CERTIFICATE of ANALYSIS

Synthetic Cannabinoid Analytical Standards Panel 2

For R&D purposes only. Not intended for human or animal use.

Item No.:	38769
Batch No.:	0726842
Size:	100 µg/well
Expiry Date:	12MAR2029 (valid from date of certification)
Storage & Handling:	Store upright and unopened at -20°C. Warm to room temperature prior to opening.
Safety:	Danger. Review the Safety Data Sheets before use.

Description

This product consists of three 96-well Matrix plates containing individual synthetic cannabinoids, metabolites, and precursors. The individual well locations for each unique standard are listed in the table below.

Traceability Statement

This panel was prepared from individual standards that have been verified through standard quality testing and are traceable *via* individual item and batch numbers. Individual certificates of analysis are available upon request. All compounds used to make this panel were used within their valid expiry dates. Stability testing of this panel is ongoing to ensure continuous quality and traceability of the materials.

Quality Testing

A single panel was pulled randomly from the batch and high resolution accurate mass analysis was performed to verify the contents of each vial position. A summary of results is reported below as the average ppm mass error ± standard deviation determined for all analytes.

Test	Result	Specification	Meets Specification
Average mass error	2.75 ± 0.54 ppm	±10 ppm	Yes

Individual results are reported in the table on pages 2-13.

Approval: E Hutchinson Title: Manager, Analytical Chemistry Certification Date: 12MAR2025

Cayman Chemical certifies that this product meets the specifications stated in this certificate and warrants this product to meet the stated acceptance criteria through the expiry date when stored unopened as recommended.

