



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 1 dari 24

Metode instrumentasi *Gas Chromatography-Mass Spectrometer* (GCMS) merupakan metode yang diterapkan pada instrumentasi GCMS dalam mengidentifikasi suatu senyawa pada sampel uji. Instruksi kerja ini sebagai acuan dalam penggunaan metode GCMS untuk identifikasi sampel uji di Pusat Laboratorium Narkotika BNN.

PARAMETER GAS CHROMATOGRAPHY-MASS SPECTROMETER (GCMS)

1. Puslab_1

Metode ini digunakan untuk analisis *delta 9 Tetrahydrocannabinol (dronabinol)*, golongan opiat dan sampel "*unknown*" pada GCMS Agilent 7890B – 5977B (GCMS 01, 02, 03 dan 04).

Nama Metode : Puslab_1

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; inj vol : 0,5 µL

Split Ratio : 50,0

Column Flow : 1,0 mL/min

Column Oven Temp : 50,0 °C ; Column : HP-5 (5% phenyl 95% dimethylpolysiloxane); 30,0 m x 0,25 mm x 0,25 µm.

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	0,00
1	10	200,0	5,00
2	10	300,0	5,00

MS

Interface/auxiliary Temperature : 300,0 °C ; MS Quad : 15 °C

Ion Source/MS Source Temperature : 280,0 °C

Solvent Cut Time/Solvent Delay : 3,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,5	35,00	Scan	40,00	550,00

2. Puslab_2

Metode ini digunakan untuk analisis *11-nor-carboxy-delta 9 tetrahydrocannabinol (THC-COOH)* dengan metode preparasi SPE pada GC-MS Shimadzu QP 2020NX-2030Nexis dan Agilent 7890B-5977B (GC-MS 05).

Nama Metode : Puslab_2

GC

Injection Temp : 290,0 °C

Injection Mode : Split

MASTER

Pusat Laboratorium Narkotika BNN

Dibuat oleh:
Peneliti Laboratorium

Diperiksa oleh :
Penata Lab Narkotika
Ahli Pertama

Disahkan oleh :
Penata Lab Narkotika
Ahli Muda

	BADAN NARKOTIKA NASIONAL PUSAT LABORATORIUM NARKOTIKA	INSTRUKSI KERJA LU-IKM 17	Tgl : 09-03-2023
			Ed : 03
		Metode Instrumentasi GCMS	Rev : 00
			Hal : 2 dari 24

Split Ratio : 10,0
 Column Flow : 1,0 mL/min
 Column Oven Temp : 130,0 °C; Column : RTX-5MS; HP-5MS; 30,0 m x 0,25 mm x 0,25 µm.
 Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	130,0	2,00
1	20	300,0	5,00

MS

Interface/auxiliary Temperature : 310,0 °C
 Ion Source/MS Source Temperature : 260,0 °C
 Solvent Cut Time/Solvent Delay : 4,50 min
 MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Ch 1 m/z	Ch 2 m/z	Ch 3 m/z	Ch 4 m/z	Ch 5 m/z
1	4,50	15,5	SIM	371,00	473,00	488,00	489,00	474,00

3. Puslab_3

Metode ini digunakan untuk analisis golongan *Amphetamine Type Stimulant* (ATS) dalam bentuk sediaan pada GC-MS Agilent 7890B- 5977B (GC-MS06).

Nama Metode : Puslab_3

GC

Injection Temp : 250,0 °C
 Injection Mode : Split
 Split Ratio : 50,0
 Column Flow : 1,0 mL/min
 Column Oven Temp : 130,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)
 Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10	280,0	4,00

MS

Interface/auxiliary Temperature : 300 °C
 Ion Source/MS Source Temperature : 230 °C; MS Quad : 150 °C
 Solvent Cut Time/Solvent Delay : 2,50 min
 MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,5	24,00	scan	40,00	550,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 3 dari 24

4. Puslab_4

Metode ini digunakan untuk analisis golongan *Amphetamine Type Stimulant* (ATS) dalam urin pada GC-MS Agilent 7890B- 5977B (GC-MS06).

Nama Metode : Puslab_4

GC

Injection Temp : 230,0 °C

Injection Mode : Split

Split Ratio : 10,0

Column Flow : 1,0 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	110,0	2,00
2	10,0	280,0	4,00

MS

Interface/auxiliary Temperature : 280,0 °C

Ion Source/MS Source Temperature : 280,0 °C

Solvent Cut Time/Solvent Delay : 3,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,5	19,00	scan	40,00	550,00

5. Puslab_5

Metode ini digunakan untuk analisis metamfetamina dan/atau golongan *Amphetamine Type Stimulant* (ATS) dalam urin pada GC-MS Agilent 7890B- 5977B (GC-MS 05).

