	MEGA BOX- 16.5ML- Watermelon Ice
PHA231 64/27	13/12/ 2023	NPR D- 1551 4	Nic salt vaping substa nce	MB18112002	18/11/2023	Nov- 23	50-50	64- 36	50	mg/m L	36.4	MYPUFF	MEGA BOX- 16.5ML- Strawberry Ice
PHA231 64/29	13/12/ 2023	NPR D- 1556 1	Nic salt vaping substa nce	EP019959	24/11/2023	Nov- 23		56- 44	50	mg/m L	33.4	ELFBAR	LB5000 Red Apple Ice
PHA231 64/17	19/12/ 2023	NPR D- 1040 6	Nic salt vaping substa nce	M603532207 2002	2023.10.17	Dec- 23		58. 42	50	mg/m L	35.9	ZOVOO Dragbar	Strawberry Ice 2200

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PHA231 64/53	19/12/ 2023	NPR D- 1151 1	Nic salt vaping substa nce			Dec- 23	60-40	61- 39	50	mg/m L nic salt	17		ELF BAR	Strawberry Ice BC3000 Puff
PHA231 64/46	19/12/ 2023	NPR D- 1151 3	Nic salt vaping substa nce			Dec- 23	60-40	58- 42	50	mg/m L nic salt	17.5		ELFBAR	Watermelon Ice BC3000 Puff
PHA241 04/2	19/12/ 2023	NPR D- 1184 3	Nic salt vaping substa nce	EP025100	2025.01.24	Dec- 23	60-40	57- 43	50	mg/m L nic salt	26.2		ELF BAR	Strawberry Kiwi 1500 Puff
PHA231 94/38	19/12/ 2023	NPR D- 1226 1	Nic salt vaping substa nce	BR-211023	26/10/2023	Dec- 23		56- 44	4	% nic Salt	38.3		AirsPops 313	21 - Mango Pineapple
PHA241 04/4	19/12/ 2023	NPR D- 1270 4	Nic salt vaping substa nce	M603532206 2801	2024.08.03	Dec- 23	70-30	67- 33	50	mg/m l	36		ZOVOO	Vincibar F2500 (Green Voodoo)
PHA231 94/16	19/12/ 2023	NPR D- 1297 5	vaping device	20230324	Sep-24	Dec- 23		45- 55	50	mg/m L nic salt	21.8		ammo	ammo GO 50MG(NZ VERSION)- Pink Lemonade
PHA241 04/10	19/12/ 2023	NPR D- 1298 2	vaping device	20230324	Sep-24	Dec- 23		54- 46	50	mg/m L nic salt	21		ammo	ammo GO 50MG(NZ VERSION)- Blueberry Lemon
PHA231 94/33	19/12/ 2023	NPR D-	Nic salt vaping		2024.02.02	Dec- 23	50-50	58- 42	30	mg nic salt	19.2		Wotofo Mega+	Strawberry ice cream

		1314 6	substa nce										
PHA241 02/1	19/12/ 2023	NPR D- 1427 3	vaping device		30/09/2024	Dec- 23	55-45 64- 36	50	mg/m l	27.4		Top 3000	Sour Apple
PHA231 94/17	19/12/ 2023	NPR D- 1510 4	Nic salt vaping substa nce		25102024	Dec- 23	60-40 57- 43	50	mg/m L nic salt	52		Frozen Salty World	Watermelon Peach Ice
PHA241 04/3	19/12/ 2023	NPR D- 1519 9	Nic salt vaping substa nce	20230217	Aug-24	Dec- 23	49- 51	50	mg/m L nic salt	26.2		ammo GO	ammo GO 50MG(NZ VERSION)- Apple Cola
PHA231 64/34	19/12/ 2023	NPR D- 1520 2	Nic salt vaping substa nce	20230217	Aug-24	Dec- 23	56- 44	50	mg/m L nic salt	25.7		ammo GO	ammo GO 50MG(NZ VERSION)- Blueberry Raspberry
PHA231 64/56	19/12/ 2023	NPR D- 1520 6	Nic salt vaping substa nce	MFG: 20230213	20250212	Dec- 23	56- 44	50	mg/m L nic salt	25.7		ammo GT	ammo GT 50MG(NZ VERSION)- Blueberry Raspberry
PHA231 64/36	19/12/ 2023	NPR D- 1520 8	Nic salt vaping substa nce	MFG: 20221226	20241225	Dec- 23	48- 52	50	mg/m L nic salt	25.6		ammo GT	ammo GT 50MG(NZ VERSION)- Apple Cola
PHA231 94/27	19/12/ 2023	NPR D- 1529 0	Nic salt vaping substa nce	PO6424	Jun-24	Dec- 23	35-65 41- 59	50	mg/m l	55.8		Joost	Cola Ice

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PHA231 94/40	19/12/ 2023	NPR D- 1532 7	Nic salt vaping substa nce	25102024	Dec- 23	60-40	55- 45	50	mg	51.1		Slaty Fizzy World	Mixed Berries Cirtrus Ice
PHA241 04/9	19/12/ 2023	NPR D- 1548 8	Nic salt vaping substa nce	2301D1202	15/08/2024	Dec- 23	44- 56	50	mg/m L nic salt	17.9		SMOK	MINIONE 50MG(NZ VERSION)- Grapefruit Passion Fruit
PHA231 94/42	19/12/ 2023	NPR D- 1551 5	Nic salt vaping substa nce	MB09012023	9/12/2024	Dec- 23	50-50	49- 51	50	mg/m l	55	MYPUFF	MEGA BOX- 16.5ML- Grape
PHA231 64/43	19/12/ 2023	NPR D- 1556 4	Nic salt vaping substa nce	EP019959	24/11/2023	Dec- 23	60- 40	50	mg/m L	32.3		ELFBAR	LB5000 Blueberry Raspberry Cherry
PHA231 64/59	19/12/ 2023	NPR D- 1601 5	Nic salt vaping substa nce	H202209	17/09/2023	Dec- 23	44- 56	5	% nic Salt	43.2		HQD Cuvie Box	Grapey/5500 Puffs Disposable
PHA231 64/57	19/12/ 2023	NPR D- 1601 7	Nic salt vaping substa nce	H202209	17/09/2023	Dec- 23	53- 47	5	% nic Salt	37.1		HQD Cuvie Box	Peach Ice/5500 Puffs Disposable
PHA241 04/5	19/12/ 2023	NPR D- 1602 2	Nic salt vaping substa nce	H 202304	2024.04.12	Dec- 23	61- 39	5	% nic Salt	18.7		HQD Cuvie Box	Pineapple Ice/5500 Puffs Disposable
PHA231 64/51	19/12/ 2023	NPR D-	Nic salt vaping	Qrd22	26/04/2023	Dec- 23	60- 40	5	% nic Salt	42.9		HQD Cuvie Box	Rainbow/55 00 Puffs Disposable



		1602 4	substa nce											
PHA231 94/32	19/12/ 2023	NPR D- 1633 0	Nic salt vaping substa nce	PO6422	Jun-24	Dec- 23	24-76	59- 41	40	mg/m L	37.3		Racer	Berry Ice
PHA231 94/39	19/12/ 2023	NPR D- 1665 4	vaping device		20240210	Dec- 23	60-40	53- 47	20	mg/m L nic salt	18.2		Cloudys 1600 Puffs Disposab le Vape Device	Crisp Apple
PHA231 94/36	19/12/ 2023	NPR D- 1706	Nic salt vaping substa nce	BN2060828	Jun-24	Dec- 23	50-50	44- 56			26.9		CHOSEN - Salts	Sweet Banana
PHA231 94/18	19/12/ 2023	NPR D- 250	Nic salt vaping substa nce			Dec- 23		49- 51	48	mg/m L nic salt	47.9		Solace	Lemon Lime Fusion
PHA241 02/3	19/12/ 2023	NPR D- 3137	Nic freeba se vaping substa nce	BN2080903	Aug-24	Dec- 23	35-65	31- 69	6	mg	5.8		The One	Lemon
PHA231 94/20	19/12/ 2023	NPR D- 326	Nic salt vaping substa nce		03-16-24	Dec- 23		44- 56	50	mg/m l	51.7		VGOD Saltnic	Iced Mango Bomb
PHA231 94/34	19/12/ 2023	NPR D- 342	Nic salt vaping			Dec- 23		45- 55	50	mg/m l	49		VGOD Saltnic	Summer Strawberry



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			substance										
PHA231 94/21	19/12/ 2023	NPR D- 398	Nic salt vaping substance	132358	Apr-25	Dec- 23	51- 49	30	mg/m L	29.6		Dinner Lady eLiquid	Bubble trouble
PHA231 94/35	19/12/ 2023	NPR D-50	Nic salt vaping substance		10032024	Dec- 23	55-45 64- 36	50	mg	47		Salty Puff World	Aloe Vera Ice
PHA231 94/43	19/12/ 2023	NPR D- 5174	Nic salt vaping substance	CB4E6-001		Dec- 23	54- 46	6	mg	5.6		Monster Bar - Tobacco Monster	Smooth
PHA241 02/2	19/12/ 2023	NPR D- 5602	Nic freebase vaping substance	95108750001	25/05/2025	Dec- 23	50-50 52- 48	18	mg/m L	17.7		LIQUA	Menthol
PHA231 94/22	19/12/ 2023	NPR D- 621	Nic salt vaping substance		Mar-25	Dec- 23	40-60 38- 62	12	mg/m L nic salt	7		Hard Out	Nip n Cola
PHA231 94/41	19/12/ 2023	NPR D- 631	Nic salt vaping substance	1019	Dec-24	Dec- 23	40-60 36- 64	6	mg/m L	3.5		Island Drip	Island Time
PHA241 02/5	19/12/ 2023	NPR D- 6323	Nic freebase vaping	L-07479	Jul-25	Dec- 23	50-50 45- 55	40	mg/m L	24.3		Coolers	Berries on Ice

			substance										
PHA231 94/24	19/12/ 2023	NPR D- 6421	Nic salt vaping substance	MAX230525	2025.12	Dec- 23	41- 59	50	mg/m L nic salt	49.4		IPLAY	Blueberry Ice
PHA231 94/37	19/12/ 2023	NPR D- 666	Nic salt vaping substance	NZ-ED- 222031	25/07/2024	Dec- 23	20- 80	20	mg	19.3		Edmund	Blueberry
PHA231 94/30	19/12/ 2023	NPR D- 8432	Nic salt vaping substance	EV2023018	2024.04.22	Dec- 23	53.34 - 38.22	61- 39	50 mg/m L nic salt	24.7		WOTOF O	Blueberry Raspberry Ice
PHA241 02/4	19/12/ 2023	NPR D- 9107	vaping device	132789	Apr-25	Dec- 23	52- 48	50	mg/m l	48.9		Dinner Lady	Strawberry Ice
PHA231 94/31	19/12/ 2023	NPR D- 957	Nic salt vaping substance	25/04/2023	24/04/2025	Dec- 23	28-72	59- 41	50 mg/m l	48.5		thevaper snest	mango peach watermelom
PHA231 94/44	19/12/ 2023	NPR D- 958	Nic salt vaping substance	DQV431	1/12/2023	Dec- 23	50-50	60- 40	50 mg nic salt	33.2		thevaper snest	banana milk
PHA231 64/23	26/01/ 2024	NPR D- 1040 2	Nic salt vaping substance	M603532207 2002	2023.10.17	Jan- 24	57- 43	50	mg/m L	38		ZOVOO Dragbar	Green Apple Ice 2200
PHA231 64/26	26/01/ 2024	NPR D-	Nic salt vaping	M603532207 1902	2023.10.17	Jan- 24	51- 49	50	mg/m L	37.8		ZOVOO Dragbar	(Orange Mango

