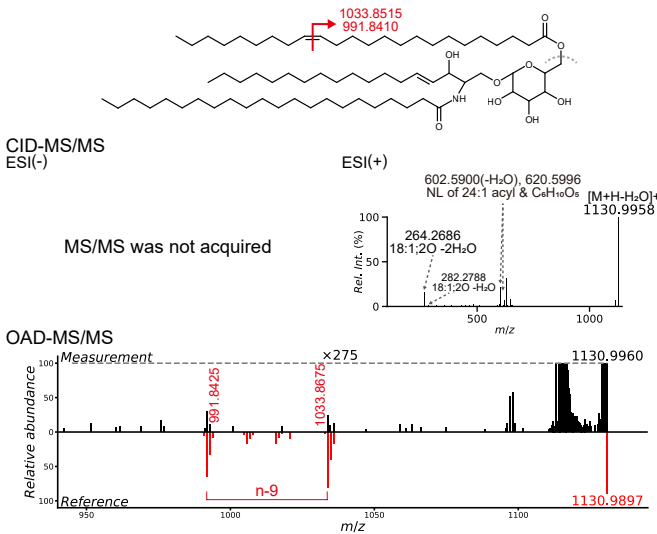
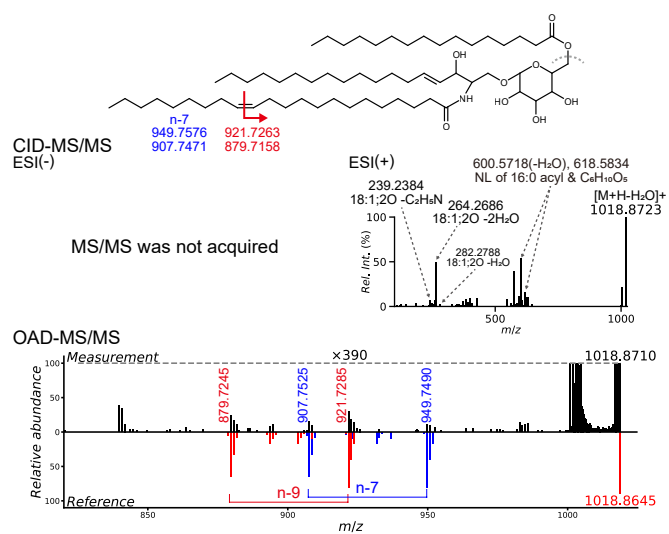