Nama Metode : Puslab_5

GC

Injection Temp : 230,0 °C

Injection Mode : Split

Split Ratio : 10,0

Column Flow : 1,0 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	135,0	2,00
2	10,0	250,0	0,00

	BADAN NARKOTIKA NASIONAL PUSAT LABORATORIUM NARKOTIKA	INSTRUKSI KERJA LU-IKM 17	Tgl : 09-03-2023 Ed : 03 Rev : 00 Hal : 4 dari 24
		Metode Instrumentasi GCMS	

MS

Interface/auxiliary Temperature : 250,0 °C
Ion Source/MS Source Temperature : 280,0 °C
Solvent Cut Time/Solvent Delay : 3,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	19,00	Scan	40,00	550,00

6. Puslab_6

Metode ini digunakan untuk analisis MDMA dan/atau golongan *Amphetamine Type Stimulant* (ATS) dalam urin pada GC-MS Agilent 7890B- 5977B (GC-MS 05).

Nama Metode : Puslab_6

GC

Injection Temp : 250,0 °C
Injection Mode : Split
Split Ratio : 10,0
Column Flow : 1,0 mL/min
Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)
Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	280,0	2,00

MS

Interface/auxiliary Temperature : 250,0 °C
Ion Source/MS Source Temperature : 280,0 °C
Solvent Cut Time/Solvent Delay : 3,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	4,00	19,00	Scan	40,00	550,00

7. Puslab_7

Metode ini digunakan untuk analisis MDMA dan/ atau golongan *Amphetamine Type Stimulant* (ATS) dalam sediaan tablet, pecahan tablet dan serbuk tablet pada GC-MS Agilent 7890B- 5977B (GC-MS 01, 02, 03 dan 04).

Nama Metode : Puslab_7

GC

Injection Temp : 250,0 °C
Injection Mode : Split
Split Ratio : 50,0
Column Flow : 1,0 mL/min

	BADAN NARKOTIKA NASIONAL PUSAT LABORATORIUM NARKOTIKA	INSTRUKSI KERJA LU-IKM 17	Tgl : 09-03-2023
		Metode Instrumentasi GCMS	Ed : 03
			Rev : 00
			Hal : 5 dari 24

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)
Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	135,0	2,00
2	10,0	250,0	0,00

MS

Interface/auxiliary Temperature : 300 °C
Ion Source/MS Source Temperature : 280 °C
Solvent Cut Time/Solvent Delay : 3,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	24,00	scan	40,00	550,00

8. Puslab_8

Metode ini digunakan untuk analisis kristal metamphetamine dan/ atau golongan *Amphetamine Type Stimulant* (ATS) pada GC-MS Agilent 7890B- 5977B (GC-MS 01, 02, 03 dan 04).

Nama Metode : Puslab_8

GC

Injection Temp : 250,0 °C
Injection Mode : Split
Split Ratio : 50,0
Column Flow : 1,0 mL/min
Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)
Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	250,0	0,00

MS

Interface/auxiliary Temperature : 280 °C
Ion Source/MS Source Temperature : 280 °C
Solvent Cut Time/Solvent Delay : 3,00 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	17,00	scan	40,00	250,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 6 dari 24

9. Puslab_9

Metode ini digunakan untuk analisis golongan Amphetamine Type Stimulants (ATS) dalam urin dan rambut pada GC-MS Shimadzu QP2010 Ultra, GC-MS Shimadzu QP2020NX-2030Nexis.

Nama Metode : Puslab_9

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; Injection volume : 0,5 µL

Split Ratio : 10,0

Column Flow : 1,0 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	250,0	0,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 1,5 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,00	17,00	Scan; Event time : 0,5; Scan speed : 1111	40,00	550,00

10. Puslab_10

Metode ini digunakan untuk analisis MDMA dalam urin pada GC-MS Shimadzu QP2010 Ultra dan QP 2020NX-2030Nexis.

