Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

SN2.DATA - Middle (FID)

CHROMATOGRAM METHOD REPORT :

Control method :

Scion/Bruker/Varian 400-GC Series (Exclu

Autosampler (8410)

Autosampler	ENABLED
First injector used	Position 2
Syringe volume	10 uL
Advance tray	NO
Clean between injections	NO
Use injection delay	NO
Delay between injections	1.0 min
Injection mode	Std (Split/Splitless)
Sample penetration depth	90 %
Solvent penetration depth	90 %

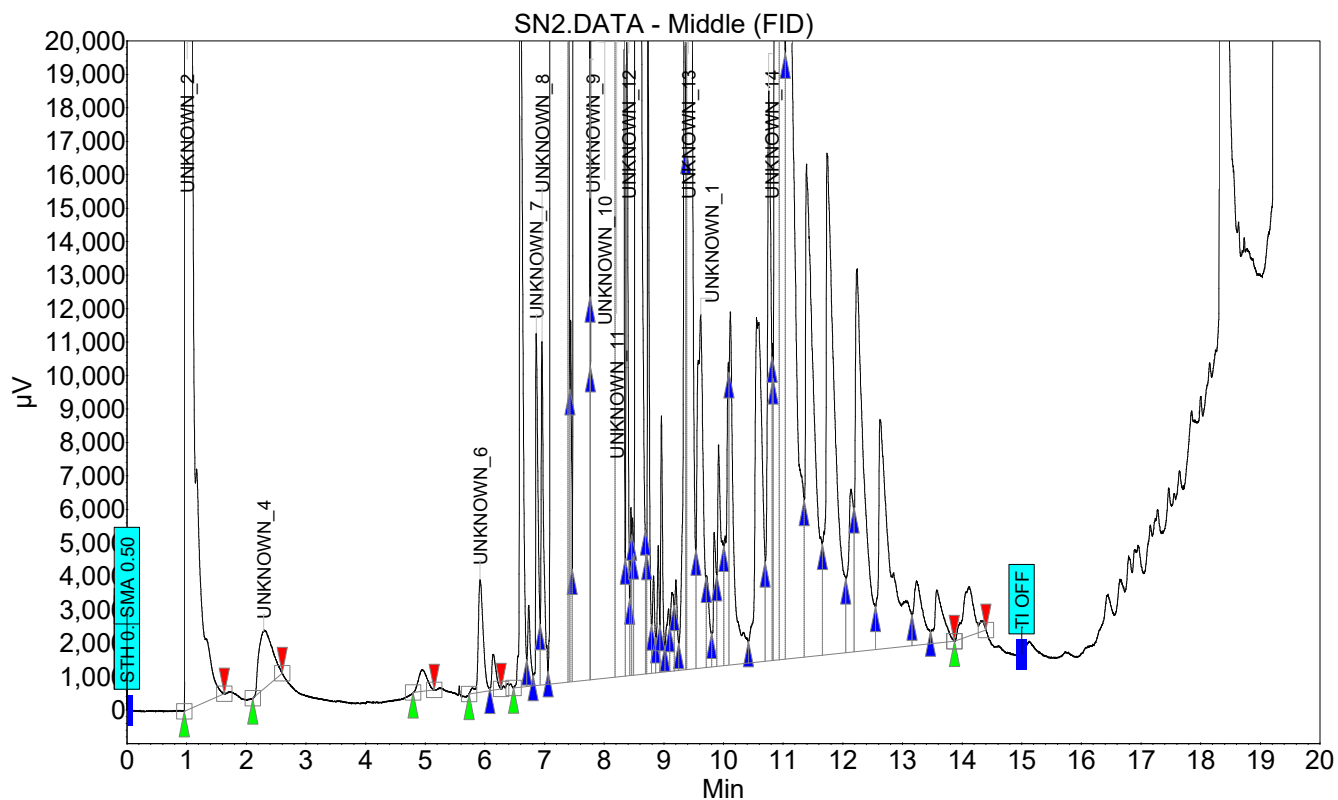Abort clean

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

Vial	I
Volume	5.0 uL
Strokes	1
Drawup speed	5.0 uL/s

Clean mode

Pre-injection solvent flushes	3
Pre-injection sample flushes	0
Post-injection solvent flushes	5
Clean solvent source	I