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice brain**

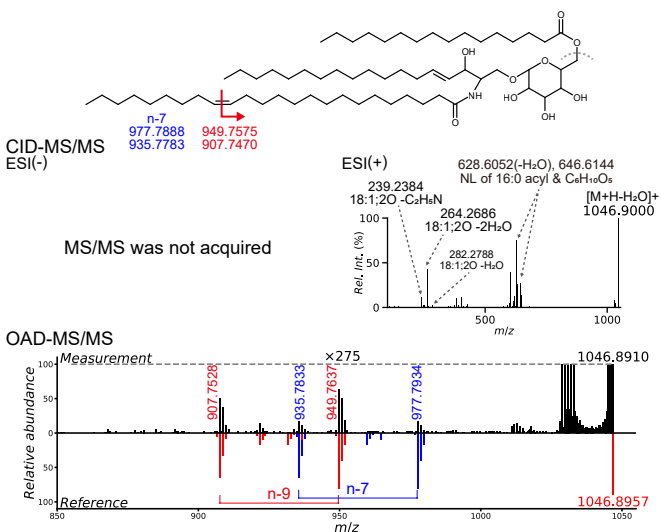
(a) AHexCer (O-24:1(n-9))18:1;20/22:0;O



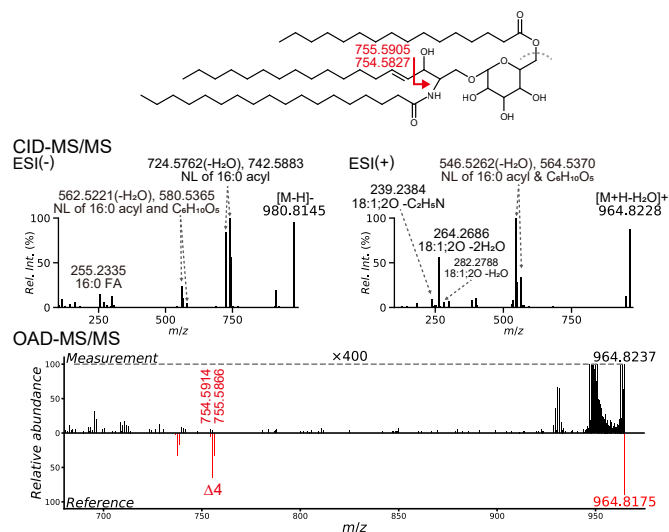
(b) AHexCer (O-16:0)18:1;20/22:1(n-7&9);O



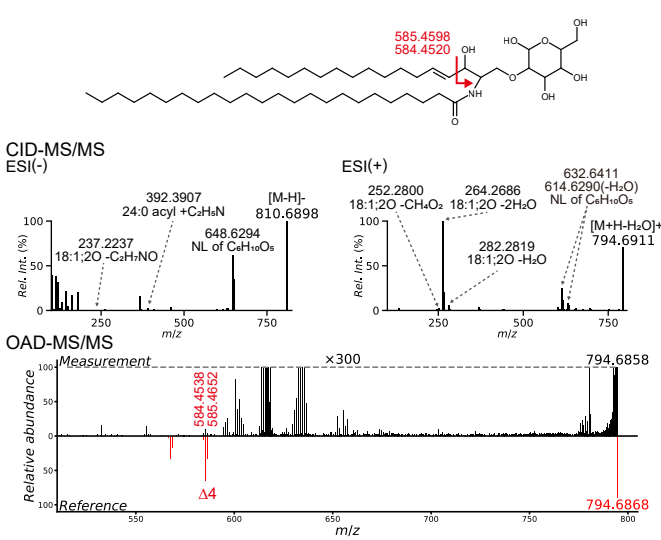
(c) AHexCer (O-16:0)18:1;20/24:1(n-7&9);O