		10408	substance											Guava) OMG 2200
PHA241 04/8	26/01/2024	NPR D-12706	Nic salt vaping substance	M603532206 2801	2024.10.18	Jan-24	70-30	66-34	50	mg/m L	37.7		ZOVOO	Vincibar F2500 (Peach Snow-Pear)
PHA241 04/6	26/01/2024	NPR D-12708	Nic salt vaping substance	M603532206 2801	2024.10.18	Jan-24	70-30	62-38	50	mg/m L	38.3		ZOVOO	Vincibar F2500 (Rainbow Bear
PHA241 04/7	26/01/2024	NPR D-14238	vaping device	IPF20230517	1/05/2025	Jan-24	60-40	58-42	4.29	% Nicotine Salt	27.3		IPUFF ULTRA	MANGO PEACH WATERMELO N 50MG
PHA231 64/25	26/01/2024	NPR D-15210	Nic salt vaping substance	MFG: 20230213	20250212	Jan-24		54-46	50	mg/m L	26.9		ammo GT	ammo GT 50MG(NZ VERSION)-Mixed Berry Ice
PHA241 04/1	26/01/2024	NPR D-15490	Nic salt vaping substance	2301D1202	15/08/2024	Jan-24		60-40	50	mg/m L	22.7		SMOK	MINIONE 50MG(NZ VERSION)-Lemon Passion Fruit
PHA231 94/29	26/01/2024	NPR D-15750	Nic salt vaping substance	FTMOH2320	1/03/2025	Jan-24	60-40	50-50	50	mg/m L	28.2		Super Salts 4000	Lemonade
PHA231 64/20	26/01/2024	NPR D-16018	Nic salt vaping substance	H202209	17/09/2023	Jan-24		48-52	50	mg/m L	44.8		HQD Cuvie Box	Banana Ice/5500 Puffs Disposable

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PHA231 64/22	26/01/ 2024	NPR D- 1602 3	Nic salt vaping substa nce	H202209	17/09/2023	Jan- 24	54- 46	50	mg/m L	43.4	HQD Cuvie Box	Black Ice/5500 Puffs Disposable
PHA231 94/52	26/01/ 2024	NPR D- 1671 4	Nic salt vaping substa nce	C294-011		Jan- 24	47- 53	45	mg/m L	44.2	Solace Black	Purple Frost
PHA231 94/48	26/01/ 2024	NPR D- 1707	Nic salt vaping substa nce	2060805	1/06/2024	Jan- 24	50-50 44- 56	50	mg/m L	27.8	CHOSEN - Salts	Apricot Preserve
PHA231 94/23	26/01/ 2024	NPR D- 1709 1	Nic salt vaping substa nce	SNBG202303 2001	20240320	Jan- 24	45-55 45- 55	50	mg/m L	26.6	WOTOF O	Zetta Frozen Cola
PHA231 94/19	26/01/ 2024	NPR D- 1744 4	Nic salt vaping substa nce	HY22SCABBI	29/12/2024	Jan- 24	60-40 51- 49	42	mg/m L	26.4	Vozol Star 3000	Tropical Jungle
PHA231 94/56	26/01/ 2024	NPR D- 3401	vaping device	2303B0710	1/03/2025	Jan- 24	57- 43	50	mg/m L	23.8	SMOK	NORD Bar- Peach Ice
PHA231 94/46	26/01/ 2024	NPR D- 3906	Nic salt vaping substa nce			Jan- 24	50-50 46- 54	35	mg/m L	17.8	Reckless Gluttony	Toffee Parfait
PHA231 94/45	26/01/ 2024	NPR D- 395	Nic salt vaping substa nce	132713	1/04/2025	Jan- 24	29- 71	6	mg/m L	5.8	Dinner Lady eLiquid	Blackberry Crumble

PHA231 94/25	26/01/ 2024	NPR D- 5285	Nic salt vaping substa nce	2303B0810	1/03/2025	Jan- 24	61- 39	50	mg/m L	19.6			SMOK	Blueberry Ice	
PHA231 94/47	26/01/ 2024	NPR D- 928	Nic salt vaping substa nce	ID280922J	1/09/2024	Jan- 24	50-50	46- 54	20	mg/m L	20		Crush Ice	Vanilla Dragon Ice	
PHA231 94/51	26/01/ 2024	NPR D- 9328	Nic salt vaping substa nce	CL200323J1	1/03/2025	Jan- 24	50-50	49- 51	20	mg/m L	20.5		Hola Cola	Hola Lime Cola	
PHA231 94/53	26/01/ 2024	NPR D- 9707	Nic salt vaping substa nce	A280323	23/12/2023	Jan- 24	31- 69	12	mg	12.5			Vapouriu m	Hasseltoff	
PHA231 94/50	26/01/ 2024	NPR D- 9895	Nic salt vaping substa nce	H202206	20/06/2023	Jan- 24	49- 51	50	mg/m L	54.7			HQD	Air Strawberry Coconut	
PHA231 94/28	13/03/ 2024	NPR D- 1320 0	vaping device	NZ-HB-2206	25/07/2024	Jan- 24	50-50	55- 45	3.5	% nic salt	30		Hebat	Hebat B6000 Disposable Pod Old Popsicle	
PHA231 94/26	13/03/ 2024	NPR D- 4992	Nic salt vaping substa nce	79	-	Jan- 24	-	19- 81	3	mg/m L	2.9		Ripe Vapes	VCT Chocolate	
PHA231 48/1	20/03/ 2024	NPR D- 6804	Nic salt vaping	-	-	11/20 23- 02/20 24	50-50	56- 44	35	mg nic salt	26.7	<0.3	notifica tion expired	Kiwicig	Gummy Candy

			substance										11/02/2024		
PHA231 48/2	25/03/2024	NPR D-1210	Nic freebase vaping substance	NZ230214	Jan-24	03/2023-02-2024	20-80	21-79	6	mg/mL	6.1	<0.3	notification expired 23/01/2024	Vape Canyon	Thug 2018
PHA231 48/3	25/03/2024	NPR D-4124	Nic freebase vaping substance	3E98A-001	09/19/2024	11/2023-02/2024	25-75	25-75	6	mg/mL	5.9	<0.3	notification expired 27/04/2023, purchased 17/03/2023	PB & Jam Monster	Grape
PHA231 48/9	25/03/2024	NPR D-5288	Nic freebase vaping substance	A60293	Jul-25	11/2023-02/2024	30-70	28-72	12	mg/mL	10.3	0.4		Just Juice	Apple & Pear On Ice
PHA231 48/8	25/03/2024	NPR D-5798	Nic freebase vaping substance	-	-	11/2023-02/2024	50-50	53-47	18	mg/mL	18.1	0.6		Aramax	Max Watermelon
PHA231 48/7	25/03/2024	NPR D-6233	Nic salt vaping substance	55D58-001	09/13/2024	11/2023-02/2024	25-75	28-72	6	mg/mL	5.8	1.5	notification expired 10/02/2023, purchased 16/03/2023. Stil	Lemonade Monster	Strawberry

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													available on market			
PHA231 48/5	25/03/2024	NPR D-6628	Nic freebase vaping substance	VP20220620	Jun-24	11/2023-02/2024	30-70	30-70	3	mg/mL	1.3	2.4	notification expired 10/02/2023, purchased 16/03/2023	Cloud vape	Cool Watermelon	
PHA231 48/10	25/03/2024	NPR D-85	Nic salt vaping substance	ALY32 220811	10082024	11/2023-02/2024	50-50	60-40	50	mg nic salt	47.8	<0.3	notified 10/08/2023	Salty world	Grape	
PHA231 48/6	25/03/2024	NPR D-9761	Nic salt vaping substance	HQD202207	2023.07.15	11/2023-02/2024	-	42-58	50	mg/mL	26.8	<0.3	notification expired 11/03/2023	HQD	Cuvie Plus Lush Ice	
PHA241 52/2	27/03/2024	NPR D-102	Nic freebase vaping substance	-	1092025	12/2023-02/2024	30-70	7-*93	6	mg/mL	6.2			Cloud Chaser	Nothing But Green	
PHA241 12/9	27/03/2024	NPR D-12005	Nic salt vaping substance	B#10514	Feb-25	11/2023-02/2024	35-65	31-69	6	mg/mL	3.5	1.8	notification expired on 12/07/2023, purchased 09/10/2023	Fruitia	Blood Orange Cactus	

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PHA241 12/4	27/03/ 2024	NPR D- 1261 1	Nic salt vaping substa nce	I220704	20230703	11/20 23- 02/20 24	-	53- 47	50	mg/m L	36.7	10.5	notifica tion expired on 08/08/2 023, purchas ed 09/10/2 023	Vapengi n	Mars Gate Cranberry Grape
PHA231 94/55	27/03/ 2024	NPR D- 1297 6	vaping device	20230324	Sep-24	11/20 23- 02/20 24		60- 40	50	mg/m L Nic salt	20.9			ammo	ammo GO 50MG(NZ VERSION) – Double Apple
PHA231 94/54	27/03/ 2024	NPR D- 1510 2	Nic salt vaping substa nce		25102024	11/20 23- 02/20 24	60-40	58- 42	50	mg	50.6		Notified 20/10/2 023	Frozen Salty World	Kiwi Blueberry Ice
PHA241 12/1	27/03/ 2024	NPR D- 1549 4	Nic salt vaping substa nce	2301D1202	15/08/2024	11/20 23- 02/20 24	-	57- 43	50	mg/m L Nic Salt	22.4	1		SMOK	Blueberry Lemon
PHA231 94/6	27/03/ 2024	NPR D- 1617 2	Nic salt vaping substa nce			11/20 23- 02/20 24	65-35	59- 41	50	mg/m L Nic salt	18.2			ELFBAR BC3000	Blue Razz Ice
PHA231 94/49	27/03/ 2024	NPR D- 1704	Nic salt vaping substa nce	2120608	Dec-24	11/20 23- 02/20 24	50-50	46- 54	50	mg/m L	28.3			CHOSEN - Salts	Peach & Passionfruit
PHA241 12/8	27/03/ 2024	NPR D- 2100	Nic freeba se	-	-	11/20 23-	70-30	73- 27	6	mg	5.7	0.7		myohm	Energy Shot