CERTIFICATE of ANALYSIS

Kit Contents
Plate 1

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ *m/z*	Measured $[M+H]^+$ *m/z*	Mass Accuracy (ppm)
A1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
A2	AM1248 azepane isomer	$C_{26}H_{34}N_2O$	391.27491	391.27362	3.30
A3	AB-PINACA	$C_{18}H_{26}N_4O_2$	331.21338	331.21219	3.58
A4	AB-FUBINACA	$C_{20}H_{21}FN_4O_2$	369.17265	369.17136	3.51
A5	A-834735	$C_{22}H_{29}NO_2$	340.22763	340.22655	3.17
A6	5-fluoro CUMYL-P7AICA	$C_{22}H_{26}FN_3O$	368.21379	368.2128	2.69
A7	JWH 412	$C_{24}H_{22}FNO$	360.17634	360.17521	3.14
A8	JWH 018 N-(4-oxo-pentyl) metabolite	$C_{24}H_{21}NO_2$	356.16503	356.16394	3.06
A9	JWH 073 6-methoxyindole analog	$C_{24}H_{23}NO_2$	358.18068	358.17963	2.93
A10	JWH 387	$C_{24}H_{22}BrNO$	420.09628	420.09503	2.96
A11	NNEI	$C_{24}H_{24}N_2O$	357.19666	357.19552	3.20
A12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B2	5-fluoro PB-22	$C_{23}H_{21}FN_2O_2$	377.16651	377.16535	3.06
B3	BB-22	$C_{25}H_{24}N_2O_2$	385.19158	385.19022	3.53
B4	JWH 080	$C_{24}H_{23}NO_2$	358.18068	358.17951	3.26
B5	MAM2201 N-(5-chloropentyl) analog	$C_{25}H_{24}ClNO$	390.16244	390.16132	2.88
B6	UR-144 N-heptyl analog	$C_{23}H_{33}NO$	340.26401	340.26314	2.57
B7	5-fluoro NNEI	$C_{24}H_{23}FN_2O$	375.18724	375.18607	3.12
B8	4-fluoro AMB	$C_{19}H_{26}FN_3O_3$	364.20362	364.20245	3.21
B9	5-Fluoropentyl-3-pyridinoylindole (hydrochloride)	$C_{19}H_{19}FN_2O$	311.15594	311.15479	3.70
B10	5-fluoro JWH 018 adamantyl analog	$C_{24}H_{30}FNO$	368.23894	368.23777	3.18
B11	JWH 203 N-(5-hydroxypentyl) metabolite	$C_{21}H_{22}ClNO_2$	356.14171	356.1405	3.39
B12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 1 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ *m/z*	Measured $[M+H]^+$ *m/z*	Mass Accuracy (ppm)
C1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C2	PB-22 7-hydroxyisoquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17467	3.50
C3	5-fluoro PB-22 3-carboxyindole metabolite	$C_{14}H_{16}FNO_2$	250.12431	250.12342	3.55
C4	PB-22 6-hydroxyisoquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17461	3.67
C5	JWH 203 N-(4-hydroxypentyl) metabolite	$C_{21}H_{22}ClNO_2$	356.14171	356.14033	3.87
C6	PB-22 3-carboxyindole metabolite	$C_{14}H_{17}NO_2$	232.13373	232.13289	3.61
C7	5-fluoro PB-22 N-(3-fluoropentyl) isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16526	3.30
C8	PB-22 N-(5-hydroxypentyl)-3-carboxyindole metabolite	$C_{14}H_{17}NO_3$	248.12864	248.12776	3.56
C9	4-fluoro NNEI	$C_{24}H_{23}FN_2O$	375.18724	375.18607	3.12
C10	UR-144 N-(5-methylhexyl) analog	$C_{23}H_{33}NO$	340.26401	340.26296	3.10
C11	ATHPINACA isomer 1	$C_{24}H_{31}N_3O_2$	394.24943	394.24831	2.83
C12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D2	A-836339	$C_{16}H_{26}N_2O_2S$	311.17930	311.17809	3.89
D3	BB-22 3-hydroxyquinoline isomer	$C_{25}H_{24}N_2O_2$	385.19158	385.19029	3.34
D4	JWH 203 N-pentanoic acid metabolite	$C_{21}H_{20}ClNO_3$	370.12097	370.11976	3.27
D5	PB-22 N-(5-hydroxypentyl) metabolite	$C_{23}H_{22}N_2O_3$	375.17084	375.16947	3.66
D6	PB-22 8-hydroxyisoquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17454	3.86
D7	4-cyano CUMYL-BUTINACA	$C_{22}H_{24}N_4O$	361.20281	361.20145	3.77
D8	PB-22 3-hydroxyquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17437	4.34
D9	5-fluoro PB-22 5-hydroxyisoquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16525	3.33
D10	PB-22 5-hydroxyquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.1747	3.42
D11	5-fluoro PB-22 6-hydroxyisoquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16524	3.36
D12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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Kit Contents
Plate 1 Continued