Injectors

Front (PWOC)

EFC 23 - Flow program	Rate (mL/min/min)	Step (mL/min)	Time (min)
	Initial	10.0	0.00
		Total time	0.00

EFC 23

Enabled	OFF

Heat-only zone 1

Heater	OFF
Setpoint	50 °C

Middle (S/SL)

Chromatogram : SN2_channel1

Split event table	Time (min)	Split state	Split ratio
	Initial	ON	25

EFC 25

Enabled	ON

Heat-only zone 2

Heater	ON
Setpoint	230 °C

Column oven

Stabilization time	0.50 min

Column oven zone

Heater	ON

Temperature program	Rate (°C/min)	Step (°C)	Time (min)
	Initial	100	4.00
	25.0	200	8.00
	20.0	250	5.00
		Total time	23.50

Valve oven

Rear (Small valve oven)

Heat-only zone 3

Heater	OFF
Setpoint	50 °C

Columns

Front

Chromatogram : SN2_channel1

System : 450-GC
Method : Biodiesel FAME 2023
User : User1

Carrier gas	Helium
Length	15.00 m
Inside diameter	200 um
Type	WCOT

Middle

Carrier gas	Helium
Length	30.00 m
Inside diameter	320 um
Type	PLOT

Pressure mode	Constant flow
Column flow	2.20 mL/min
Pressure pulse	DISABLED

Detectors

Heat-only zone 4

Heater	OFF
Setpoint	50 °C

Front (TCD)

Electronics	OFF
Time constant	Fast
Data rate	10 Hz

Filament temp. limit	390 °C
Filament temperature	50 °C

TCD event table	Time (min)	Range	Autozero	Polarity
	Initial	0.05	YES	POSITIVE

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

EFC 14

Enabled	OFF
Make-up (Helium) flow	25 mL/min
Reference (Helium) flow	30.0 mL/min

Heat-only zone 5

Heater	ON
Setpoint	250 °C

Middle (FID)

Electronics	ON
Time constant	Fast
Data rate	10 Hz

FID event table	Time (min)	Range	Autozero
	Initial	12	YES

EFC 11

Enabled	ON
Make-up (Nitrogen) flow	28 mL/min
Combustion (H2) flow	30.0 mL/min
Combustion (Air) flow	300.0 mL/min

Ouput ports

Front

ENABLED	NO

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Front	0

Middle

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

ENABLED	NO

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Middle	0

Rear

ENABLED	NO

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Rear	0

Valves

Valve event table	Time (min)	Gas Sample Valve
	Initial	Fill

Miscellaneous

Start automatically when ready	NO

Acquisition :
Run Name : SN2
Run Id. : -1
Run Time : 24.00

Integration method :
Reduce Noise : Yes
Spike Parameter : 1
Use Relative Threshold ? : Yes
Peak saturation level : min = 0   max = 0

Integration events :

Active	Time	Event	ON	Value
Yes	0.00	Set Peak Width		0.5
Yes	0.00	Set Threshold		0.05
Yes	0.00	Set Minimal Area		0.5
Yes	15.00	Turn Integration	OFF	

Manual actions :

Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Manual integration action count : 20
Action #1 : 20/10/2025 04:25:10 p. m. : ADD peak between t=4.797 and t=5.152
Action #2 : 20/10/2025 04:26:02 p. m. : SPLIT peak # 9 at 7.43
Action #3 : 20/10/2025 04:26:06 p. m. : SPLIT peak # 12 at 8.35
Action #4 : 20/10/2025 04:26:13 p. m. : SPLIT peak # 13 at 8.46
Action #5 : 20/10/2025 04:26:15 p. m. : SPLIT peak # 35 at 8.49
Action #6 : 20/10/2025 04:26:17 p. m. : SPLIT peak # 14 at 8.79
Action #7 : 20/10/2025 04:26:20 p. m. : SPLIT peak # 15 at 8.93
Action #8 : 20/10/2025 04:26:22 p. m. : SPLIT peak # 16 at 9.10
Action #9 : 20/10/2025 04:26:23 p. m. : SPLIT peak # 39 at 9.17
Action #10 : 20/10/2025 04:26:25 p. m. : SPLIT peak # 17 at 9.37
Action #11 : 20/10/2025 04:26:30 p. m. : SPLIT peak # 19 at 9.89
Action #12 : 20/10/2025 04:26:35 p. m. : SPLIT peak # 20 at 10.09
Action #13 : 20/10/2025 04:26:37 p. m. : SPLIT peak # 22 at 10.82
Action #14 : 20/10/2025 04:26:44 p. m. : SPLIT peak # 23 at 10.93
Action #15 : 20/10/2025 04:26:51 p. m. : SPLIT peak # 27 at 12.19
Action #16 : 20/10/2025 04:27:28 p. m. : SPLIT peak # 9 at 7.39
Action #17 : 20/10/2025 04:27:30 p. m. : SPLIT peak # 10 at 7.76
Action #18 : 20/10/2025 04:27:35 p. m. : SPLIT peak # 41 at 9.38
Action #19 : 20/10/2025 04:28:23 p. m. : SPLIT peak # 18 at 9.71
Action #20 : 20/10/2025 04:28:27 p. m. : SPLIT peak # 36 at 8.69

Peak Identification table :

Peak Name	RT [min]	Abs.Window[min]	Window %	Ref?	Mode
UNKNOWN_2	1.14	0.20	0.00		Nearest
heptano	1.48	0.20	0.00		Nearest
UNKNOWN_4	2.11	0.20	0.00		Nearest
UNKNOWN_5	4.10	0.20	0.00		Nearest
UNKNOWN_6	5.86	0.20	0.00		Nearest
UNKNOWN_7	6.93	0.20	0.00		Nearest
UNKNOWN_8	6.96	0.20	0.00		Nearest
UNKNOWN_9	7.71	0.20	0.00		Nearest
UNKNOWN_10	7.84	0.20	0.00		Nearest
UNKNOWN_11	8.04	0.20	0.00		Nearest
UNKNOWN_12	8.41	0.20	0.00		Nearest
UNKNOWN_13	9.32	0.20	0.00		Nearest
UNKNOWN_1	9.54	0.20	0.00		Nearest
UNKNOWN_14	10.71	0.20	0.00		Nearest

Resolve with references : No

Group Identification table :

Group Name	Group type	Parameters

Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Peak results :