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			vaping substa nce			02/20 24									
PHA241 52/3	27/03/ 2024	NPR D- 316	Nic freeba se vaping substa nce	-	Nov-24	12/20 23- 02/20 24	30-70	32- 68	6	mg	5.9			Electric Vape	Grizzly
PHA241 12/7	27/03/ 2024	NPR D- 329	Nic salt vaping substa nce	CB550032922 -1	03-29-24	11/20 23- 02/20 24	-		50	mg/m L	51.7	0.8	notifica tion expired on 02/12/2 023, purchas ed 09/10/2 023	VGOD Saltnic	Cubano Black
PHA241 52/4	27/03/ 2024	NPR D- 3718	Nic freeba se vaping substa nce	-	BB01/25	12/20 23- 02/20 24	30-70	20- 80	6	mg/m L	4.8			Twist	Iced Pink Punch
PHA241 52/5	27/03/ 2024	NPR D- 4816	Nic freeba se vaping substa nce	268	-	12/20 23- 02/20 24	30-70	27- 73	6	mg/m L	6.5			Pop!	Blue Raspberry
PHA241 12/6	27/03/ 2024	NPR D- 5439	Nic salt vaping substa nce	141540	Dec-25	11/20 23- 02/20 24	-	42- 58	30	mg/m L Nic Salicyl ate	29.4	1.6		Dinner Lady	Bubblegum Ice

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PHA241 12/5	27/03/ 2024	NPR D- 6191	Nic salt vaping substa nce	871EC-001	09/23/2024	11/20 23- 02/20 24	25-75	31- 79	6	mg/m L	5.8	<0.3		Custard Monster	Blackberry
PHA241 12/3	27/03/ 2024	NPR D- 7290	Nic freeba se vaping substa nce	A190123	16/10/2023	11/20 23- 02/20 24	-	25- 75	12	mg	12.2	<0.3		Aotearoa E-Juice	Cherry Cola
PHA241 12/2	27/03/ 2024	NPR D- 7595	Nic freeba se vaping substa nce	723284112	Jul-24	11/20 23- 02/20 24	30-70	27- 73	3		2	<0.3		Long White Vapour	Melon Dragon Fruit
PHA241 52/1	27/03/ 2024	NPR D- 9017	Nic freeba se vaping substa nce	-	-	12/20 23- 02/20 24	50-50	38- 62	35	mg/m L	19.4		notifica tion expired on 28/04/2 023, purchas ed 17/10/2 023	Strapped	Cool Lemon Sherbet
PHA241 17/4	28/03/ 2024	NPR D- 1060 4	Nic salt vaping substa nce	-	-	11/20 23- 02/20 24	-	42- 58	50	mg/m L Nic Salt	51.9		notifica tion expired on 27/04/2 023, purchas ed 11/10/2 023	Kang	Cool Mint

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PHA241 17/17	28/03/ 2024	NPR D- 1073 6	Nic salt vaping substa nce	VNS330338	Aug-24	11/20 23- 02/20 24	55-45 40- 60	5	% Nic Salt	47.9	notifica tion expired on 28/04/2 023, purchas ed 17/10/2 023	Tokk	Blue Cloud
PHA241 17/12	28/03/ 2024	NPR D- 1150 7	Nic salt vaping substa nce	EP018026	05 2024	11/20 23- 02/20 24	62-38 53- 47	30	mg/m L	31.8	notifica tion expired on 15/06/2 023, purchas ed 16/10/2 023	ELFBAR	Pink Lemonade
PHA241 17/2	28/03/ 2024	NPR D- 1198 5	Nic salt vaping substa nce	A230523	17/02/2024	11/20 23- 02/20 24	- 35- 65	18	mg	10.2		Aotearoa E-Juice	Strawberry Kiwifruit
PHA241 17/20	28/03/ 2024	NPR D- 1366 6	Nic salt vaping substa nce	VNS220625	Jun-24	11/20 23- 02/20 24	55-45 56- 44	5	%	46.2	notifica tion expired on 03/10/2 023, purchas ed 17/10/2 023	Tokk	Tokk Pod - Pineapple Ice
PHA241 17/3	28/03/ 2024	NPR D-	Nic salt vaping	PA0113 PA0132	3/01/2025 27/02/2025	11/20 23-	64-36 56- 44	50		28.4		AirsPops 313	23 - Red Apple

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		1441	substance			02/2024									
PHA241 17/10	28/03/ 2024	NPR D- 1526 3	Nic salt vaping substance	H202303	2024.03.29	11/2023- 02/2024	-	59-41	5%	Nic Salt	20.4			HQD	XXL Energy Drink
PHA241 17/7	28/03/ 2024	NPR D- 1534 0	Nic salt vaping substance	PO6490	Nov-24	11/2023- 02/2024	60-40	61-39	50	mg/mL	45.8		notification expired on 02/12/2023, purchased 16/10/2023	Joost SU	Peach Ice
PHA241 17/5	28/03/ 2024	NPR D- 1797	Nic salt vaping substance	62902	Sep-24	11/2023- 02/2024	50-50	48-52	20	mg/mL Nic Salt	21		notification expired on 26/01/2024, purchased 11/10/2023	KIWIAZ SALTS	Yea Nah
PHA241 17/8	28/03/ 2024	NPR D- 2152	Nic salt vaping substance	-	15/06/2024	11/2023- 02/2024	60-40	60-40	50	mg/mL	47.4		notification expired on 28/01/2024, purchased 16/10/2023	Super Salts	Lychee Ice

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PHA241 17/13	28/03/ 2024	NPR D- 345	Nic salt vaping substa nce	141547	Dec-25	11/20 23- 02/20 24	-	52- 48	30	mg/m L Nic Salicyl ate	31.7	notifica tion expired on 28/04/2 023, purchas ed 16/10/2 023	Dinner Lady eLiquid	Blackberry Crumble
PHA241 17/14	28/03/ 2024	NPR D- 371	Nic salt vaping substa nce	132763	Apr-25	11/20 23- 02/20 24	-	28- 72	6	mg/m L	6.1		Dinner Lady eLiquid	Sweet Tobacco
PHA241 17/1	28/03/ 2024	NPR D- 4137	Nic salt vaping substa nce	600A8-001	09-14-2024	11/20 23- 02/20 24	25-75	27- 73	6	mg	6		The Milk	Milk Fruity
PHA241 17/16	28/03/ 2024	NPR D- 5393	Nic salt vaping substa nce	132782	Apr-25	11/20 23- 02/20 24	-	53- 47	50	mg/m L	49.4	notifica tion expired on 28/04/2 023, purchas ed 16/10/2 023	Dinner Lady	Blue Menthol
PHA241 17/9	28/03/ 2024	NPR D- 602	Nic salt vaping substa nce	-	May-25	11/20 23- 02/20 24	40-60	39- 61	12	mg/m L nic benzo ate	7.5		Hard Ice	Berry Blitz
PHA241 17/11	28/03/ 2024	NPR D- 961	Nic salt vaping	22/05/2023	21/05/2025	11/20 23-	28-72	63- 37	50	mg/m L	51.5	notifica tion expired	thevaper sneet	Peach ice

			substance			02/2024					on 28/04/2023, purchased 17/10/2023		
PHA241 17/6	28/03/2024	NPR D-9909	Nicotine salt vaping substance	H202305	2024.05.08	11/2023-02/2024	-	60-40	-	19		HQD	Air Peach Ice
PHA242 04/4	1/05/2024	NPR D-11172	Nicotine Salt Vaping Substance	-	-	03/2024-04/2024	50-50	47-53	18	17.6		HILIQ META	Wild Watermint/ Menthol
PHA242 04/10	1/05/2024	NPR D-15291	Nicotine Salt Vaping Substance	PO6467/NSC MT505G	1/08/2024/Feb2025	03/2024-04/2024	41-59	41-59	50	50		Joost	Mint
PHA242 04/7	1/05/2024	NPR D-16278	Nicotine Salt Vaping Substance	BP3K082SB	Nov-25	03/2024-04/2024	60-40	58-42	2%	18.8		Solo Plus	Blue Raspberry
PHA242 04/8	1/05/2024	NPR D-16508	Nicotine Salt Vaping Substance	I202311D	Oct-25	03/2024-04/2024	60-40	57-43	38	18.8		IGET	BAR – Watermelon Mint Ice

Substance													
PHA242 04/2	1/05/2 024	NPR D- 1770 8	Nicotine Salt Vaping Substance	135976	Jul-25	03/20 24- 04/20 24	-	24- 76	6 mg	5.9		Dinner Lady	Peach Bubble Ice
PHA242 04/3	1/05/2 024	NPR D- 324	Nicotine Salt Vaping Substance	LIS50092622- 1	9/26/24	03/20 24- 04/20 24	-	43- 57	50	51.5		VGOD Salt Nic	LushIce
PHA242 04/1	1/05/2 024	NPR D- 328	Nicotine Salt Vaping Substance	-	-	03/20 24- 04/20 24	-	44- 56	25	25.6		VGOD Salt Nic	Dry Tobacco
PHA242 04/6	1/05/2 024	NPR D- 347	Nicotine Salt Vaping Substance	-	Sep-24	03/20 24- 04/20 24	-	53- 47	50	46.2		Dinner Lady	Blue Menthol
PHA242 04/5	1/05/2 024	NPR D- 5345	Nicotine Salt Vaping Substance	-	-	03/20 24- 04/20 24	40-60	58- 42	50	39.5		Summer Lumma	variant fruity cubes