Nama Metode : Puslab_10

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; vol : 0,5 µL

Split Ratio : 10,0

Column Flow : 1,0 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	280,0	4,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 7 dari 24

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 1,5 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,00	24,00	Scan; Event time : 0,5; Scan speed : 1000	40,00	500,00

11. Puslab_11

Metode ini digunakan untuk analisis urin mengandung senyawa golongan sintetik kanabionoid atau urin "unknown" pada GC-MS Shimadzu QP2010 Ultra, Shimadzu QP2020NX – 2030Nexis dan Agilent 7890B – 5977B (GC-MS 05).

Nama Metode : Puslab_11

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; vol : 0,5 µL

Split Ratio : 10,0

Column Flow : 1,0 mL/min

Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	0,00
1	10,0	200,0	5,00
2	10,0	300,0	5,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 2,5 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	35,00	Scan; Event time : 0,5; Scan speed : 1111	40,00	500,00

12. Puslab_12

Metode ini digunakan untuk analisis urin mengandung senyawa golongan Benzodiazepine pada GC-MS Shimadzu QP2010 Ultra, Shimadzu QP2020NX – 2030Nexis dan Agilent 7890B – 5977B (GC-MS 05).



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 8 dari 24

Nama Metode : Puslab_12
GC
Injection Temp : 250,0 °C
Injection Mode : Split ; vol : 0,5 µL
Split Ratio : 10,0
Column Flow : 1,12 mL/min
Column Oven Temp : 140,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Purge Flow Program

	Rate	Final Flow	Hold Time
0	-	30,0	0,00

MS

Interface/auxiliary Temperature : 250 °C
Ion Source/MS Source Temperature : 200 °C
Solvent Cut Time/Solvent Delay : 2,5 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	26,00	Scan; Event time : 0,3; Scan speed : 1666	35,00	500,00

13. Puslab_13

Metode ini digunakan untuk analisis *11-nor-carboxy-delta 9 tetrahydrocannabinol* (THC-COOH) dalam urin pada GC-MS Shimadzu QP2010 Ultra, Shimadzu QP2020NX – 2030Nexis dan Agilent 7890B – 5977B (GC-MS 05).

Nama Metode : Puslab_13

GC

Injection Temp : 250,0 °C
Injection Mode : Splitless ; vol : 0,5 µL
Split Ratio : -1,0
Column Flow : 0,91 mL/min
Column Oven Temp : 150,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	150,0	1,00
1	9,0	260,0	0,00
2	30,0	300,0	5,00

MS

Interface/auxiliary Temperature : 280 °C
Ion Source/MS Source Temperature : 230 °C
Solvent Cut Time/Solvent Delay : 4,5 min



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 9 dari 24

MS Scan

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Ch1 m/z	Ch2 m/z	Ch3 m/z	Ch4 m/z	Ch5 m/z
1	4,50	15,5	SIM ; Event Time : 0,3	371,00	473,00	488,00	489,00	474,00

14. Puslab_14

Metode ini digunakan untuk analisis urin mengandung senyawa golongan opiat pada GC-MS Shimadzu QP2010 Ultra, Shimadzu QP2020NX – 2030Nexis dan Agilent 7890B – 5977B (GC-MS 05).

Nama Metode : Puslab_14

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; vol : 0,5 µL

Split Ratio : 10,0

Column Flow : 1,00 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,25
1	40,0	180,0	0,00
2	10,0	290,0	5,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 230 °C

Solvent Cut Time/Solvent Delay : 7,00 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	7,00	20,25	Scan; Event time : 0,5; Scan speed : 1111	40,00	550,00

15. Puslab_15

Metode ini digunakan untuk analisis *buprenorphine* dan *nor-buprenorphine* pada GC-MS Shimadzu QP2010 Ultra dan Shimadzu QP2020NX – 2030Nexis.

Nama Metode : Puslab_15

GC

Injection Temp : 250,0 °C

Injection Mode : Split ; vol : 0,5 µL

Split Ratio : 10,0

Column Flow : 0,86 mL/min

Column Oven Temp : 240,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 10 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	240,0	0,00
1	6,0	270,0	1,00
2	15,0	300,0	10,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 2,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	7,00	18,00	Scan; Event time : 0,5; Scan speed : 1111	50,00	550,00

16. Puslab_16

Metode ini digunakan untuk analisis golongan sintetik kanabinoid pada GC-MS Agilent 7890B – 5977B (GC-MS 01, 02, 03 dan 04).