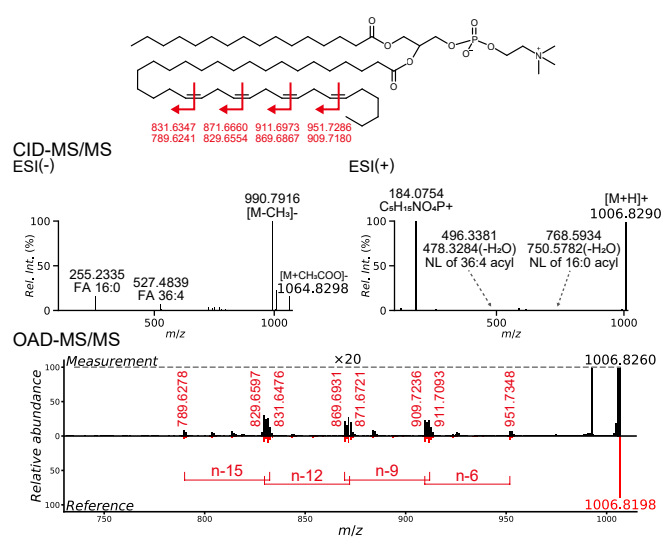
(d) AHexCer (O-16:0)18:1(Δ4);20/18:0;O



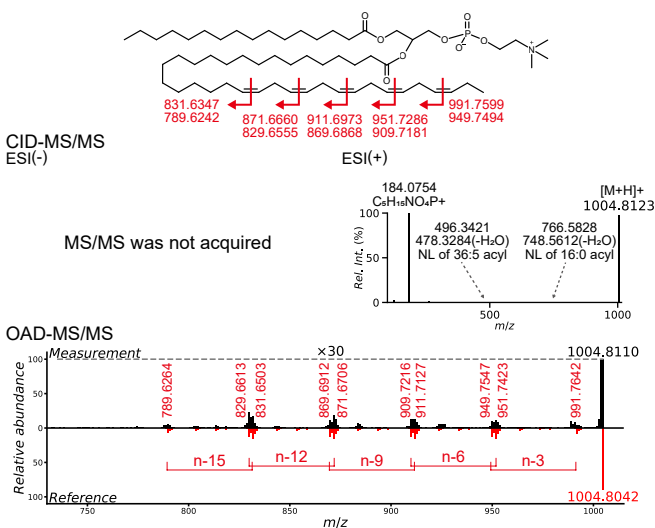
(e) HexCer 18:1(Δ4);20/24:0



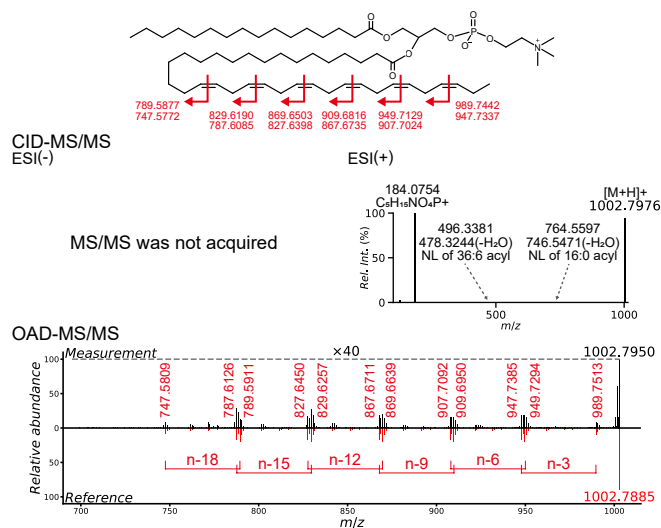
(f) PC 16:0_36:4(n-6,9,12,15)



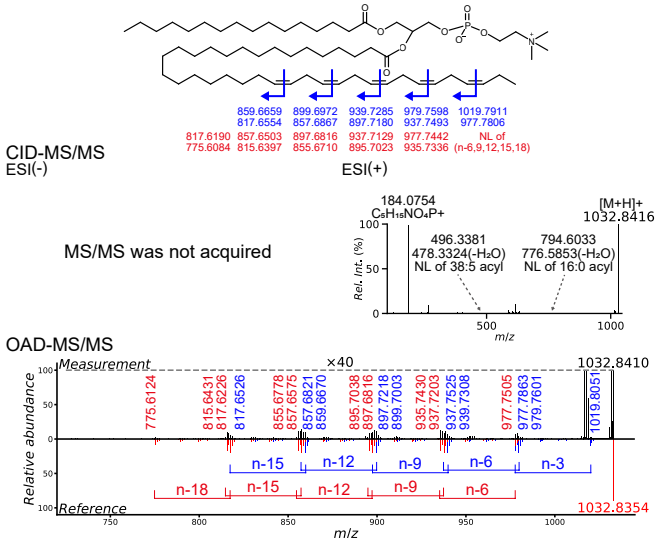
(g) PC 16:0_36:5(n-3,6,9,12,15)