PHA242 04/9	1/05/2 024	NPR D- 8378	Nicoti ne Salt Vapin g Substa nce	A66704	Nov-24	03/20 24- 04/20 24	30-70	25- 75	6	mg	7.4		Supergo od	Butter 07
PHA242 32/7	16/05/ 2024	NPR D- 1161 3	Nicoti ne Salt Vapin g Substa nce	7.50E+85	May-25	04/20 24- 05/20 24	50-50	50- 50	30	mg/m L nic salicyl ate	30.7 0.8		CORE By Dinner Lady	Tropic Mango Chill
PHA242 32/8	16/05/ 2024	NPR D- 1225 4	Nicoti ne Salt Vapin g Substa nce	OP-PA0103	18/11/2024	04/20 24- 05/20 24	60-40	59- 41	50 (28.5)	mg/m L nic salts (mg/ mL FB)	26.9 2.9		AirsPops 313	14 - Strawberry Yogurt
PHA242 32/3	16/05/ 2024	NPR D- 1326 0	Nic freeba se vaping substa nce		Feb-25	04/20 24- 05/20 24	45-55	47- 53	18	mg/m L	17.8 <0.3		V	Menthol Ice
PHA242 32/2	16/05/ 2024	NPR D- 1506 9	Nicoti ne Salt Vapin g Substa nce	CT20221014_ 1	Oct-25	04/20 24- 05/20 24	30-70	29- 71	6	mg/m L nic salts	6.1 2.2		Aisu	Cactus
PHA242 32/6	16/05/ 2024	NPR D- 2022 0	vaping device	H2303H1206 S 5144030128	Dec-24	04/20 24- 05/20 24	55-45	63- 37	40	mg/m L nic salts	30.5 <0.3		Inmood	Inmood Switch Menthol Ice



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														Replacement Pod 40 mg
PHA242 32/4	16/05/ 2024	NPR D- 2407 8	Nicoti ne Salt Vapin g Substa nce	F231112	20251111	04/20 24- 05/20 24	50- 50	40	mg/m L nic salts	19.4	4.4		Vapengi n	Pineapple
PHA242 32/9	16/05/ 2024	NPR D- 2449 7	vaping device	VP1136	20/06/2025	04/20 24- 05/20 24	36-64 63- 37	40	mg/m L nic salts	19.2	3		Cloudys Booster	Raspberry Grape
PHA242 32/5	16/05/ 2024	NPR D- 2594 7	Nic freeba se vaping substa nce	2311108234	10/11/2025	04/20 24- 05/20 24	30-70 25- 75	12	mg/m L	12.2	0.9		Shelley	Banana Caramel
PHA242 32/1	16/05/ 2024	NPR D- 2627 9	Nic freeba se vaping substa nce	11324	Mar-26	04/20 24- 05/20 24	50-50 49- 51	15	mg/m L	16	<0.3		VAPURE	Espresso
PHA242 32/10	16/05/ 2024	NPR D-55	Nicoti ne Salt Vapin g Substa nce		10082024	04/20 24- 05/20 24	57-43 48- 52	50	mg	57.3	5.7		Salty Bubble World	Redcurrant Grape cherry
PHA242 33/7	24/05/ 2024	NPR D- 1218 7	Nicoti ne Salt Vapin g		26/07/2024	04/20 24- 05/20 24	60-40 57- 43	50	mg/m L nic salts	26.8			AirsPops	Pink Crystal

			Substance											
PHA242 33/19	24/05/ 2024	NPR D- 1296 0	Nicotine Salt Vaping Substance			04/20 24- 05/20 24	60-40	56- 44	40	mg/mL nic salts	45.2		Inmood Hi Puff 5K	Sour Apple
PHA242 33/9	24/05/ 2024	NPR D- 2031 6	Nicotine Salt Vaping Substance	12403B	Feb-26	04/20 24- 05/20 24	60-40	56- 44	20	mg/mL	19.6		Iget Bar	Blueberry Raspberry
PHA242 33/12	24/05/ 2024	NPR D- 2033 9	Nicotine Salt Vaping Substance	12401E	Dec-25	04/20 24- 05/20 24	40-60	58- 42	20	mg/mL	18.9		Iget Bar	Cherry Pomegranate
PHA242 33/17	24/05/ 2024	NPR D- 2106 1	Nicotine Salt Vaping Substance			04/20 24- 05/20 24	50-50	51- 49	40	mg nic salt	24.8		Phantom	Mint
PHA242 33/8	24/05/ 2024	NPR D- 2305 4	Nicotine Salt Vaping Substance	A69412	Jan-25	04/20 24- 05/20 24	30-70	26- 74	6	mg	6.2		Supergood	Butter 05

## Document 1

PHA242 33/10	24/05/ 2024	NPR D- 2321 7	Nicoti ne Salt Vapin g Substa nce	27/11/2023	27/11/2025	04/20 24- 05/20 24	58- 42	20	mg/m L	18.9		LOCO R8000	LOCO R8000 Kit / Grape Raspberry
PHA242 33/3	24/05/ 2024	NPR D- 2322 4	Nicoti ne Salt Vapin g Substa nce		Mar-26	04/20 24- 05/20 24	40-60	38- 62	12 (6.8)	mg/m L Nic benzo ate (mg/ mL FB)	7.1	Black Sheep	Vanilla Tobacco
PHA242 33/6	24/05/ 2024	NPR D- 2357 7	vaping device	C9000H	Nov-25	04/20 24- 05/20 24	60-40	58- 42	20	mg/m L	18.7	Lords bar 7000 pro/bar 7000	Lords bar 7000 pro/bar 7000 pod*
PHA242 33/11	24/05/ 2024	NPR D- 2395 0	Nicoti ne Salt Vapin g Substa nce	PN4A2528BP	Jan-25	04/20 24- 05/20 24	50-50	57- 43	28	mg/m L	28.9	Bud Pods	Passionfruit Sour
PHA242 33/4	24/05/ 2024	NPR D- 2411 3	Nicoti ne Salt Vapin g Substa nce	281123	27/11/2024	04/20 24- 05/20 24	60-40	60- 40	32	mg/m L nic salts	19.6	Akso lgo 6000 Puffs with Ren	Peach Blueberry
PHA242 33/20	24/05/ 2024	NPR D- 2439 6	Nicoti ne Salt Vapin g	FOG231218	2026.5	04/20 24- 05/20 24		58- 42	50	mg/m L nic salts	23.6	Iplay fog	Watermelon Pineapple

Substance													
PHA242 33/13	24/05/ 2024	NPR D- 2496 5	Nicotine Salt Vaping Substance	3062301	Jun-25	04/20 24- 05/20 24	50-50	45- 55	25	mg/m L nicotine salts	13.5	Master Tang	Apple Pear
PHA242 33/15	24/05/ 2024	NPR D- 2537 7	Nicotine Salt Vaping Substance	I2312Q	Nov-25	04/20 24- 05/20 24	60-40	57- 43	38	mg/m L	18.9	IGET BAR PLUS	Watermelon Mint
PHA242 33/16	24/05/ 2024	NPR D- 2544 1	Nicotine Salt Vaping Substance	NZ2401YD	28/01/2026	04/20 24- 05/20 24		53- 47	28.5	mg/m L	28.7	Top	Kiwifruit Pineapple
PHA242 33/2	24/05/ 2024	NPR D- 2557 6	Nicotine Salt Vaping Substance	3102604	Oct-25	04/20 24- 05/20 24	50-50	43- 57	50	mg/m L nicotine salts	27.9	FROZEN CHOSEN - Salts	Apple
PHA242 33/5	24/05/ 2024	NPR D- 2570 5	Nicotine Salt Vaping Substance	F240124	20260123	04/20 24- 05/20 24		53- 47	40	mg/m L nicotine salts	18.9	Vapengin Vulcan	Passionfruit Guava

PHA242 33/14	24/05/ 2024	NPR D- 2584 6	Nicoti ne Salt Vapin g Substa nce	2024.01.28	2026.01.27	04/20 24- 05/20 24	60-40	58- 42	40	mg/m L nic salts	19.4		Serein Mech Pro 10000 puffs	Kiwifruit Guava
PHA242 33/1	24/05/ 2024	NPR D- 2611 4	Nicoti ne Salt Vapin g Substa nce	240203BN29 P	Feb-26	04/20 24- 05/20 24	55-45	57- 43	2.85 (28.5)	5 (mg/ mL)	29.2		Solo Pods	Banana
PHA242 33/18	24/05/ 2024	NPR D- 2647 4	Nicoti ne Salt Vapin g Substa nce	20231220	Jan-26	04/20 24- 05/20 24	63-37	60- 40	28.5	mg/m L	28.3		TILT	Strawberry Raspberry
PHA231 48/4	5/06/2 024	NPR D- 1312 7	vape device			11/20 23- 02/20 24, 05/20 24	50-50	34- 66	30	mg salt	32.7	0.5	Wotofo Mega+ Disposab le Vape	variant Lemon cola
PHA241 12/10	5/06/2 024	NPR D- 1747 5	Nicoti ne Salt Vapin g Substa nce	230101	20240710	11/20 23- 02/20 24, 05/20 24	50-50	55- 45	50	mg salt	25.7	4.8	Typhoon Circle Disposab le	variant Grapefruit Passionfruit
PHA241 17/18	5/06/2 024	NPR D- 1804 5	Nicoti ne Salt Vapin	I202302	Jan-25	May- 24	60-40	53- 47	50		18.6		IGET	XXL - Grape

PHA242 44/1	5/06/2 024	NPR D- 183	Nic freeba se vaping substa nce			04/20 24- 05/20 24	50-50	52- 48	18	mg	16.6		SHOSHA	Guarana Drink
PHA242 44/2	5/06/2 024	NPR D- 2364 9	vape device	NZ20240105	4/01/2026	04/20 24- 05/20 24		59- 41	20	mg/m L	22.2		Bingo	Blueberry
PHA242 44/5	5/06/2 024	NPR D- 2376 1	Nic freeba se vaping substa nce		08/30/25	04/20 24- 05/20 24	30-70	25- 75	6	mg	5.8		TFN Vape	Sweet Mango
PHA242 44/3	5/06/2 024	NPR D- 2400 2	vape device		Jan-25	04/20 24- 05/20 24	55-45	52- 48	40	mg/m L nic salt	34.9		Inmood 10K	Peach Apple cartoon
PHA242 44/4	5/06/2 024	NPR D- 2409 5	vape device	F240110	20260109	04/20 24- 05/20 24		47- 53	40	mg/m L nic salt	19.5		Vapengi n	Strawberry Watermelon
PHA241 17/19	5/06/2 024	NPR D- 2849	Nicoti ne Salt Vapin g Substa nce	BN2051802	May-24	May- 24	50-50	46- 54	25	mg	13		Vape Box Salts	Lemon Tart
PHA241 17/15	5/06/2 024	NPR D- 4131	Nicoti ne Salt Vapin	AF5B8B-001		May- 24		53- 47	6	mg salt	5.5		Tobacco Monster	Rich

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# Memo

## Post-market surveillance testing of vaping products

<b>Date:</b>	24 June 2024
<b>To:</b>	Dr Andrew Old, Deputy Director-General, Public Health Agency   Te Pou Hauora Tūmatanui
<b>Cc:</b>	Jane Chambers, Group Manager, Public Health Policy and Regulation, Public Health Agency   Te Pou Hauora Tūmatanui
<b>From:</b>	Gill Hall, Manager Ope te Tatua, Public Health Agency   Te Pou Hauora Tūmatanui
<b>For your:</b>	Action

### Purpose of report

1. This memo raises risks and issues with the current vaping product testing approach and seeks your endorsement of the future direction of post-market testing as we develop a product strategy.