Well	Item Name	Molecular Formula (free analyte	Calculated $[M+H]^+$ *m/z*	Measured $[M+H]^+$ *m/z*	Mass Accuracy (ppm)
E1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E2	PB-22 7-hydroxyquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17485	3.00
E3	5-fluoro PB-22 8-hydroxyisoquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16571	2.11
E4	methyl-1-pentyl-1H-indole-3-Carboxylate	$C_{15}H_{19}NO_2$	246.14938	246.14856	3.33
E5	5-fluoro PB-22 4-hydroxyquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16547	2.75
E6	UR-144 Degradant N-pentanoic acid metabolite	$C_{21}H_{27}NO_3$	342.20689	342.20594	2.79
E7	5-fluoro PB-22 4-hydroxyisoquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16563	2.32
E8	5-fluoro NNEI 2'-naphthyl isomer	$C_{24}H_{23}FN_2O$	375.18724	375.18631	2.48
E9	BB-22 4-hydroxyisoquinoline isomer	$C_{25}H_{24}N_2O_2$	385.19158	385.19064	2.44
E10	UR-144 N-(2-hydroxypentyl) metabolite	$C_{21}H_{29}NO_2$	328.22763	328.22678	2.59
E11	ATHPINACA isomer 2	$C_{24}H_{31}N_3O_2$	394.24943	394.24864	2.00
E12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F2	3-fluoro NNEI	$C_{24}H_{23}FN_2O$	375.18724	375.18628	2.56
F3	3-fluoro AMB	$C_{19}H_{26}FN_3O_3$	364.20362	364.20279	2.28
F4	MDMB-FUBICA metabolite 3	$C_{22}H_{23}FN_2O_3$	383.17707	383.17625	2.14
F5	PB-22 5-hydroxyisoquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17503	2.50
F6	AM694 N-(5-hydroxypentyl) metabolite	$C_{20}H_{20}INO_2$	434.06168	434.06097	1.64
F7	BB-22 8-hydroxyisoquinoline isomer	$C_{25}H_{24}N_2O_2$	385.19158	385.19072	2.23
F8	JWH 146	$C_{28}H_{29}NO$	396.23271	396.23212	1.50
F9	RCS-4 4-hydroxyphenyl metabolite	$C_{20}H_{21}NO_2$	308.16503	308.16435	2.20
F10	JWH 018 N-propanoic acid metabolite	$C_{22}H_{17}NO_3$	344.12864	344.12808	1.64
F11	5-fluoro PB-22 5-hydroxyquinoline isomer	$C_{23}H_{21}FN_2O2$	377.16651	377.166	1.34
F12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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Kit Contents
Plate 1 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
G1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
G2	methyl-1-(cyclohexylmethyl)-1H-indole-3-Carboxylate	$C_{17}H_{21}NO_2$	272.16503	272.16424	2.90
G3	methyl-1-(5-fluoropentyl)-1H-indole-3-Carboxylate	$C_{15}H_{18}FNO_2$	264.13996	264.13923	2.75
G4	MDMB-FUBINACA metabolite M1	$C_{21}H_{22}FN_3O_3$	384.17232	384.17097	3.51
G5	5-fluoro PB-22 6-hydroxyquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16543	2.85
G6	AKB48 N-(5-hydroxypentyl) metabolite	$C_{23}H_{31}N_3O_2$	382.24943	382.24816	3.31
G7	5-fluoro PB-22 7-hydroxyquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16545	2.80
G8	PB-22 4-hydroxyquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17473	3.34
G9	5-fluoro PB-22 7-hydroxyisoquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16547	2.75
G10	UR-144 N-(4-chloropentyl) analog	$C_{21}H_{28}ClNO$	346.19374	346.19276	2.84
G11	PB-22 6-hydroxyquinoline isomer	$C_{23}H_{22}N_2O_2$	359.17593	359.17465	3.56
G12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H2	5-fluoro PB-22 3-hydroxyquinoline isomer	$C_{23}H_{21}FN_2O_2$	377.16651	377.16533	3.12
H3	THJ2201 N-(5-hydroxypentyl) metabolite	$C_{23}H_{22}N_2O_2$	359.17593	359.17459	3.73
H4	AKB48 N-pentanoic acid metabolite	$C_{23}H_{29}N_3O_3$	396.22869	396.22739	3.29
H5	MMB-FUBICA	$C_{22}H_{23}FN_2O_3$	383.17707	383.17583	3.24
H6	MN-25-2-methyl derivative	$C_{27}H_{39}N_3O_3$	454.30694	454.30558	3.00
H7	4-cyano CUMYL-BUTINACA isomer 2	$C_{22}H_{24}N_4O$	361.20281	361.20154	3.52
H8	AKB48 N-(4-hydroxypentyl) metabolite	$C_{23}H_{31}N_3O_2$	382.24943	382.24814	3.37
H9	5-fluoro AKB48 N-(4-hydroxypentyl) metabolite	$C_{23}H_{30}FN_3O_2$	400.24001	400.23889	2.79
H10	2-fluoro NNEI	$C_{24}H_{23}FN_2O$	375.18724	375.18624	2.67
H11	ADBICA	$C_{20}H_{29}N_3O_2$	344.23378	344.23263	3.33
H12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 2