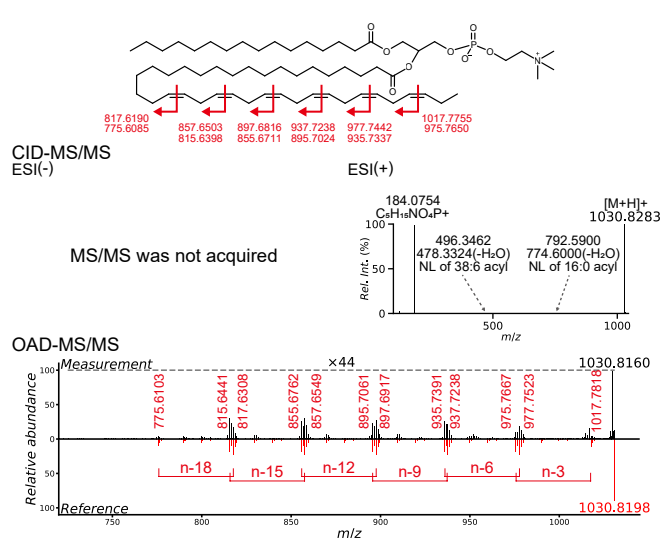
(h) PC 16:0_36:6(n-3,6,9,12,15,18)



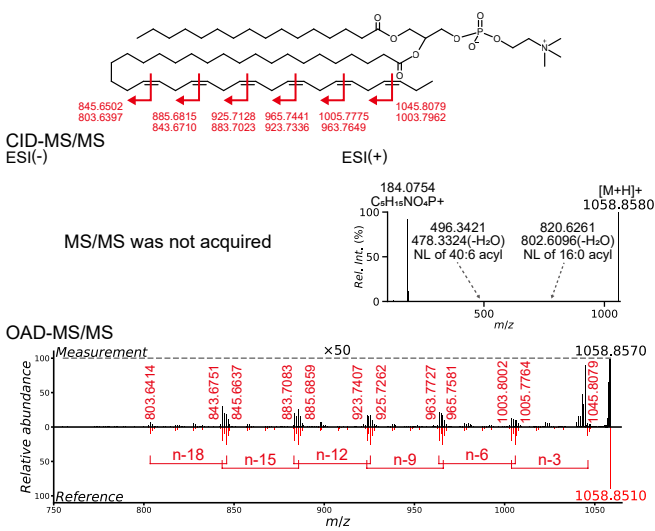
(i) PC 16:0_38:5(n-3&6)



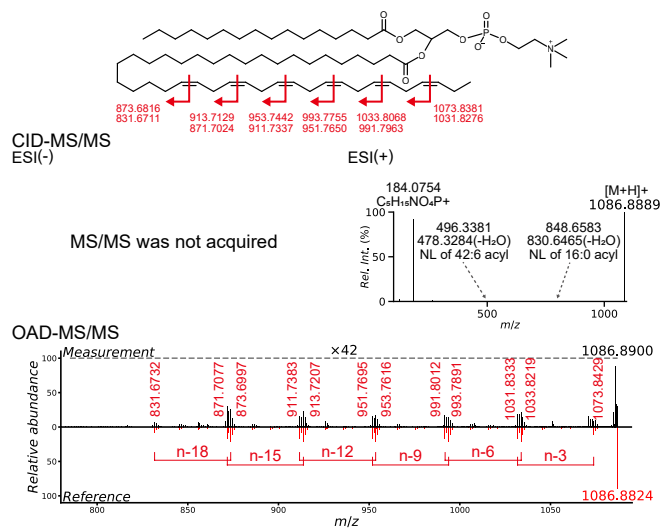
(j) PC 16:0_38:6(n-3,6,9,12,15,18)



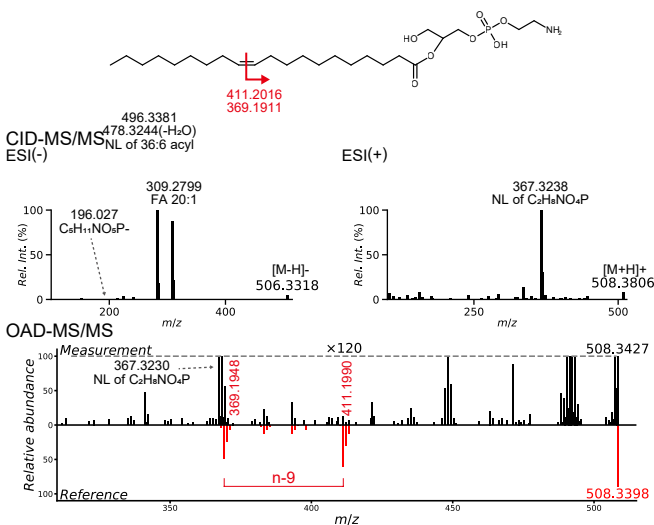
(k) PC 16:0_40:6(n-3,6,9,12,15,18)