Index	Name	Time [Min]	Quantity [% Area]	Height [µV]	Area [µV.Min]	Area % [%]
1	UNKNOWN_2	0.98	76.90	486285800.8	3429470.7	76.895
2	UNKNOWN_4	2.29	0.01	1730.2	445.5	0.010
32	UNKNOWN	4.95	0.00	652.5	106.5	0.002
3	UNKNOWN_6	5.92	0.01	3367.6	325.0	0.007
4	UNKNOWN	6.14	0.00	1067.4	85.1	0.002
5	UNKNOWN	6.59	0.03	25017.3	1457.9	0.033
6	UNKNOWN	6.74	0.00	2421.5	128.9	0.003
7	UNKNOWN_7	6.86	0.01	10529.9	501.9	0.011
8	UNKNOWN_8	6.96	0.01	10264.6	518.1	0.012
9	UNKNOWN	7.10	1.86	725780.2	83016.4	1.861
47	UNKNOWN	7.40	0.01	23977.2	592.4	0.013
33	UNKNOWN	7.44	0.01	10802.9	304.6	0.007
10	UNKNOWN	7.49	1.94	595167.8	86628.1	1.942
48	UNKNOWN_9	7.77	0.00	14397.8	105.9	0.002
11	UNKNOWN_10	7.86	17.15	3522958.2	765077.8	17.155
12	UNKNOWN_11	8.20	0.98	649381.9	43851.9	0.983
34	UNKNOWN_12	8.37	0.02	21396.2	851.1	0.019
13	UNKNOWN	8.45	0.00	5019.7	133.6	0.003
35	UNKNOWN	8.48	0.00	4699.7	137.2	0.003
36	UNKNOWN	8.53	0.26	165187.3	11769.4	0.264
51	UNKNOWN	8.70	0.00	4319.1	98.9	0.002
14	UNKNOWN	8.73	0.02	20610.8	703.4	0.016
37	UNKNOWN	8.83	0.00	2898.2	136.8	0.003
15	UNKNOWN	8.91	0.00	3798.4	149.1	0.003
38	UNKNOWN	8.96	0.01	7660.3	294.7	0.007
16	UNKNOWN	9.08	0.00	1869.6	118.1	0.003
39	UNKNOWN	9.14	0.00	2335.0	149.6	0.003
40	UNKNOWN	9.20	0.00	2714.3	138.4	0.003
17	UNKNOWN_13	9.34	0.02	22442.8	987.3	0.022
41	UNKNOWN	9.38	0.01	24305.9	285.7	0.006
49	UNKNOWN	9.40	0.14	96956.8	6062.3	0.136
18	UNKNOWN_1	9.62	0.03	10543.5	1200.4	0.027
50	UNKNOWN	9.72	0.00	2741.6	166.7	0.004
19	UNKNOWN	9.85	0.00	4012.7	220.7	0.005
42	UNKNOWN	9.92	0.01	6603.2	529.6	0.012
20	UNKNOWN	10.08	0.01	9040.3	468.1	0.010
43	UNKNOWN	10.12	0.02	10551.7	919.0	0.021
21	UNKNOWN	10.55	0.03	10300.8	1464.7	0.033
22	UNKNOWN_14	10.76	0.03	17046.1	1254.8	0.028
44	UNKNOWN	10.82	0.00	9480.1	145.1	0.003
23	UNKNOWN	10.87	0.05	27402.9	2232.2	0.050
45	UNKNOWN	10.98	0.05	24356.5	2231.3	0.050
24	UNKNOWN	11.08	0.10	31591.6	4563.6	0.102
25	UNKNOWN	11.39	0.05	14726.1	2403.1	0.054
26	UNKNOWN	11.74	0.06	14966.2	2609.7	0.059
27	UNKNOWN	12.14	0.01	4868.9	519.4	0.012
46	UNKNOWN	12.24	0.04	11432.7	1872.9	0.042
28	UNKNOWN	12.62	0.03	6847.9	1553.9	0.035
29	UNKNOWN	13.24	0.01	1918.6	335.8	0.008
30	UNKNOWN	13.58	0.01	1586.7	264.3	0.006
31	UNKNOWN	14.12	0.01	1447.5	331.6	0.007
Total			100.00	492490997.3	4459919.2	100.000

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

CHROMATOGRAM METHOD REPORT :

Control method :

Scion/Bruker/Varian 400-GC Series (Exclu

Autosampler (8410)

Autosampler	ENABLED
First injector used	Position 2
Syringe volume	10 uL
Advance tray	NO
Clean between injections	NO
Use injection delay	NO
Delay between injections	1.0 min
Injection mode	Std (Split/Splitless)
Sample penetration depth	90 %
Solvent penetration depth	90 %

Abort clean

Vial	I
Volume	5.0 uL
Strokes	1
Drawup speed	5.0 uL/s

Clean mode

Pre-injection solvent flushes	3
Pre-injection sample flushes	0
Post-injection solvent flushes	5
Clean solvent source	I

Injectors

Front (PWOC)

EFC 23 - Flow program	Rate (mL/min/min)	Step (mL/min)	Time (min)
	Initial	10.0	0.00

Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

EFC 23 - Flow program	Rate (mL/min/min)	Step (mL/min)	Time (min)
		Total time	0.00

EFC 23

Enabled	OFF

Heat-only zone 1

Heater	OFF
Setpoint	50 °C

Middle (S/SL)

Split event table	Time (min)	Split state	Split ratio
	Initial	ON	25

EFC 25

Enabled	ON

Heat-only zone 2

Heater	ON
Setpoint	230 °C

Column oven

Stabilization time	0.50 min

Column oven zone

Heater	ON

Temperature program	Rate (°C/min)	Step (°C)	Time (min)

Chromatogram : SN2_channel1

Temperature program	Rate (°C/min)	Step (°C)	Time (min)
	Initial	100	4.00
	25.0	200	8.00
	20.0	250	5.00
		Total time	23.50

Valve oven

Rear (Small valve oven)

Heat-only zone 3

Heater	OFF
Setpoint	50 °C

Columns

Front

Carrier gas	Helium
Length	15.00 m
Inside diameter	200 um
Type	WCOT

Middle

Carrier gas	Helium
Length	30.00 m
Inside diameter	320 um
Type	PLOT

Pressure mode	Constant flow
Column flow	2.20 mL/min
Pressure pulse	DISABLED

Detectors

Heat-only zone 4

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

Heater	OFF
Setpoint	50 °C

Front (TCD)

Electronics	OFF
Time constant	Fast
Data rate	10 Hz

Filament temp. limit	390 °C
Filament temperature	50 °C

TCD event table	Time (min)	Range	Autozero	Polarity
	Initial	0.05	YES	POSITIVE

EFC 14

Enabled	OFF
Make-up (Helium) flow	25 mL/min
Reference (Helium) flow	30.0 mL/min

Heat-only zone 5

Heater	ON
Setpoint	250 °C

Middle (FID)

Electronics	ON
Time constant	Fast
Data rate	10 Hz

FID event table	Time (min)	Range	Autozero
	Initial	12	YES

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

| EFC 11 |

Enabled	ON
Make-up (Nitrogen) flow	28 mL/min
Combustion (H2) flow	30.0 mL/min
Combustion (Air) flow	300.0 mL/min

| Ouput ports |

| Front |

| ENABLED | NO |

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Front	0

| Middle |

| ENABLED | NO |

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Middle	0

| Rear |

| ENABLED | NO |

Output port program	Time (min)	Detector source	Attenuation (2^X)
	Initial	Rear	0

| Valves |

Valve event table	Time (min)	Gas Sample Valve
	Initial	Fill

Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

| Miscellaneous |

| Start automatically when ready | NO |

Acquisition :
System : 456-GC
Project : Aceites
Run Name : SN2
Description
Run Id. : -1
Run Time : 24.00
Vial   : 9
Rack   : 0
Analysis   : Unknown
Injection volume : 1.00

Scale :
 RT Min : 0.00
 RT Max : 20.00
 Y Min : -1,000.00
 Y Max : 20,000.00
 Divisor factor   : 1.00
 Multiplier factor : 1.00
 Sample mass : 0.00

Run log :

Injection report for Position 2

 Injection occured at 20/10/2025 02:08:33 p. m.

Scion/Bruker/Varian 400-GC Series (Exclu [Scion/Bruker/Varian 400-GC Series (Excluding 430)]
Wrapper 5.0.8.31952
Firmware 32834
Driver 4.1.0.394

Preprocessing :
Blank Subtract :
 File:
N.A.

Integration method :
Reduce Noise : Yes
Spike Parameter : 1
Use Relative Threshold ? : Yes
Peak saturation level : min = 0   max = 0

Integration events :

Active	Time	Event	ON	Value
Yes	0.00	Set Peak Width		0.5
Yes	0.00	Set Threshold		0.05
Yes	0.00	Set Minimal Area		0.5

Chromatogram : SN2_channel1

System : 456-GC
Method : Biodiesel FAME 2023
User : User1

Acquired : 20/10/2025 02:08:33 p. m.
Processed : 20/10/2025 04:28:31 p. m.
Printed : 20/10/2025 04:28:58 p. m.

