SFL3

Method: 100SLOWSCRN

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 30 m × 0.25 mm I.D. × 0.25 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.5 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 100ºC hold for 2 min, 11ºC/min to 280 ºC, hold for 3 min, 35 ºC/min to 310 ºC, hold for 4 min
Minimum Run Time: 26.221 min
Detector Temperature: 300ºC

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: COCSCRN

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:
Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 280 °C
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 °C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 250°C for 1 min, 30°C/min to 300 °C, hold for 2 min
Minimum Run Time: 4.67 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.

SFL3

Method: G-SCRN-02

Instruments: DEA364408; DEA364315; DEA364316; DEA364407; DEA364311; DEA364353; DEA364381; DEA364409; DEA364410

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 or HP-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 °C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- 135°C for 1 min, 20°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C, hold for 2 min
  - *DEA364408; DEA364316; DEA364407*
- 135°C for 1 min, 20°C/min to 280 °C, 30°C/min to 310 °C for 3 min
  - *DEA364381, DEA364409; DEA364410*
- 145°C for 1 min, 20°C/min to 280°C, hold for 1 min, 30°C/min to 310°C, hold for 2.3 min
  - *DEA364315*
- 125°C for 1.0 min, 20°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C for 2 min
  - *DEA364311*
- 125°C for 1.5 min, 20°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C for 1.75 min
  - *DEA364353*

Minimum Run Time:

- *DEA364408; DEA364316; DEA364407; DEA 364381; DEA364409; DEA364410***:** 12.25 min
- *DEA364315*: 12.05 min
- *DEA364311***:** 12.75 min
- *DEA364353***:** 13.00 min

Detector Temperature: 310 °C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability:

- *DEA364408; DEA364407; DEA364353; DEA364381; DEA364409; DEA364410***:** Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.
- *DEA364315; DEA364316; DEA364311:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections.

Reproducibility:

- *DEA364408***:** Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 4 weeks are within 1% of the values measured on week 1.
- *DEA364315; DEA364316; DEA364353***:** Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364407; DEA364409:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.
- *DEA364311:* Individual retention times measured for representative compounds during 3 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364381*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.
- *DEA364410*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 1 week are within 1% of the values measured on week 1.

SFL3

Method: G-SCRN-02_30M

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 30 m × 0.25 mm I.D. × 0.25 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270ºC
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.5 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 140ºC, 25ºC/min to 290 ºC, hold for 5 min, 35 ºC/min to 310 ºC, hold for 1.5 min
Minimum Run Time: 13.071 min
Detector Temperature: 300ºC

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3 ISOMER

Method: ISOMER

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be based extracted into a suitable solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these, and derivatized with MTPA.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 310 ℃
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 ℃
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 200 °C for 7 min, 30°C/min to 270°C
Minimum Run Time: 9.333 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 1 week are within 1% of the values measured on week 1.

SFL3

Method: LONGSCREEN

Instruments: DEA364381; DEA364409; DEA364410

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: split
Maximum Split Ratio: 50:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 260°C for 5 min, 15°C/min to 310 °C, hold for 15 min
Minimum Run Time: 23.333 min
Detector Temperature: 280 °C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: LONGSCRN

Instruments: DEA364315; DEA364316; DEA364407

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364315*: 150°C for 1 min, 15°C/min to 280°C, hold for 1 min, 35°C/min to 310°C, hold for 6 min
- *DEA364316:* 150ºC for 1 min, 15ºC/min to 280 ºC, hold for 1 min, 35 ºC/min to 310 ºC, hold for 5.5 min
- *DEA364407:* 150ºC for 1 min, 15ºC/min to 280 ºC, hold for 1 min, 35 ºC/min to 310 ºC, hold for 7 min

Minimum Run Time:

- *DEA364315*: 17.524 min
- *DEA364316*: 17.024 min
- *DEA364407*: 18.524 min

Detector Temperature: 310°C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364315:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 4 weeks are within 1% of the values measured on week 1.
- *DEA364316:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364407:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.

SFL3

Method: LONGSCRN_30M

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 30 m × 0.25 mm I.D. × 0.25 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270ºC
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.5 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 150ºC hold for 1 min, 15ºC/min to 280 ºC, hold for 1 min, 35 ºC/min to 310 ºC, hold for 8 min
Minimum Run Time: 19.524 min
Detector Temperature: 300ºC

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: LTM-FASTSCRN

Instruments: DEA364347; DEA364348; DEA364349; DEA364350; DEA364352

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 310 °C
Column Type and Dimensions:

Pre-Column: DB-5 1.0 m × 0.18mm I.D. × 0.18 µm film thickness;
LTM Column: DB-CSI LL-LTM 15m × 0.25mm I.D. × 0.25µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)

Inlet Temperature: 270 ℃
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 50:1
Carrier Gas and Flow:

- *DEA364347; DEA364348; DEA364352:* Hydrogen, 2.0 mL/min
- *DEA364349; DEA364350:* Hydrogen, 1.0 mL/min

Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364347; DEA364348; DEA364352:* 280 °C
- *DEA364349; DEA364350:* 270 °C

LTM Program Set Points:

- 135°C for 1 min, 100°C/min to 280 °C, hold for 1 min, 250°C/min to 310 °C, hold for 1.9 min
  - *DEA364347; DEA364348*
- 135°C for 1 min, 100°C/min to 280 °C, hold for 1 min, 250°C/min to 310 °C, hold for 2.0 min
  - *DEA364349*
- 135°C for 1 min, 100°C/min to 280 °C, hold for 1 min, 250°C/min to 310 °C, hold for 1.7 min
  - *DEA364350*
- 135°C, 1.0 min, 100°C/min to 280°C for 1 min, 250°C/min to 310°C, hold for 1.5 min
  - *DEA364352*

Minimum Run Time:

- *DEA364347; DEA364348:* 5.47 min

- *DEA364349:* 5.57 min
- *DEA364350:* 5.27 min
- *DEA364352:* 5.07 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability:

- *DEA364347:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections.
- *DEA364348; DEA364349; DEA364350; DEA364352:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364347:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364348; DEA364350:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and/or the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.
- *DEA364349:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 3 weeks are within 1% of the values measured on week 1.
- *DEA364352:* Individual retention times measured for representative compounds during 4 weeks are within 0.1 minutes of the values measured on week 1.

SFL3

Method: LTM-G-SCRN-02

Instruments: DEA364347; DEA364348; DEA364349; DEA364350

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 310 °C
Column Type and Dimensions:
Pre-Column: DB-5 1.0 m × 0.18mm I.D. × 0.18 µm film thickness;
LTM Column: DB-CSI LL-LTM 15m × 0.25mm I.D. × 0.25µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 °C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364347; DEA364348:* 280 °C
- *DEA364349; DEA364350:* 270 °C

LTM Program Set Points:

- 135°C for 1 min, 15°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C, hold for 2.6 min
  - *DEA364347; DEA364348*
- 135°C for 1 min, 15°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C, hold for 3 min
  - *DEA364349*
- 135°C for 1 min, 15°C/min to 280 °C, hold for 1 min, 30°C/min to 310 °C, hold for 2.3 min
  - *DEA364350*

Minimum Run Time:

- *DEA364347; DEA364348:* 15.267 min
- *DEA364349:* 15.667 min
- *DEA364350:* 14.967 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability:

- *DEA364347; DEA364348; DEA364349:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.
- *DEA364350:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections.

Reproducibility:

- *DEA364347; DEA364349; DEA364350:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364348:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and/or the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.

SFL3

Method: LTM-ISOMER

Instrument: DEA364349; DEA364350; DEA364348

Separation of Controlled and Non-controlled Substances by Gas

Chromatography **Scope: Limited purpose for isomers of methamphetamine**

Sample Preparation:

Samples will be based extracted into a suitable solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these, and derivatized with MTPA.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 310 ℃
Column Type and Dimensions:
Pre-Column: DB-5 1.0 m × 0.18mm I.D. × 0.18 µm film thickness;
LTM Column: DB-CSI LL-LTM 15m × 0.25mm I.D. × 0.25µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 °C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 50:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 280 °C
LTM Program Set Points: 200°C for 9 min
Minimum Run Time: 9 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364349*: Individual retention times measured for representative compounds during 3 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.
- *DEA364350*: Individual retention times measured for representative compounds during 4 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 2 weeks are within 1% of the values measured on week 1.
- *DEA364348*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: LTM-LONGSCRN

Instruments: DEA364348; DEA364350; DEA364349

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Detector Temperature: 310 °C
Column Type and Dimensions:
Pre-Column: DB-5 1.0 m × 0.18mm I.D. × 0.18 µm film thickness;
LTM Column: DB-CSI LL-LTM 15m × 0.25mm I.D. × 0.25µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270 °C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen, 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points: 280 °C
LTM Program Set Points: 135°C for 1 min, 20°C/min to 320 °C, hold for 5 min
Minimum Run Time: 15.25 min

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and/or fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability:

- *DEA364348:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections.

- *DEA364349; DEA364350:* Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and/or the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364348:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364349; DEA364350:* Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 4 weeks are within 1% of the values measured on week 1.

SFL3

Method: MTPA

Instruments: DEA364315; DEA364316; DEA364407

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: Limited purpose (l-Methamphetamine and d-Methamphetamine)

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364315:* 165°C for 1 min, 15°C/min to 270°C for 1 min
- *DEA364316; DEA364407:* 200°C for 7 min, 30°C/min to 270°C

Minimum Run Time:

- *DEA364315:* 9.0 min
- *DEA364316; DEA364407*: 9.3 min

Detector Temperature: 310°C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364315; DEA364316*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364407*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: MTPA_30M

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: Limited purpose (for the qualitative analysis and identification of methamphetamine optical isomers)

Sample Preparation:

Samples will be base extracted into a suitable solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these, and derivatized with MTPA.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID
Column Type and Dimensions: DB-5 30 m × 0.25 mm I.D. × 0.25 µm film thickness, 5% phenyl methylpolysiloxane stationary phase
Inlet Temperature: 270ºC
Minimum Injection Volume: 1 µL
Injection Mode): Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.5 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant Flow
Oven Program Set Points: 200°C for 7 min, 30°C/min to 270°C
Minimum Run Time: 9.333 min
Detector Temperature: 310 ºC

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections, and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: MTPA-ISOMER

Instruments: DEA364381; DEA364409; DEA364410; DEA364311; DEA364353

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: Limited purpose (l-Methamphetamine and d-Methamphetamine)

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 50:1
Carrier Gas and Flow:

- *DEA364381; DEA364409; DEA364410; DEA364311*: Hydrogen at 1.1 mL/min
- *DEA364353*: Hydrogen at 1.0 mL/min

Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- 225°C, 15°C/min to 240°C, hold 0.5min, 15°C/min to 280°C
  - *DEA364381; DEA364409; DEA364410*
- 200°C, 15°C/min to 280°C
  - *DEA364311; DEA364353*

Minimum Run Time:

- *DEA364381; DEA364409; DEA364410*: 4.17 min
- *DEA364311; DEA364353*: 5.33 min

Detector Temperature: 300°C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: QUICKSCRN

Instruments: DEA364316; DEA364407

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364316:* 165ºC for 1 min, 20ºC/min to 255 ºC
- *DEA364407*: 165ºC for 1 min, 20ºC/min to 255 ºC, hold for 0.5 min

Minimum Run Time:

- *DEA364316:* 5.5 min
- *DEA364407*: 6.0 min

Detector Temperature: 310°C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364316*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and/or the individual relative retention times during 1 week are within 1% of the values measured on week 1.
- *DEA364407*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: SHORTSCREEN

Instruments: DEA364311; DEA364353; DEA364381; DEA364409; DEA364410

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364311; DEA364381; DEA364409; DEA364410:* 250°C for 1 min, 30°C/min to 280°C, hold for 3 min
- *DEA364353:* 250°C for 1 min, 35°C/min to 300°C, hold for 2.5 min

Minimum Run Time:

- *DEA364311; DEA364381; DEA364409; DEA364410:* 5.0 min
- *DEA364353:* 4.9 min

Detector Temperature: 310°C

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364311*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1, and the individual relative retention times during 3 weeks are within 1% of the values measured on week 1.
- *DEA364353*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.
- *DEA364381; DEA364409; DEA364410*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.

SFL3

Method: SHORTSCRN

Instruments: DEA364315; DEA364316; DEA364407

Separation of Controlled and Non-controlled Substances by Gas Chromatography

Scope: General purpose

Sample Preparation:

Samples will be prepared at a suitable concentration for identification and in any appropriate solvent, including but not limited to methanol, chloroform, acetone, petroleum ether, ethyl ether, methylene chloride, ethyl acetate, xylenes and hexane, or any combination of these. Internal standards, such as tetracosane, may be used. Perform filtration, centrifugation, derivatization and acid/base extraction as necessary.

Method Parameters:

Instrument: Agilent GC 7890 equipped with an FID detector
Column Type and Dimensions: DB-5 12 m × 0.20 mm I.D. × 0.33 µm film thickness, 5% phenyl methylpolysiloxane stationary phase (or equivalent)
Inlet Temperature: 270°C
Minimum Injection Volume: 1 µL
Injection Mode: Split
Maximum Split Ratio: 60:1
Carrier Gas and Flow: Hydrogen at 1.0 mL/min
Make-up Gas: Nitrogen
Control Mode: Constant flow
Oven Program Set Points:

- *DEA364315; DEA364316:* 250°C for 1 min, 30°C/min to 300°C, hold for 2 min
- *DEA364407*: 250ºC for 1 min, 30ºC/min to 300 ºC, hold for 2.5 min

Minimum Run Time:

- *DEA364315; DEA364316:* 4.667 min
- *DEA364407*: 5.1667 min

Detector Temperature:

- *DEA364315*: 310°C
- *DEA364316; DEA364407*: 280℃

Limitations: See individual instrument validation reports.

Acceptance Criteria (unless otherwise noted in individual validation report):

Selectivity: Target compounds are visually separated and observed as a single peak with a clear, non-splitting apex. Peak fronting/tailing, if observed, does not preclude the detection of closely eluting peaks. A minimum S/N =3 is observed, including a low level (0.5%) marker compound. Earliest eluting compound met minimum retention factor criteria and fulfilled the repeatability and reproducibility acceptance criteria.

Repeatability: Individual retention times measured for representative compounds are within 0.1 minutes of the average of 30 injections and the individual relative retention times are within 1% of the average of 30 injections.

Reproducibility:

- *DEA364315; DEA364407*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1 and the individual relative retention times during 6 weeks are within 1% of the values measured on week 1.
- *DEA364316*: Individual retention times measured for representative compounds during 6 weeks are within 0.1 minutes of the values measured on week 1.