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
A1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
A2	5-fluoro ADB-PINACA	$C_{19}H_{27}FN_4O_2$	363.21960	363.21867	2.57
A3	5-fluoro ADBICA	$C_{20}H_{28}FN_3O_2$	362.22436	362.22336	2.75
A4	ADB-FUBINACA	$C_{21}H_{23}FN_4O_2$	383.18830	383.18733	2.54
A5	AM2201 8-quinolinyl carboxamide	$C_{23}H_{22}FN_3O$	376.18249	376.18174	1.99
A6	5-fluoro THJ	$C_{22}H_{21}FN_4O$	377.17774	377.17702	1.91
A7	MN-25	$C_{26}H_{37}N_3O_3$	440.29129	440.2904	2.03
A8	XLR12	$C_{20}H_{24}F_3NO$	352.18880	352.18801	2.24
A9	5-fluoro CYPPICA	$C_{18}H_{23}FN_2O$	303.18724	303.1865	2.44
A10	THJ	$C_{22}H_{22}N_4O$	359.18716	359.18626	2.51
A11	XLR11 6-hydroxyindole metabolite	$C_{21}H_{28}FNO_2$	346.21821	346.21737	2.42
A12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B2	FUB-PB-22	$C_{25}H_{17}FN_2O_2$	397.13521	397.13443	1.95
B3	AB-PINACA N-(5-hydroxypentyl) metabolite	$C_{18}H_{26}N_4O_3$	347.20829	347.20735	2.71
B4	FDU-PB-22	$C_{26}H_{18}FNO_2$	396.13996	396.13901	2.39
B5	5-fluoro PY-PICA	$C_{18}H_{23}FN_2O$	303.18724	303.18646	2.58
B6	CI2201	$C_{24}H_{21}ClFNO$	394.13737	394.13672	1.65
B7	JWH 018 benzimidazole analog	$C_{23}H_{22}N_2O$	343.18101	343.18013	2.57
B8	5-fluoro AB-PINACA	$C_{18}H_{25}FN_4O_2$	349.20395	349.20304	2.62
B9	5-fluoro APINAC	$C_{23}H_{29}FN_2O_2$	385.22911	385.22818	2.40
B10	JWH 081 N-(4-hydroxypentyl) metabolite	$C_{25}H_{25}NO_3$	388.19124	388.19036	2.28
B11	JWH 081-N-(cyclohexylmethyl) analog	$C_{27}H_{27}NO_2$	398.21198	398.21117	2.03
B12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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Kit Contents
Plate 2 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
C1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C2	5-fluoro MN-18	$C_{23}H_{22}FN_3O$	376.18249	376.18172	2.05
C3	ADB-PINACA pentanoic acid metabolite	$C_{19}H_{26}N_4O_4$	375.20321	375.20236	2.25
C4	ADB-PINACA N-(4-hydroxypentyl) metabolite	$C_{19}H_{28}N_4O_3$	361.22394	361.22294	2.77
C5	5-fluoro AMB metabolite 2	$C_{19}H_{27}N_3O_4$	362.20796	362.20703	2.56
C6	ADBICA N-(4-hydroxypentyl) metabolite	$C_{20}H_{29}N_3O_3$	360.22869	360.22769	2.78
C7	FUBIMINA	$C_{23}H_{21}FN_2O$	361.17159	361.17057	2.83
C8	JWH 133	$C_{22}H_{32}O$	313.25312	313.25191	3.85
C9	APINAC	$C_{23}H_{30}N_2O_2$	367.23853	367.23765	2.39
C10	JWH 081 N-pentanoic acid metabolite	$C_{25}H_{23}NO_4$	402.17051	402.16958	2.31
C11	THJ2201	$C_{23}H_{21}FN_2O$	361.17159	361.17056	2.85
C12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D2	SDB-006	$C_{21}H_{24}N_2O$	321.19666	321.19572	2.94
D3	Mepirapim (hydrochloride)	$C_{19}H_{27}N_3O$	314.22321	314.22233	2.81
D4	FUB-PB-22 3-carboxyindole metabolite	$C_{16}H_{12}FNO_2$	268.077407 [M-H]-	268.07811 [M-H]-	2.62
D5	5-fluoro SDB-006	$C_{21}H_{23}FN_2O$	339.18724	339.18645	2.33
D6	5-fluoro AMB	$C_{19}H_{26}FN_3O_3$	364.20362	364.20251	3.05
D7	AMB	$C_{19}H_{27}N_3O_3$	346.21304	346.21226	2.26
D8	ADB-PINACA N-(5-hydroxypentyl) metabolite	$C_{19}H_{28}N_4O_3$	361.22394	361.22282	3.10
D9	AB-CHMINACA	$C_{20}H_{28}N_4O_2$	357.22903	357.22806	2.70
D10	MN-18	$C_{23}H_{23}N_3O$	358.19191	358.19083	3.02
D11	AB-FUBINACA 3-fluorobenzyl isomer	$C_{20}H_{21}FN_4O_2$	369.17265	369.17158	2.91