Nama Metode : Puslab_16

GC

Injection Temp : 300,0 °C

Injection Mode : Split ; vol : 0,5 µL

Split Ratio : 50,0

Column Flow : 1,20 mL/min

Column Oven Temp : 80,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	80,0	0,17
1	30,0	300,0	0,50
2	5,0	320,0	5,00

MS

Interface/auxiliary Temperature : 325 °C

Ion Source/MS Source Temperature : 280 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 3,00 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	17,00	Scan; Scan speed : 1,562	50,00	550,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 11 dari 24

17. Puslab_17

Metode ini digunakan untuk analisis mitragynine dan turunannya pada GC-MS Agilent 7890B – 5977B (GC-MS 03 dan 04).

Nama Metode : Puslab_17

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 50,0

Column Flow : 1,00 mL/min

Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	0,00
1	10,0	200,0	5,00
2	10,0	300,0	10,00

MS

Interface/auxiliary Temperature : 300 °C

Ion Source/MS Source Temperature : 280 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 3,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	40,00	Scan; Scan speed : 1,562	40,00	550,00

18. Puslab_18

Metode ini digunakan untuk analisis 11-nor-carboxy-delta 9 THC (THC-COOH) pada GC-MS Agilent 7890B – 5977B (GC-MS 03 dan 04).

Nama Metode : Puslab_18

GC

Injection Temp : 240,0 °C

Injection Mode : Splitless

Split Ratio : -

Column Flow : 1,00 mL/min

Column Oven Temp : 90,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 12 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	90,0	1,00
1	30,0	200,0	2,00
2	5,0	240,0	3,00
3	30,0	290,0	3,00

MS

Interface/auxiliary Temperature : 290 °C

Ion Source/MS Source Temperature : 230 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 2,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,50	22,33	Scan; Scan speed : 1,562	40,00	550,00

19. Puslab_19

Metode ini digunakan untuk analisis *mitragynine* dan turunannya pada GC-MS Agilent 7890B – 5977B (GC-MS 03 dan 04).

Nama Metode : Puslab_19

GC

Column Oven Temp : 90,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Injection Temp : 240,0 °C

Injection Mode : Splitless

Column Flow : 1,00 mL/min

Split Ratio : -

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	90,0	1,00
1	30,0	200,0	2,00
2	5,0	240,0	3,00
3	30,0	290,0	3,00

MS

Interface/auxiliary Temperature : 290 °C

Ion Source/MS Source Temperature : 230 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 2,50 min



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 13 dari 24

MS Scan

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Ch 1 m/z	Ch 2 m/z	Ch 3 m/z	Ch 4 m/z	Ch 5 m/z
1	2,50	22,33	SIM; Dwell time : 100	371,00	473,00	474,00	488,00	489,00

20. Puslab_20

Metode ini digunakan untuk analisis golongan *benzodiazepine* pada GC-MS Agilent 7890B – 5977B (GC-MS 01, 02, 03 dan 04).

Nama Metode : Puslab_20

GC

Column Oven Temp : 140,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Injection Temp : 250,0 °C

Injection Mode : Split

Column Flow : 1,12 mL/min

Split Ratio : 50,0

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	140,0	2,00
1	30,0	260,0	5,00
2	5,0	310,0	5,00

MS

Interface/auxiliary Temperature : 310 °C

Ion Source/MS Source Temperature : 280 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 3,00 min

MS Scan

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	26,00	Scan; Scan speed : 1,562	40,00	550,00

21. Puslab_21

Metode ini digunakan untuk analisis rambut mengandung senyawa golongan *Amphetamine Type Stimulant* (ATS) pada GC-MS Agilent 7890A – 5975 (GC-MS TSP).

Nama Metode : Puslab_21

GC

Injection Temp : 100,0 °C



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 14 dari 24

Inlet Ramp Temperature/InletProgram

	Rate (°C/min)	Value (°C)	Hold Time (min)
0	-	100,0	0,00
1	300,0	260,0	3,00
2	200,0	250,0	2,00
3	20,0	100,0	0,00

Injection Mode : Split
Split Ratio : 50,0
Column Flow : 1,3 mL/min
Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	1,00
1	20,0	150,0	5,00
2	30,0	250,0	2,00

MS

Interface/auxiliary Temperature : 280 °C
Ion Source/MS Source Temperature : 280 °C; MS Quad : 150,0 °C
Solvent Cut Time/Solvent Delay : 1,00 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	1,00	26,00	Scan	40,00	550,00

22. Puslab_22

Metode ini digunakan untuk analisis rambut pada GC-MS Agilent 7890A – 5975 (GC-MS TSP).