### Issue with current post-market surveillance testing

#### *Background to the current testing programme*

2. One of the purposes and intent of the Smokefree Environments and Regulated Products Act (the Act) is to minimise harm and regulate the safety of vaping products. The Act and regulations require manufacturers to test their products annually and report the results to the Director-General of Health (DG). Section 71 of the Act allows the DG to request additional safety information about a product if they have reasonable safety concerns about a product.
3. The Ministry of Health (the Ministry) contracted ESR in January 2023 to perform post-market surveillance testing for regulated products. There is no strategy in place which guides what product testing should be undertaken, including what action is required following receipt of testing results.
4. This testing programme was introduced by the Vaping Regulatory Authority (VRA) as part of a suite of testing and scientific analysis (method development, quality assurance testing, environmental sampling, and understanding the vape product landscape) aiming to support the regulatory functions of the VRA, and to give effect to the (now repealed) 2022 amendments to the Act relating to the Tobacco Regulatory Authority (TRA).
5. The Ministry positions vaping products as harm-reduction tools only to be used by people who smoke cigarettes. It would be reasonable to expect vaping products to contain the level of nicotine they claim to have, so consumers can make informed choices when deciding what products to use on their journey to quit smoking.



6. There are several benefits to collecting and analysing vaping product testing data; these include supporting policy work on manufacturing policies and supporting product monitoring (by providing objective safety-related information on products) and compliance work (for product ingredients and labelling).
7. The regulated products team is still building its capability to fully recognise these benefits.

*Issues with testing results from 2023-24*

8. Since January 2023, ESR has tested 116 vaping products with a total spend of **s 9(2)(b)(ii)** (approximately **s 9(2)(b)(ii)** per test). The annual budget set aside for vaping product testing in 2023-24 is \$200,000.
9. In January 2024, we analysed testing results from products sourced in March 2023 with the Intelligence, Surveillance, and Knowledge group (ISK) and found 36 out of 51 products tested had a variance of over 10% between tested nicotine concentration<sup>1</sup> and what was labelled on the product.
10. Further analysis was done for products sourced in June and November 2023, with similar results.

11. **s 9(2)(b)(ii)**  
**s 9(2)(b)(ii)**  
**s 9(2)(b)(ii)**  
**s 9(2)(b)(ii)**

*Impact of 23/24 testing results*

12. **s 9(2)(b)(ii)**  
the results are concerning, because they indicate that at least some vaping products are not being manufactured in a high quality, consistent manner.
13. The overall risks and issues identified include:
  - i. the need for clearer requirements for product testing
  - ii. the regulated products team capacity to respond to the issues in a timely way and develop appropriate compliance/communication processes
  - iii. product non-compliance, dating back to March 2023 which poses legal and reputational risk for the Ministry.

## Addressing the issue

*Remedial approach*

14. To address the issues above, the testing programme is being incorporated into a broader regulated products strategy, and into the general work programme.
15. The regulated products strategy will consider the testing regulations and highlight opportunities to ensure regulatory compliance in the pre-notification phase, notification

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1. Officials from Medsafe have advised the VRA that a +/- 10% variance between the labelled and tested amount of active ingredient is common in the pharmaceutical industry and is also used for quality tests for medicinal cannabis as required under the Misuse of Drugs (Medicinal Cannabis) Regulations 2019<sup>1</sup>.

process, through to post-market monitoring and surveillance. The strategy will ensure that the testing programme provides assurance that actions taken at all stages are effective. We will provide an overview of the broader products strategy to you once it has been developed.

*Options for post market surveillance testing*

16. s 9(2)(b)(ii)
17. We have explored other options for the testing programme. The options are discussed below, and the analysis of options is in Table 1.

*Option 1: Cancel the current testing programme*

18. Cancelling the ESR testing programme has the following risks:
- i. reputational – the public may perceive cancelling the test programme as the Ministry not taking product compliance seriously. It would also signal to manufacturers and importers that the Ministry is not interested in product quality or compliance with the Regulations.
  - ii. public safety – the Ministry has identified a significant proportion of products containing different amounts of nicotine than the label claims. Choosing not to investigate the issue further may result in many users continuing to over or underdose their vapes.
  - iii. failing to give effect to the Act, as its purpose is to minimise harm and regulate the safety of vaping products.

*Option 2: status quo*

19. This option continues testing through ESR but not take any compliance action as a result.
20. There are reputational risks to continue to test while not taking compliance action. Testing without follow up could negatively impact on the public trust and perception of the Ministry, it may appear that the Ministry is unwilling to take any action against vaping manufacturers.
21. If we continue to test, we also have an obligation to inform manufacturers or importers of products that their products contain more nicotine than is labelled, even if they do not take any action to remedy this.

*Option 3: Increase number of products tested and develop compliance pathway*

22. Continuing to test and take compliance action aligns with the intention of the Act to minimise harm and regulate the safety of vaping products.
23. The VRA commissions ESR to conduct testing, looking at nicotine concentrations only, as a proxy for manufacturing quality.
24. Compliance action is undertaken based on the results of testing, with additional triplicate testing in instances where notifiers dispute the veracity of testing results.

**Table 1 – summary of options**

	<i>Option 1: Cancel the current testing programme</i>	<i>Option 2: status quo - continue to test, continue to not use the testing results</i>	<i>Option 3: Increase number of products tested and develop compliance pathway</i>
<i>Alignment with intent of the regulator</i>	--	0	++
<i>Cost</i>	\$0K	§ 9(2)(b)(ii)	§ 9(2)(b)(ii)
<i>Risks (negative means increased risk)</i>	--	0	++
			Recommended

**Key**

- |   |                                 |    |                                      |
|---|---------------------------------|----|--------------------------------------|
| + | Slightly better than status quo | ++ | Significantly better than status quo |
| - | Slightly worse than status quo  | -- | Significantly worse than status quo  |

25. Our recommended approach is option 3 § 9(2)(b)(ii)

*Budget and contract management*

26. The budget ringfenced for testing for FY 2024/25 is § 9(2)(f)(iv) and we expect option 3 to fall within that total. The forecast budget allows for some contingency funding for additional proactive and reactive projects that have been identified as valuable. These are either ad hoc in nature or not fully scoped at this time and include:

- pilot testing of other substances if appropriate (Appendix 2)
- specific project based and reactive testing of products for compliance and enforcement purposes
- testing of other nicotine containing products as required (eg, heated tobacco, or oral tobacco products)
- further surveillance testing
- reactive testing in response to an adverse event report.

27. Priorities for this additional testing will be determined following completion of the product strategy.

28. § 9(2)(b)(ii)

<sup>2</sup> This is a current estimate, we are awaiting revised pricing structure from ESR.

29. If managed well the proposed post market surveillance testing option will require at least 0.5 - 1 FTE<sup>3</sup> on an ongoing basis to support.
30. We will provide a detailed breakdown of resource model and priorities once the product strategy is completed.
31. We will report quarterly on progress of this programme of work.

#### *Addressing 2023/24 testing results*

32. We will close out the 2022-2024 testing programme. To do this, we will contact all notifiers of tested products and provide their results by 31 July 2024. Following this, we will work with the communications team to publish a summary of these test results by 30 September 2024 on the Ministry Website.
33. **s 9(2)(b)(ii)**  
However, we will direct ESR to retest all products (and/or other products from the relevant notifiers) that have been identified as failing by a significant margin in the 2024-2025 programme.
34. We have also identified a number of SOP's, processes and templates (eg, for letters to manufacturers) that are required. As resourcing allows, we will continue to develop these. These will support timely processing of test data in future and will allow our decision making around additional testing of non-compliant products to be more streamlined.

#### **Next steps**

35. We are meeting with ESR and confirming the testing programme and cost for the 2024/25 year.
36. We will contact all notifiers of tested products to provide their results by 31 July 2024.
37. The VRA will provide you with quarterly updates on this work programme, including test results.
38. We will provide a product strategy by the end of July 2024.

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<sup>3</sup> We have considered that the following activities are needed – project management of testing, analysis of results, follow up notification and publication of results, additional compliance case management where required. In addition, there is initial development of SOP's to manage this work.

## Recommendations

It is recommended that you:

1	Endorse	testing option 3- surveillance testing of 250 products annually, and stage two (triplicate testing) where required.	<b>Yes/No</b>
2.	Note	the VRA will update you quarterly on the product testing results.	<b>Noted</b>
3	Note	the VRA will develop a product strategy by the end of July 2024.	<b>Noted</b>

Signature

Dr Andrew Old

**Deputy Director General**

**Public Health Agency | Te Pou Hauora Tūmatanui**

Date: 5 July 2024

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## Appendix 1 - The current scope of product testing, budget and findings to date

1. ESR test a random sample of vaping substance products available on the New Zealand market. These are randomly selected using the HARP public database of notified products. These are either vaping liquids sold as refilling solutions or replacement pods, or pre-filled vaping devices.
2. ESR tests each product for:
  - a. Nicotine concentration
  - b. Propylene glycol (PG) concentration
  - c. Vegetable glycerine (VG) concentration
  - d. And calculate the PG:VG ratio
3. ESR make written observations relating to schedule 5 of the Smokefree Environments and Regulated Products Regulations relating to safety including labelling and take photos.
4. Approximately 10% of products tested are also tested for:
  - a. Ethanol concentration
  - b. Water concentration
  - c. pH (how acid, neutral or alkaline the substance is)
  - d. Colour observation of the liquid
  - e. Density of the liquid
5. In the 2023-2024 financial year, ESR has so far tested 116 products with a total spend of **s 9(2)(b)(ii)**. The annual budget set aside for post-market vaping product testing is currently \$200,000.
6. ESR reports are received monthly as written reports and a meeting to discuss specific reports and test results.
7. The January 2024 analysis by ISK found 55 out of 66 products (83%) tested to date had a variance of over 10% between the tested nicotine concentration and what was labelled on the product.
8. Testing data results provided by ESR since January 2024 has consistently shown:
  - a. at least 25% of products tested have greater than 10% variance between the labelled nicotine concentration and the tested nicotine concentration.
  - b. there are a number of products still available on the market that testing indicates contain more than the maximum 28.5mg/mL freebase nicotine (free-base) concentration. These are often mis-labelled as 50mg/mL nicotine salt.
  - c. a large number of products do not meet labelling requirements, are using prohibited variant (flavour) descriptions, do not have removable batteries, or have prohibited imagery (cartoons) on the packaging.