D12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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Kit Contents
Plate 2 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
E1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E2	5-fluoro SDB-005	$C_{23}H_{21}FN_2O_2$	377.16651	377.16548	2.72
E3	FUB-144	$C_{23}H_{24}FN_O$	350.19199	350.19106	2.66
E4	ADB-PINACA isomer 1	$C_{19}H_{28}N_4O_2$	345.22903	345.22815	2.54
E5	AB-FUBINACA isomer 1	$C_{20}H_{21}FN_4O_2$	369.17265	369.17168	2.64
E6	ADB-PINACA isomer 3	$C_{19}H_{28}N_4O_2$	345.22903	345.22821	2.36
E7	5,3-AB-CHMFUPPYCA	$C_{22}H_{29}FN_4O_2$	401.23525	401.23451	1.85
E8	ADB-PINACA isomer 2	$C_{19}H_{28}N_4O_2$	345.22903	345.22815	2.54
E9	AB-FUBINACA isomer 2	$C_{20}H_{21}FN_4O_2$	369.17265	369.17173	2.50
E10	AB-PINACA N-(2-fluoropentyl) isomer	$C_{18}H_{25}FN_4O_2$	349.20395	349.20296	2.85
E11	NPB-22	$C_{22}H_{21}N_3O_2$	360.17118	360.17025	2.57
E12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F2	5-fluoro NPB-22	$C_{22}H_{20}FN_3O_2$	378.16176	378.16081	2.50
F3	JWH 019 N-(4-fluorohexyl) isomer	$C_{25}H_{24}FNO$	374.19199	374.19124	2.01
F4	NM2201	$C_{24}H_{22}FNO_2$	376.17126	376.17017	2.89
F5	5-fluoro PY-PINACA	$C_{17}H_{22}FN_3O$	304.18249	304.18175	2.43
F6	MMB-FUBINACA	$C_{21}H_{22}FN_3O_3$	384.17232	384.17157	1.95
F7	AKB48 N-(4-fluorobenzyl) analog	$C_{25}H_{26}FN_3O$	404.21379	404.21291	2.18
F8	5-fluoro-3,5-ADB-PFUPPYCA	$C_{21}H_{28}F_2N_4O_2$	407.22583	407.22496	2.14
F9	MDMB-FUBICA	$C_{23}H_{25}FN_2O_3$	397.19272	397.19194	1.97
F10	MMB2201	$C_{20}H_{27}FN_2O_3$	363.20837	363.20724	3.11
F11	AB-FUBINACA metabolite 3	$C_{20}H_{20}FN_3O_3$	370.15667	370.15581	2.32
F12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 2 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
G1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
G2	MMB018	$C_{20}H_{28}N_2O_3$	345.21779	345.21687	2.67
G3	ADB-PINACA	$C_{19}H_{28}N_4O_2$	345.22903	345.22808	2.74
G4	M-144	$C_{22}H_{30}FNO$	344.23894	344.23821	2.13
G5	5-fluoro BEPIRAPIM (hydrochloride)	$C_{25}H_{30}FN_3O$	408.24509	408.24414	2.33
G6	AB-FUBINACA isomer 5	$C_{20}H_{21}FN_4O_2$	369.17265	369.17171	2.56
G7	(1H-Indol-3-yl)(2,2,3,3-tetramethylcyclopropyl)methanone	$C_{16}H_{19}NO$	242.15446	242.1536	3.57
G8	ADB-PINACA isomer 4	$C_{19}H_{28}N_4O_2$	345.22903	345.22806	2.80
G9	ADB-BICA	$C_{22}H_{25}N_3O_2$	364.20248	364.20143	2.87
G10	5-chloro THJ 018	$C_{23}H_{21}ClN_2O$	377.14204	377.14114	2.39
G11	MA-CHMINACA	$C_{21}H_{29}N_3O_3$	372.22869	372.2278	2.40
G12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H2	MDMB-CHMINACA	$C_{22}H_{31}N_3O_3$	386.24434	386.2433	2.70
H3	PTI-1 (hydrochloride)	$C_{21}H_{29}N_3S$	356.21602	356.21506	2.69
H4	PX 2	$C_{22}H_{25}FN_4O_2$	397.20395	397.20301	2.38
H5	CBL-018	$C_{24}H_{23}NO_2$	358.18068	358.17967	2.82
H6	MAB-CHMINACA	$C_{21}H_{30}N_4O_2$	371.24468	371.24375	2.49
H7	F2201	$C_{24}H_{21}F_2NO$	378.16692	378.16609	2.19
H8	MDMB-FUBINACA	$C_{22}H_{24}FN_3O_3$	398.18797	398.18717	2.01
H9	ADB-BINACA	$C_{21}H_{24}N_4O_2$	365.19773	365.19679	2.56
H10	5-fluoro AMB metabolite 3	$C_{19}H_{25}N_3O_5$	376.18722	376.18614	2.88
H11	AB-CHMINACA metabolite M3A	$C_{20}H_{27}N_3O_4$	374.20796	374.207	2.56
H12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 3