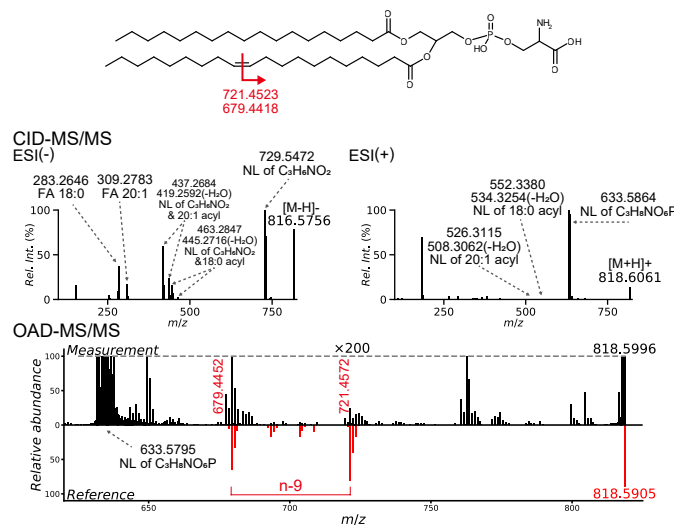
(l) PC 16:0_42:6(n-3,6,9,12,15,18)



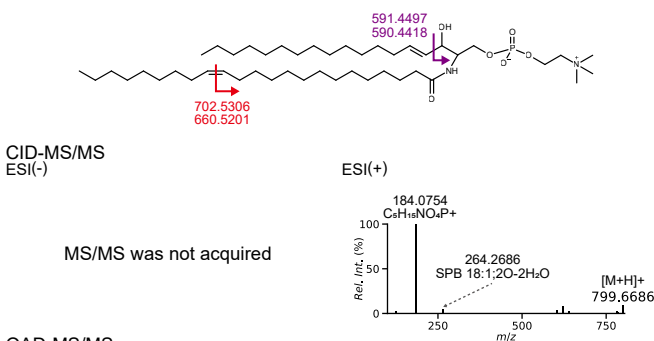
(m) LPE 20:1(n-9)



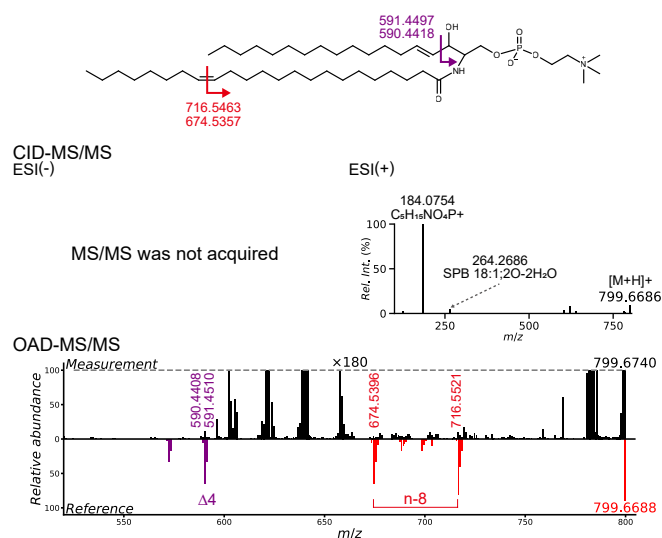
(n) SP 18:0_20:1(n-9)