## **Appendix 2 – testing for other substances.**

1. Currently the most useful information we receive from the ESR testing programme is nicotine concentration as it's the active ingredient in vapes, and it's legislated for.
2. Propylene glycol and glycerine (PG/VG) are tested as a package with nicotine. PG/VG ratios can be important from a consumer experience perspective, as they affect the 'mouth feel' of vapour, but there are no known safety considerations.
3. The Regulations prescribe a list of prohibited compounds that vaping substances cannot contain, and an additional list of prohibited compounds that have a maximum concentration limit. While the VRA can request these compounds be tested for, routine or surveillance testing for all or some of the prohibited compounds would be expensive to implement and have limited benefit in terms of safety or compliance action.
4. Any changes to what chemical compounds we direct ESR to detect and quantify is likely to increase costs substantially as all tests will need to be validated prior to entering routine use and many will require purchase of reference standards. There will also be a time delay in when these tests can become routine as it takes time to validate these tests.
5. Some of the prohibited compounds would only be detected if they had been purposefully added (eg, caffeine, taurine, prohibited sweeteners). They're unlikely to be introduced to the vaping substance by accident. It would be most beneficial to test specific products if we had other evidence that these products contained these compounds.
6. Our recommended approach is to review and rank the many compounds and additives that could be present in vaping products and carry out small scale pilot tests on those that are most harmful and most likely to be present. Where issues are indicated through the pilot testing, we will investigate further. We will develop this as part of the ongoing programme.

### **A specific note about testing for heavy metals:**

7. Heavy metals are often cited in literature about the health harms of vaping.
8. There are two potential sources of heavy metal contamination in vaping products – vaping substance ingredients and the metal wire used for the coil. As the coil heats it will shed heavy metals into the vapour. This is supported by the research below showing that increased vaping resulted in higher heavy metal biomarkers.
9. The current testing methodology will not detect contamination from coils, as that requires regular use of the vaping device.

### **A specific note about testing for flavour compounds:**

10. It has been suggested that testing for specific flavour compounds may be useful to determine whether a product has the same flavour it claims to have, or to ensure that a product is suitable for sale in a GVR (ie, it is only mint, menthol or tobacco flavour).
11. Flavour chemistry is complex to test for. There are a lot of individual chemical compounds that make up what we perceive as a flavour. For example, vanilla flavour can consist of 3-4 different vanillin compounds. There is also a lot of overlap in chemical compounds for different flavours, the same compound may appear in a flavour labelled coconut or peach.
12. At the moment, a chemical test for flavour compounds is not a good indicator of how the flavour or aroma will be perceived. This is not specific to vaping substances, many flavour

profiles of food ingredients are determined by a mixture of chemical assay, and taste and aroma testing by humans.

13. The cost of testing for flavours as a surveillance tool is prohibitive. This is because of the number of reference standards required and the time needed to analyse the results.

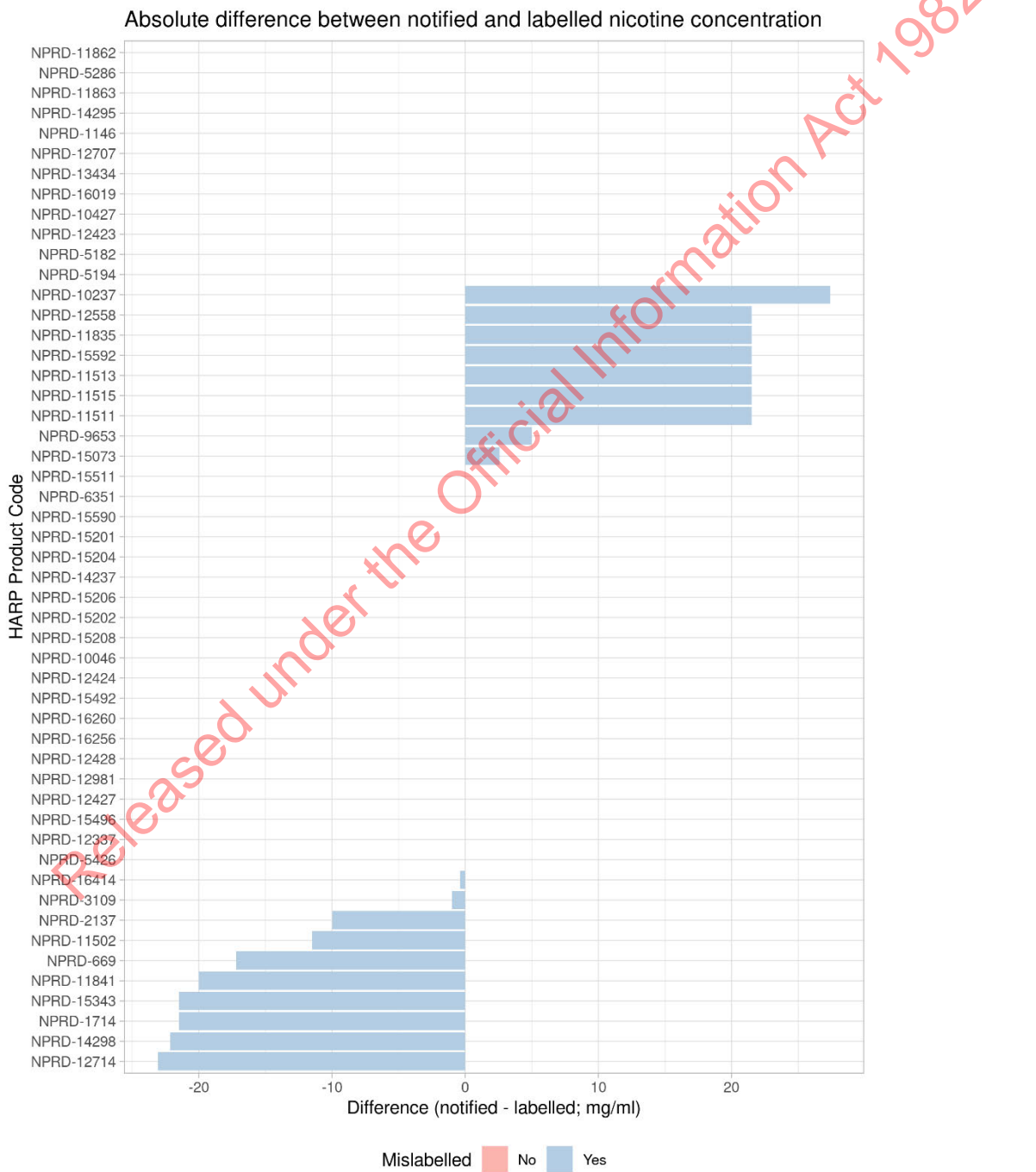
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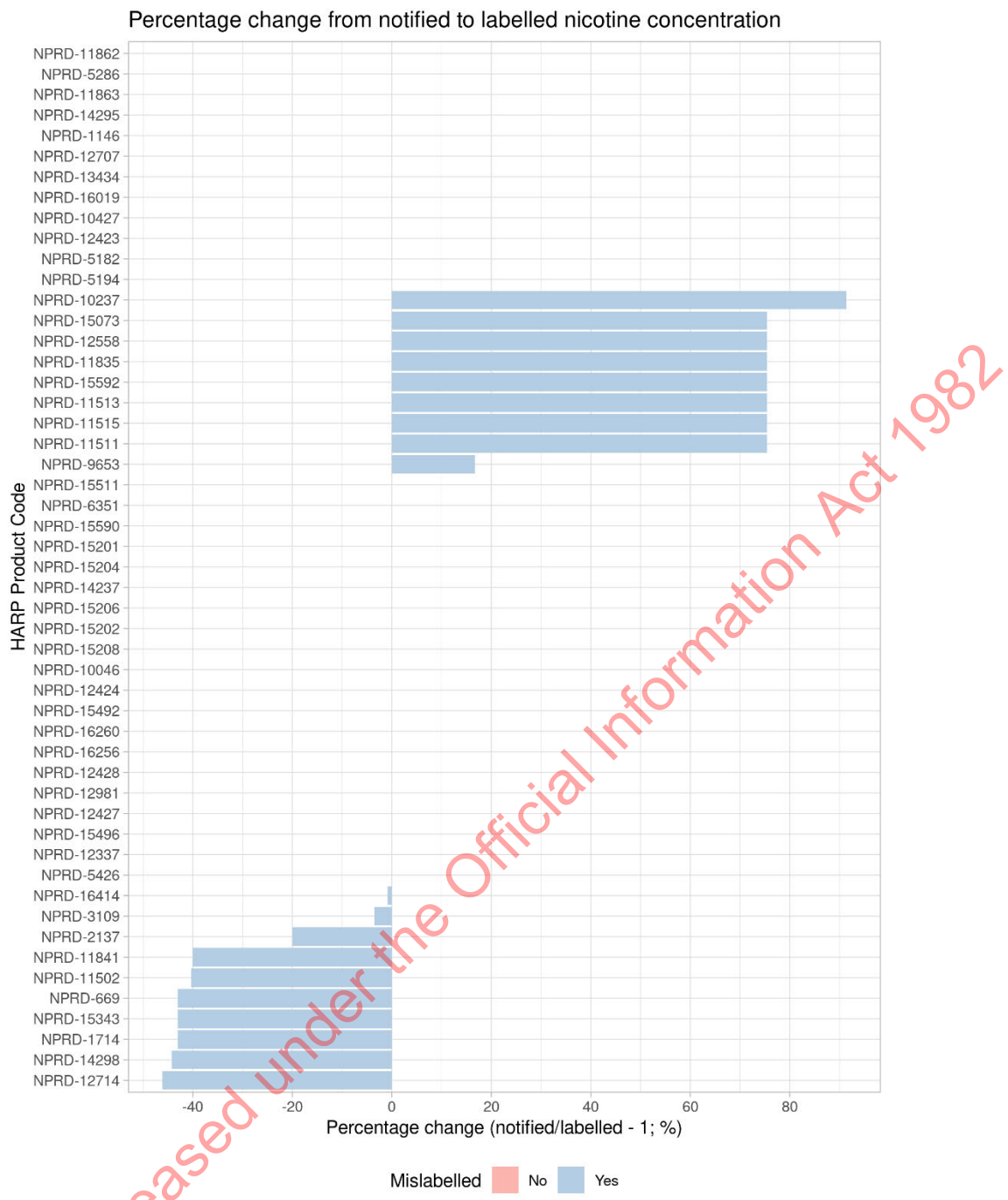


# ESR testing of nicotine concentrations in vaping products

Summary of tables and figures with basic descriptive commentary

We first looked at the absolute and relative difference between notified and labelled nicotine concentrations for each product.