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
A1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
A2	AB-CHMINACA metabolite M5A	$C_{15}H_{18}N_2O_3$	275.13954	275.13859	3.46
A3	AB-CHMINACA metabolite M1B	$C_{20}H_{28}N_4O_3$	373.22394	373.22307	2.33
A4	MDMB-CHMCZCA	$C_{27}H_{34}N_2O_3$	435.26474	435.26368	2.44
A5	MDMB-CHMICA	$C_{23}H_{32}N_2O_3$	385.24909	385.24786	3.20
A6	FUB-NPB-22	$C_{24}H_{16}FN_3O_2$	398.13046	398.12963	2.07
A7	FUB-JWH 018	$C_{26}H_{18}FNO$	380.14504	380.14416	2.32
A8	5-bromo THJ 018	$C_{23}H_{21}BrN_2O$	421.09152	421.09038	2.72
A9	MO-CHMINACA	$C_{22}H_{30}N_2O_4$	387.22836	387.2275	2.22
A10	5-fluoro AMB metabolite 7	$C_{18}H_{24}FN_3O_3$	350.18797	350.1869	3.06
A11	5-chloro AKB48	$C_{23}H_{30}ClN_3O$	400.21554	400.21481	1.82
A12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
B2	EG2201	$C_{28}H_{24}FNO$	410.19199	410.19097	2.49
B3	JWH 307 3'-isomer	$C_{26}H_{24}FNO$	386.19199	386.19106	2.41
B4	5-fluoro MDMB-PICA	$C_{21}H_{29}FN_2O_3$	377.22402	377.22301	2.68
B5	5-fluoro ADB-PINACA isomer 2	$C_{19}H_{27}FN_4O_2$	363.21960	363.21853	2.96
B6	APP-CHMINACA	$C_{24}H_{28}N_4O_2$	405.22903	405.22807	2.36
B7	5-fluoro CUMYL-PINACA	$C_{22}H_{26}FN_3O$	368.21379	368.21303	2.06
B8	FDU-NNEI	$C_{26}H_{19}FN_2O$	395.15594	395.15523	1.80
B9	APP-FUBINACA	$C_{24}H_{21}FN_4O_2$	417.17265	417.17169	2.31
B10	EMB-FUBINACA	$C_{22}H_{24}FN_3O_3$	398.18797	398.18745	1.31
B11	MMB-CHMICA	$C_{22}H_{30}N_2O_3$	371.23344	371.23286	1.57
B12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 3 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
C1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C2	5-fluoro AEB	$C_{20}H_{28}FN_3O_3$	378.21927	378.21845	2.17
C3	MAB-CHMINACA metabolite M2	$C_{21}H_{29}N_3O_3$	372.22869	372.22761	2.91
C4	PB-22 N-(4-hydroxypentyl) metabolite	$C_{23}H_{22}N_2O_3$	375.17084	375.17004	2.14
C5	BB-22 6-hydroxyisoquinoline isomer	$C_{25}H_{24}N_2O_2$	385.19158	385.19053	2.72
C6	APP-PICA	$C_{23}H_{27}N_3O_2$	378.21813	378.21711	2.69
C7	THJ2201 N-pentanoic acid metabolite	$C_{23}H_{20}N_2O_3$	373.15519	373.15394	3.36
C8	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C9	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C10	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C11	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
C12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D2	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D3	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D4	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D5	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D6	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D7	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D8	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D9	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D10	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D11	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
D12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 3 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
E1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E2	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E3	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E4	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E5	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E6	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E7	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E8	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E9	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E10	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E11	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
E12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
F2	BB-22 3-carboxyindole metabolite	$C_{16}H_{19}NO_2$	258.14938	258.14859	3.06
F3	PB-22 N-pentanoic acid-3-carboxyindole metabolite	$C_{14}H_{15}NO_4$	262.10791	262.107	3.47
F4	AB-PINACA N-pentanoic acid metabolite	$C_{18}H_{24}N_4O_4$	361.18756	361.18637	3.28
F5	AB-FUBINACA 2-fluorobenzyl isomer	$C_{20}H_{21}FN_4O_2$	369.17265	369.17155	2.99
F6	ADBICA N-pentanoic acid metabolite	$C_{20}H_{27}N_3O_4$	374.20796	374.20688	2.88
F7	5-chloro AB-PINACA	$C_{18}H_{25}ClN_4O_2$	365.17440	365.17335	2.89
F8	ADBICA N-(5-hydroxypentyl) metabolite	$C_{20}H_{29}N_3O_3$	360.22869	360.22745	3.45
F9	5-fluoro ABICA	$C_{19}H_{26}FN_3O_2$	348.20871	348.20756	3.29
F10	PX 1	$C_{23}H_{26}FN_3O_2$	396.20871	396.20782	2.23
F11	AB-FUBINACA metabolite 4	$C_{15}H_{11}FN_2O_2$	271.08826	271.08735	3.34
F12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*