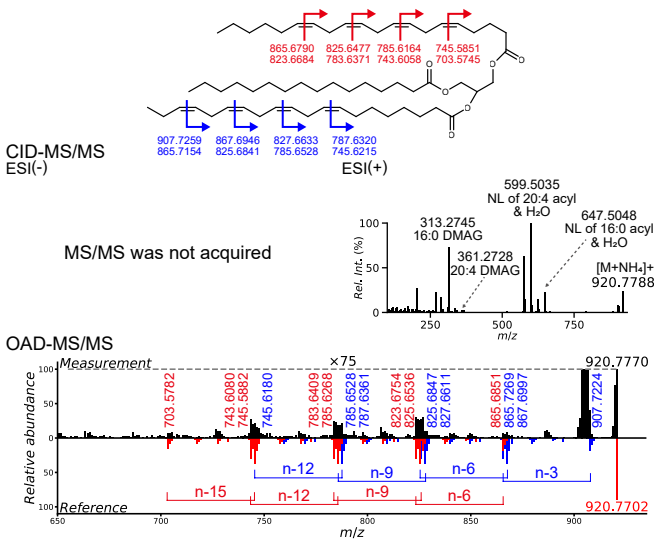
(o) SM 18:1(Δ4);20:2/3:1(n-9)



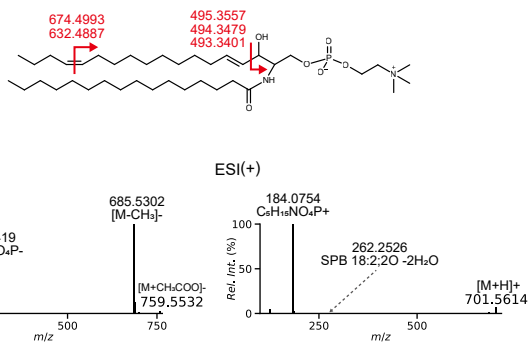
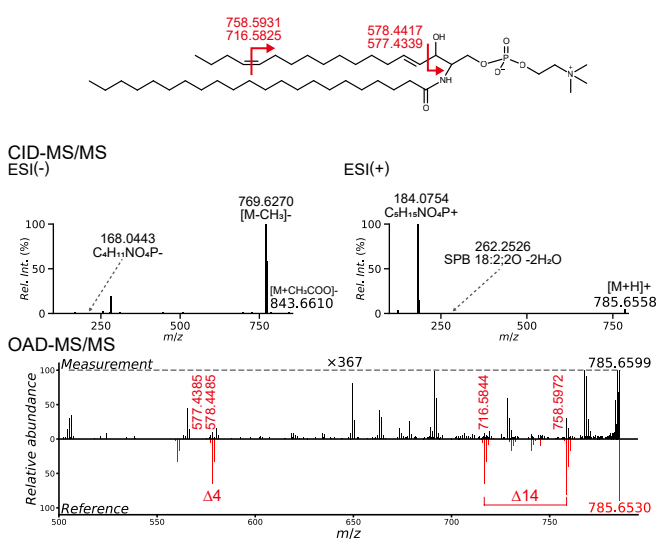