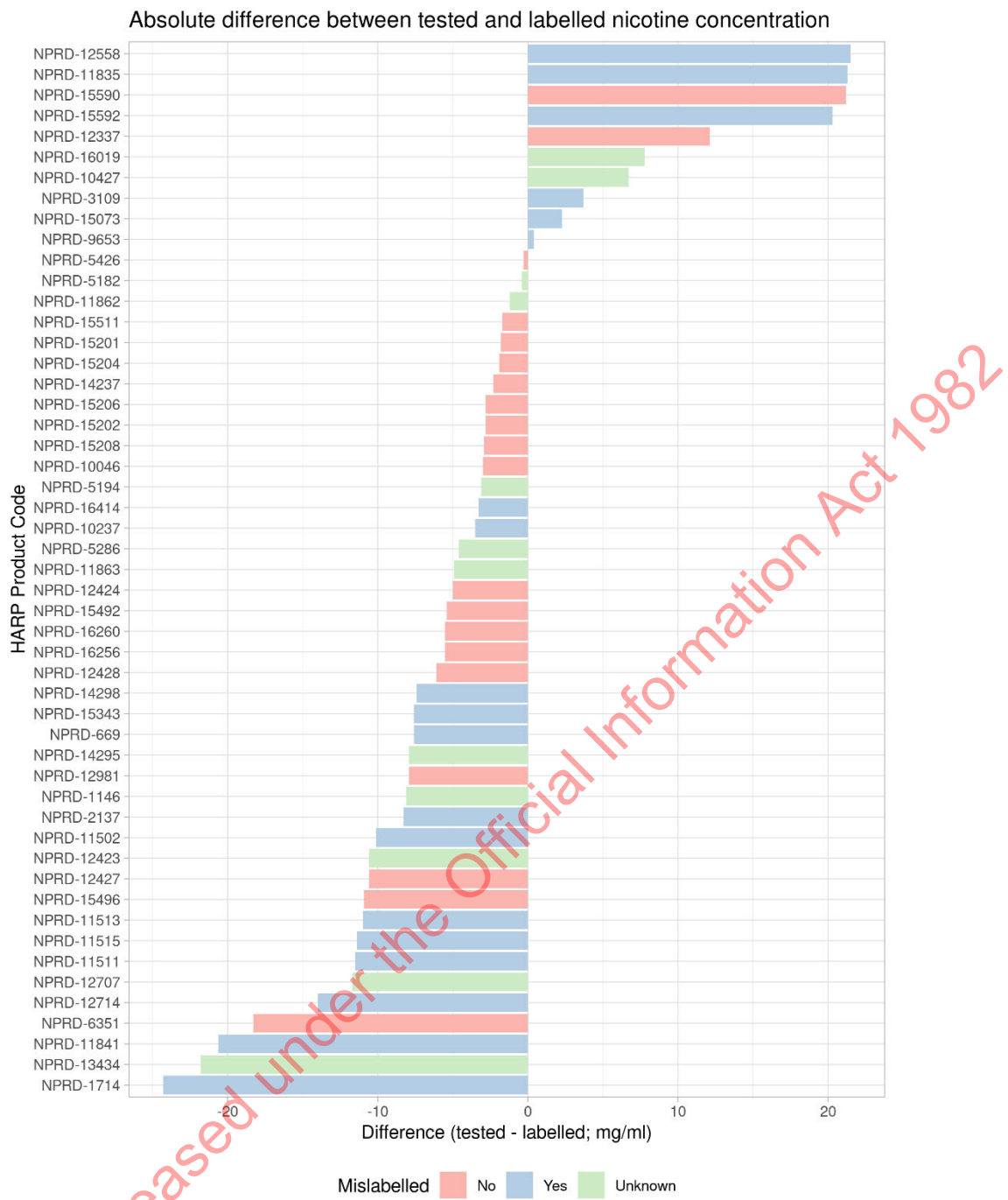


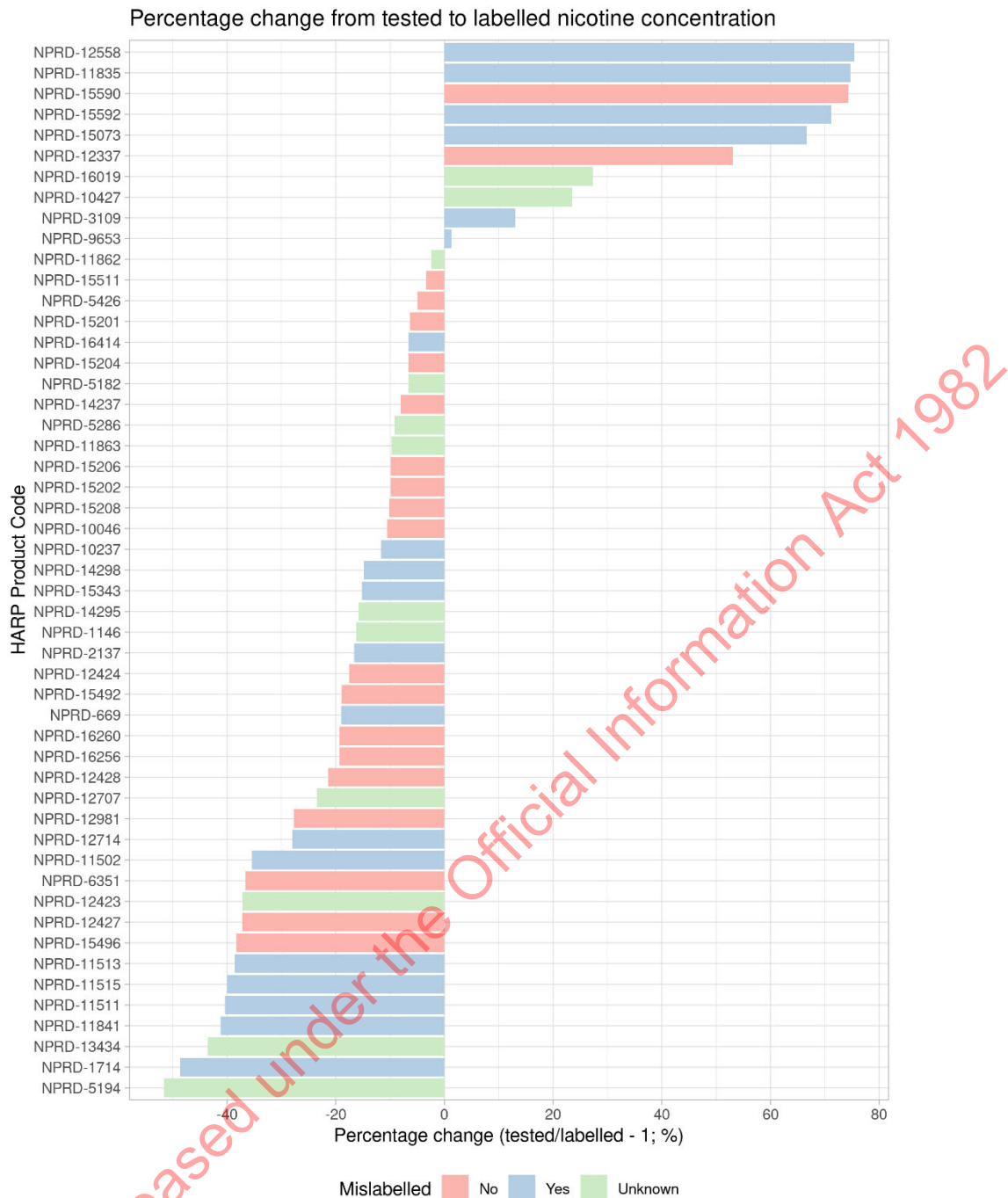




We found that 12 products did not have any notified value and could not be assessed. 20 products have the same notified and labelled nicotine concentration and 19 products differed. The major sources of error were products in the 25-30mg/ml labelled range having notified as 50mg/ml or higher and vice versa. We created a new variable called "Mislabelled" to represent these products that have difference between the notified and labelled nicotine concentrations.

We next looked at ESR tested values against labelled nicotine concentrations both in terms of absolute and relative differences.