Nama Metode : Puslab_22

GC

Injection Temp : 100,0 °C

Inlet Ramp Temperature/InletProgram

	Rate (°C/min)	Value (°C)	Hold Time (min)
0	-	100,0	0,00
1	300,0	250,0	3,00
2	10,0	100,0	0,00

Injection Mode : Split
Split Ratio : 50,0
Column Flow : 1,20 mL/min
Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 15 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	1,00
1	10,0	200,0	5,00
2	10,0	300,0	5,00

MS

Interface/auxiliary Temperature : 280 °C

Ion Source/MS Source Temperature : 280 °C; MS Quad : 150,0 °C

Solvent Cut Time/Solvent Delay : 3,00 min

MS Scan

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	35,00	Scan; Scan speed : 1,562	40,00	550,00

23. Puslab_23

Metode ini digunakan untuk analisis *11-nor-delta 9 tetrahydrocannabinol* (THC-COOH) pada GC-MS Agilent 7890B-5977B (GC-MS 05)

Nama Metode : Puslab_23

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 10,0

Column Flow : 1,20 mL/min

Column Oven Temp : 150,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	150,0	1,00
1	9,0	260,0	0,00
2	30,0	300,0	5,00

MS

Interface/auxiliary Temperature : 230 °C

Ion Source/MS Source Temperature : 280 °C

Solvent Cut Time/Solvent Delay : 4,50 min

MS Scan

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	5,00	35,00	Scan; Event time scan : 0,5 Scan speed : 1111	40,00	550,00

	BADAN NARKOTIKA NASIONAL PUSAT LABORATORIUM NARKOTIKA	INSTRUKSI KERJA LU-IKM 17	Tgl : 09-03-2023
		Metode Instrumentasi GCMS	Ed : 03
			Rev : 00
			Hal : 16 dari 24

24. Puslab_24

Metode ini digunakan untuk analisis golongan *benzodiazepine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_24

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 120,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	120,0	1,00
1	50,0	300,0	8,00

MS

Interface/auxiliary Temperature : 280 °C

Ion Source/MS Source Temperature : 280 °C

Solvent Cut Time/Solvent Delay : 3,00 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	12,60	Scan; Event time scan : 0,3 Scan speed : 2000	50,00	550,00

25. Puslab_25

Metode ini digunakan untuk analisis golongan *benzodiazepine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_25

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	2,00
1	10,0	280,0	4,00

MS

Interface/auxiliary Temperature : 250 °C



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 17 dari 24

Ion Source/MS Source Temperature : 250 °C
Solvent Cut Time/Solvent Delay : 3,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	24,00	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

26. Puslab_26

Metode ini digunakan untuk analisis golongan *benzodiazepine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_26

GC

Injection Temp : 240,0 °C
Injection Mode : Split
Split Ratio : 1,0
Column Flow : 1,00 mL/min
Column Oven Temp : 60,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)
Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	60,0	3,00
1	40,0	300,0	6,00

MS

Interface/auxiliary Temperature : 280 °C
Ion Source/MS Source Temperature : 230 °C
Solvent Cut Time/Solvent Delay : 2,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	15,00	Scan; Event time scan : 0,3 Scan speed : 1428	40,00	450,00

27. Puslab_27

Metode ini digunakan untuk analisis golongan *benzodiazepine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_27

GC

Injection Temp : 250,0 °C
Injection Mode : Split
Split Ratio : 1,0
Column Flow : 1,00 mL/min

	BADAN NARKOTIKA NASIONAL PUSAT LABORATORIUM NARKOTIKA	INSTRUKSI KERJA LU-IKM 17	Tgl : 09-03-2023
			Ed : 03
		Metode Instrumentasi GCMS	Rev : 00
			Hal : 18 dari 24

Column Oven Temp : 60,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	60,0	3,00
1	40,0	300,0	6,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 2,50 min

MS Scan :

.	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	15,00	Scan; Event time scan : 0,3 Scan speed : 1428	40,00	450,00

28. Puslab_28

Metode ini digunakan untuk analisis *buprenorphine*, *nor buprenorphine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_28

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 240,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	240,0	0,00
1	6,0	270,0	1,00
2	15,0	300,0	10,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 2,50 min

MS Scan :

.	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	7,00	18,00	Scan; Event time scan : 0,3 Scan speed : 2000	50,00	550,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 19 dari 24

29. Puslab_29

Metode ini digunakan untuk analisis sampel "unknown" ice program pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_29

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	0,00
1	10,0	200,0	5,00
2	10,0	300,0	5,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 230 °C