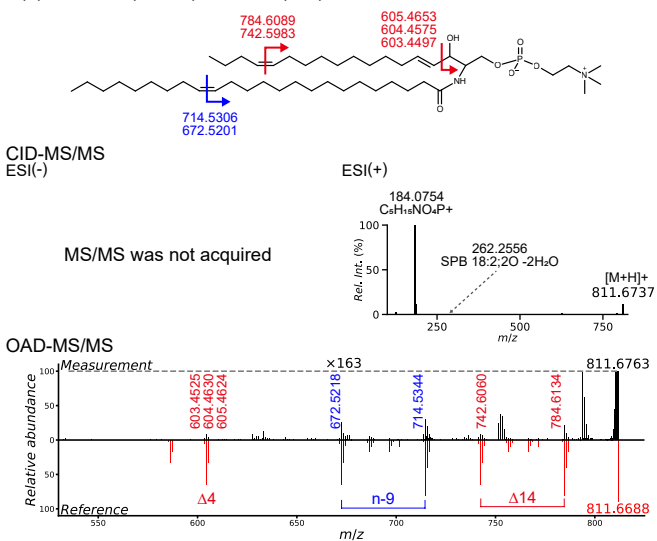
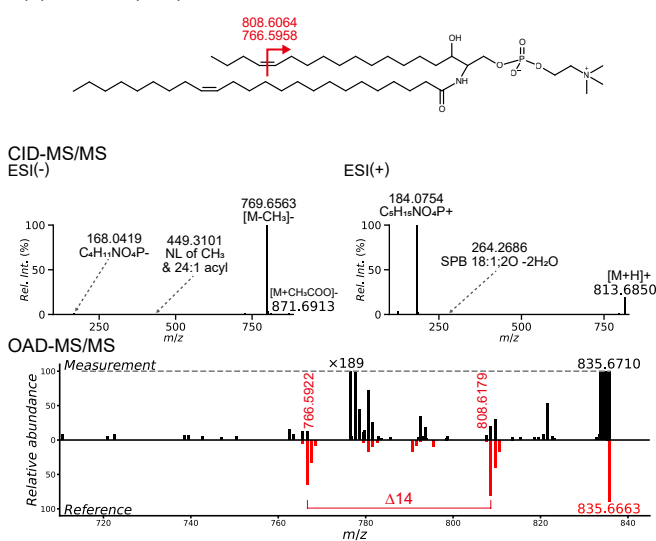
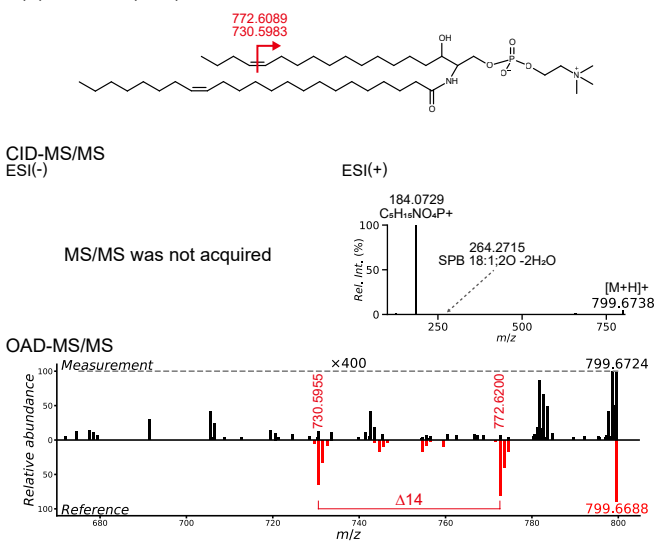
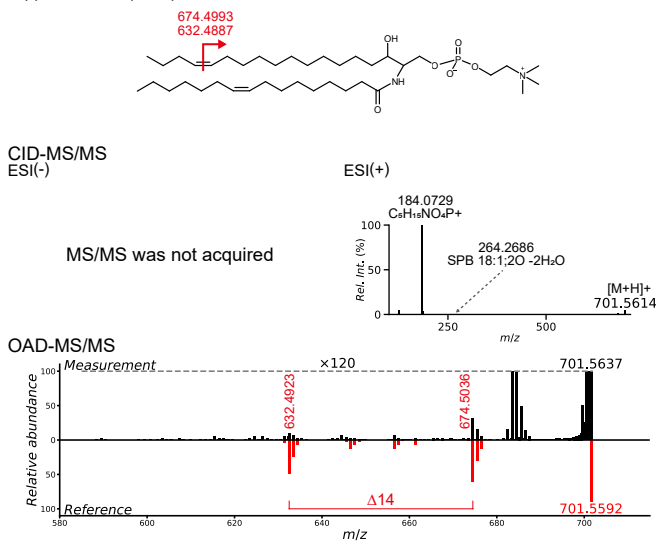
(p) SM 18:1(Δ4);20:2/3:1(n-8)