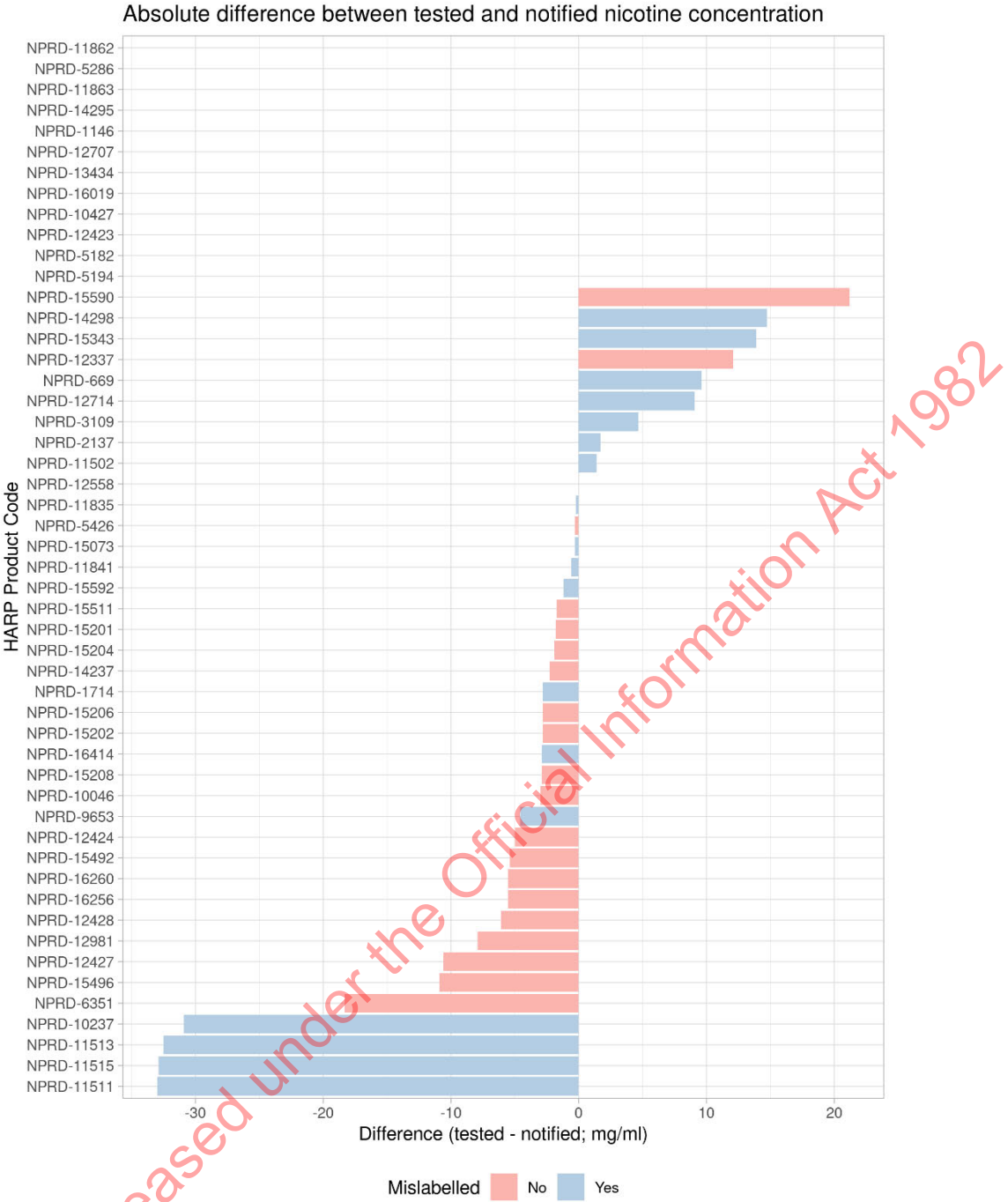


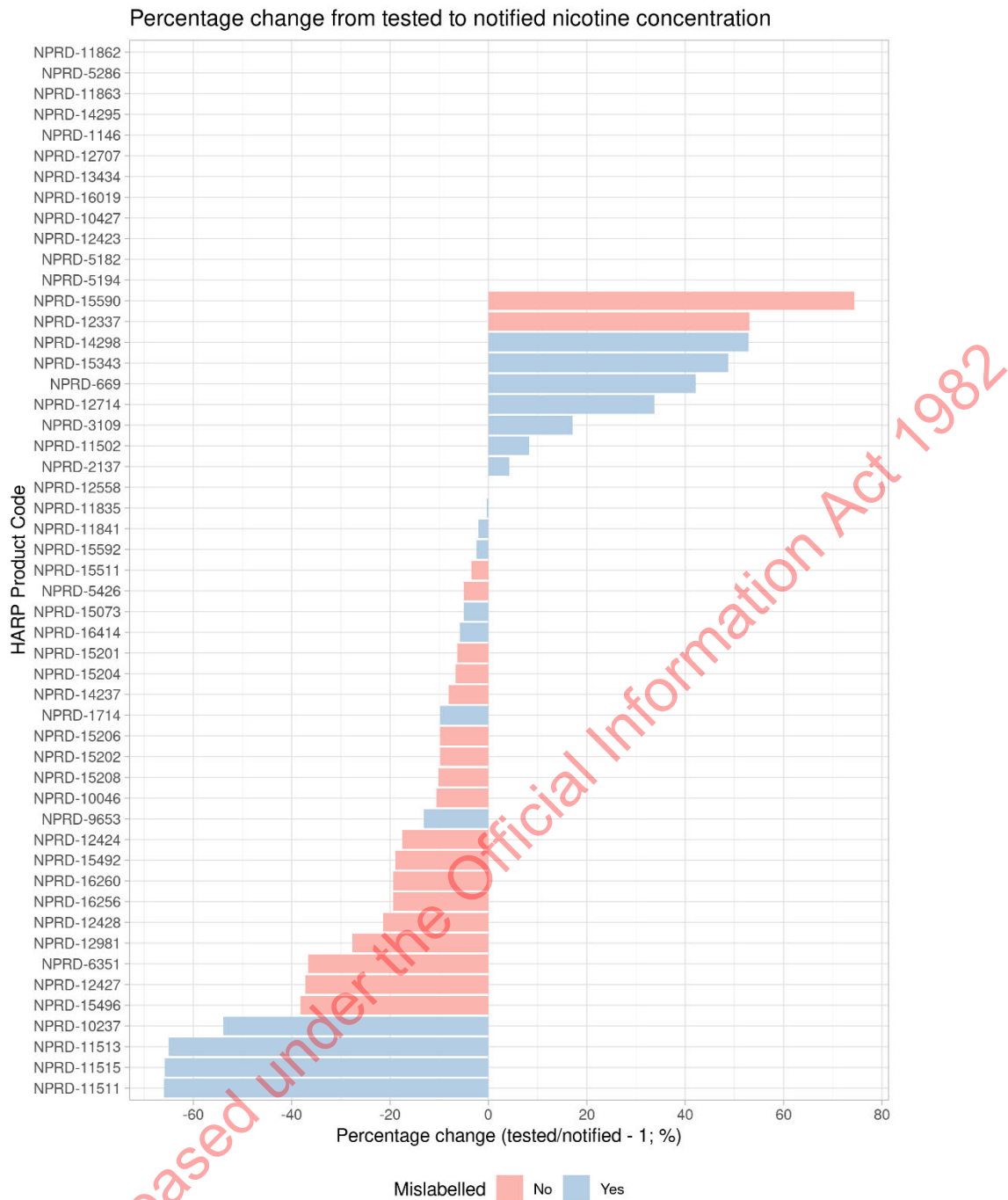


We found that most tests had lower nicotine concentration. Only 10 products had higher nicotine concentrations in the ESR tests, of which 6 were mislabelled, 2 were correctly labelled and 2 did not have a notified concentration. 6 had absolute differences greater than 10mg/ml. All except 1 had greater than 5% deviation from the labelled concentration.

Amongst products with lower tested nicotine levels, the majority had a greater than 5mg/ml difference and three exceeded 20mg/ml. Mislabelling might explain part of the error but the differences for both absolute and relative were substantial.

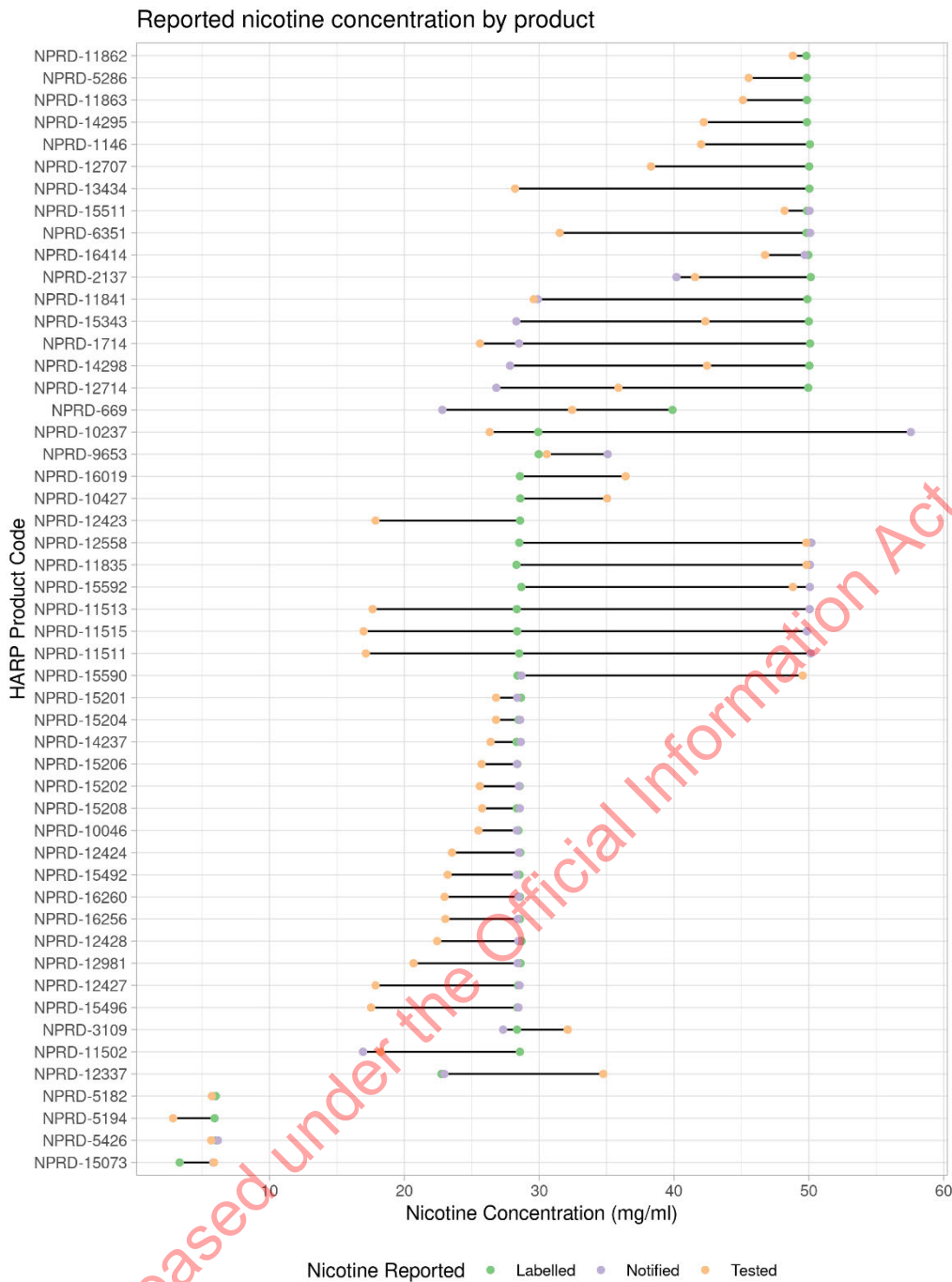
Next, we checked the absolute and relative difference between tested and notified nicotine concentrations.





Those 12 products without notified nicotine concentrations are listed at the top. We again found that most products had lower tested nicotine concentrations than their notified values. Compared to labelled concentrations, the differences observed for notified concentrations were generally smaller, except for 4 products where the absolute difference exceeded -30mg/ml and greater than 50% reduction.

To allow for direct comparison for each product, the figure below shows all the reported nicotine concentrations.



Freebase products have low nicotine concentrations and although their absolute differences are small, their relative differences can be substantial. Most labelled products under 30mg/ml have lower tested nicotine concentrations with a few going below 20mg/ml. A similar pattern is also generally observed for products at higher nicotine concentrations besides a few mislabelled products. Another major finding is that many products have tested values that differ from both the labelled and notified nicotine concentrations.