Active	Time	Event	ON	Value
Yes	15.00	Turn Integration	OFF	

Manual actions :
Manual integration action count : 20
Action #1 : 20/10/2025 04:25:10 p. m. : ADD peak between t=4.797 and t=5.152
Action #2 : 20/10/2025 04:26:02 p. m. : SPLIT peak # 9 at 7.43
Action #3 : 20/10/2025 04:26:06 p. m. : SPLIT peak # 12 at 8.35
Action #4 : 20/10/2025 04:26:13 p. m. : SPLIT peak # 13 at 8.46
Action #5 : 20/10/2025 04:26:15 p. m. : SPLIT peak # 35 at 8.49
Action #6 : 20/10/2025 04:26:17 p. m. : SPLIT peak # 14 at 8.79
Action #7 : 20/10/2025 04:26:20 p. m. : SPLIT peak # 15 at 8.93
Action #8 : 20/10/2025 04:26:22 p. m. : SPLIT peak # 16 at 9.10
Action #9 : 20/10/2025 04:26:23 p. m. : SPLIT peak # 39 at 9.17
Action #10 : 20/10/2025 04:26:25 p. m. : SPLIT peak # 17 at 9.37
Action #11 : 20/10/2025 04:26:30 p. m. : SPLIT peak # 19 at 9.89
Action #12 : 20/10/2025 04:26:35 p. m. : SPLIT peak # 20 at 10.09
Action #13 : 20/10/2025 04:26:37 p. m. : SPLIT peak # 22 at 10.82
Action #14 : 20/10/2025 04:26:44 p. m. : SPLIT peak # 23 at 10.93
Action #15 : 20/10/2025 04:26:51 p. m. : SPLIT peak # 27 at 12.19
Action #16 : 20/10/2025 04:27:28 p. m. : SPLIT peak # 9 at 7.39
Action #17 : 20/10/2025 04:27:30 p. m. : SPLIT peak # 10 at 7.76
Action #18 : 20/10/2025 04:27:35 p. m. : SPLIT peak # 41 at 9.38
Action #19 : 20/10/2025 04:28:23 p. m. : SPLIT peak # 18 at 9.71
Action #20 : 20/10/2025 04:28:27 p. m. : SPLIT peak # 36 at 8.69

Peak Identification table :

Peak Name	RT [min]	Abs.Window[min]	Window %	Ref?	Mode
UNKNOWN_2	1.14	0.20	0.00		Nearest
heptano	1.48	0.20	0.00		Nearest
UNKNOWN_4	2.11	0.20	0.00		Nearest
UNKNOWN_5	4.10	0.20	0.00		Nearest
UNKNOWN_6	5.86	0.20	0.00		Nearest
UNKNOWN_7	6.93	0.20	0.00		Nearest
UNKNOWN_8	6.96	0.20	0.00		Nearest
UNKNOWN_9	7.71	0.20	0.00		Nearest
UNKNOWN_10	7.84	0.20	0.00		Nearest
UNKNOWN_11	8.04	0.20	0.00		Nearest
UNKNOWN_12	8.41	0.20	0.00		Nearest
UNKNOWN_13	9.32	0.20	0.00		Nearest
UNKNOWN_1	9.54	0.20	0.00		Nearest
UNKNOWN_14	10.71	0.20	0.00		Nearest

Resolve with references : No

Group Identification table :

Group Name	Group type	Parameters

Calibration Method :

Method type : Response %
Response : Area
Standard Unit : g/l
Calibration curve file name :

Factors : Curve
Subtract internal standard mass

Chromatogram : SN2_channel1

Response unit : Curve

Unknown mode : None

Calibration components :

Component	Level 1	Level 2	Level 3	Level 4	Control Sample

Suitability tests :

Export :

Post Run :

Print Method :
File name : : default_standard
Copies : 0

Summary :