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CERTIFICATE of ANALYSIS

Kit Contents
Plate 3 Continued

Well	Item Name	Molecular Formula (free analyte)	Calculated $[M+H]^+$ m/z	Measured $[M+H]^+$ m/z	Mass Accuracy (ppm)
G1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
G2	AB-FUBINACA metabolite 2A	$C_{20}H_{19}FN_4O_4$	399.14683	399.14567	2.92
G3	AB-CHMINACA metabolite M4	$C_{15}H_{18}N_2O_2$	259.14463	259.14398	2.50
G4	AB-CHMINACA metabolite M2	$C_{20}H_{27}N_3O_3$	358.21304	358.21194	3.08
G5	CUMYL-PICA	$C_{23}H_{28}N_2O$	349.22796	349.22703	2.67
G6	AB-FUBICA	$C_{21}H_{22}FN_3O_2$	368.17741	368.17649	2.49
G7	ADB-CHMICA	$C_{22}H_{31}N_3O_2$	370.24943	370.24831	3.02
G8	AB-FUBINACA metabolite 2B	$C_{20}H_{19}FN_4O_4$	399.14683	399.14574	2.74
G9	AB-CHMICA	$C_{21}H_{29}N_3O_2$	356.23378	356.23257	3.39
G10	MAB-CHMINACA metabolite M1	$C_{21}H_{30}N_4O_3$	387.23959	387.23862	2.51
G11	MAB-CHMINACA metabolite M3	$C_{21}H_{29}N_3O_4$	388.22361	388.2227	2.34
G12	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H1	*Unused*	*Unused*	*Unused*	*Unused*	*Unused*
H2	1'-Naphthoyl-2-methylindole	$C_{20}H_{15}NO$	286.12316	286.12217	3.47

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