Solvent Cut Time/Solvent Delay : 3,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	35,00	Scan; Event time scan : 0,3 Scan speed : 2000	50,00	550,00

30. Puslab_30

Metode ini digunakan untuk analisis sampel "unknown" ice program pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_30

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 140,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 20 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	140,0	2,00
1	50,0	180,0	0,00
2	2,0	195,0	0,00
3	5,0	220,0	0,00
4	50,0	300,0	2,00

MS

Interface/auxiliary Temperature : 280 °C
Ion Source/MS Source Temperature : 230 °C
Solvent Cut Time/Solvent Delay : 2,50 min
MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,50	19,25	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

31. Puslab_31

Metode ini digunakan untuk analisis GHB dan sampel "unknown" ice program pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_31

GC

Injection Temp : 250,0 °C
Injection Mode : Split
Split Ratio : 1,0
Column Flow : 1,00 mL/min
Column Oven Temp : 60,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	60,0	1,00
1	15,0	100,0	1,00
2	25,0	250,0	5,00

MS

Interface/auxiliary Temperature : 250 °C
Ion Source/MS Source Temperature : 230 °C
Solvent Cut Time/Solvent Delay : 2,50 min



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 21 dari 24

MS Scan

:

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,50	16,50	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

32. Puslab_32

Metode ini digunakan untuk analisis *mitragynine* dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_32

GC

Injection Temp : 280,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 200,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	200,0	2,00
1	10,0	285,0	20,00

MS

Interface/auxiliary Temperature : 280 °C

Ion Source/MS Source Temperature : 280 °C

Solvent Cut Time/Solvent Delay : 3,00 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,00	30,50	Scan; Event time scan : 0,3 Scan speed : 2000	35,00	500,00

33. Puslab_33

Metode ini digunakan untuk analisis golongan opiat dan sampel "*unknown*" *ice program* pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_33

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 22 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,25
1	40,0	180,0	0,00
2	10	290,0	5,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 230 °C

Solvent Cut Time/Solvent Delay : 7,00 min

MS Scan :

.	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	7,00	20,25	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

34. Puslab_34

Metode ini digunakan untuk analisis sampel "unknown" ice program pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_34

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 1,0

Column Flow : 1,00 mL/min

Column Oven Temp : 50,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	50,0	0,50
1	99,0	100,0	1,00
2	35,0	300,0	15,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 230 °C

Solvent Cut Time/Solvent Delay : 3,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	3,50	22,70	Scan; Event time scan : 0,3 Scan speed : 2000	50,00	550,00



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 23 dari 24

35. Puslab_35

Metode ini digunakan untuk cek antara metamfetamina pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_35

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 50,0

Column Flow : 1,00 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	110,0	2,00
2	10,0	280,0	4,00

MS

Interface/auxiliary Temperature : 250 °C

Ion Source/MS Source Temperature : 230 °C

Solvent Cut Time/Solvent Delay : 1,50 min

MS Scan :

	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,00	24,00	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

36. Puslab_36

Metode ini digunakan untuk cek antara metamfetamina pada GC-MS Shimadzu QP 2020NX – 2030Nexis (c).

Nama Metode : Puslab_36

GC

Injection Temp : 250,0 °C

Injection Mode : Split

Split Ratio : 10,0

Column Flow : 1,00 mL/min

Column Oven Temp : 100,0 °C; Column : RTX-5MS/DB-5MS/HP-5MS (30 mx2,50µmx0,25 µm)



**BADAN NARKOTIKA NASIONAL
PUSAT LABORATORIUM NARKOTIKA**

**INSTRUKSI KERJA
LU-IKM 17**

Metode Instrumentasi GCMS

Tgl : 09-03-2023

Ed : 03

Rev : 00

Hal : 24 dari 24

Oven Ramp Temperature/Oven Program

	Rate	Final Temperature	Hold Time
0	-	100,0	2,00
1	10,0	110,0	2,00
2	15,0	280,0	0,00

MS

Interface/auxiliary Temperature : 230 °C

Ion Source/MS Source Temperature : 200 °C

Solvent Cut Time/Solvent Delay : 1,50 min

MS Scan :

.	Start Time (min)	End Time (min)	Acq. Mode / Acq Type	Start m/z	End m/z
1	2,00	16,33	Scan; Event time scan : 0,3 Scan speed : 2000	40,00	550,00

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Dokumen Terkait

LU-FRM 20 Formulir Analisis GC-MS