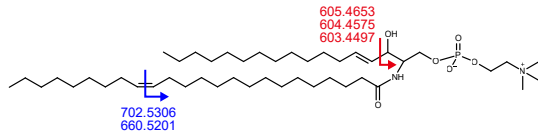
(q) TG 16:0_20:4(n-3,6,9,12)_20:4(n-6,9,12,15)



CID- and OAD-MS/MS spectra of
notable lipids in **common segment**

(a) SM 18:2($\Delta 4,14$);20/16:0(b) SM 18:2($\Delta 4,14$);20/22:0(c) SM 18:2($\Delta 4,14$);20/24:1(n-9)(d) SM 18:1($\Delta 14$);20/24:1(e) SM 18:1($\Delta 14$);20/23:1(f) SM 18:1($\Delta 14$);20/16:1

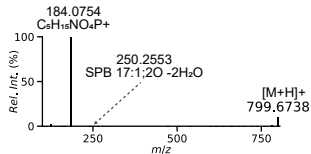
(g) SM 17:1($\Delta 4$);2O/24:1(n-9)



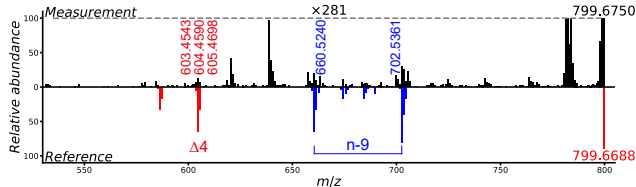
CID-MS/MS
ESI(-)

ESI(+)

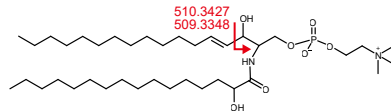
MS/MS was not acquired



OAD-MS/MS

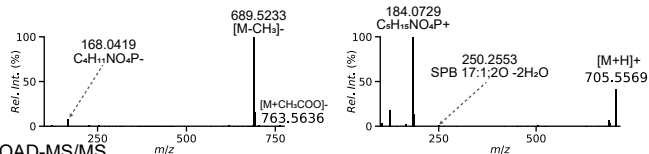


(h) SM 17:1($\Delta 4$);2O/16:0;O

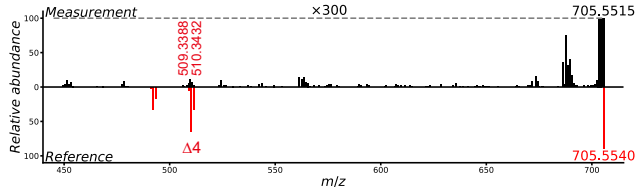


CID-MS/MS
ESI(-)

ESI(+)

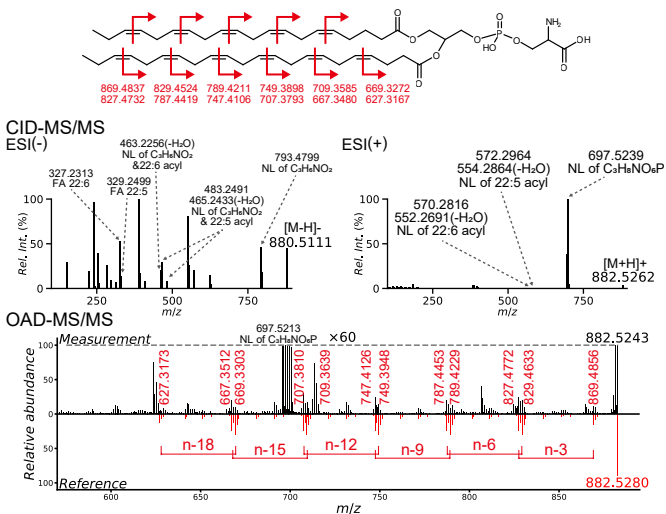


OAD-MS/MS

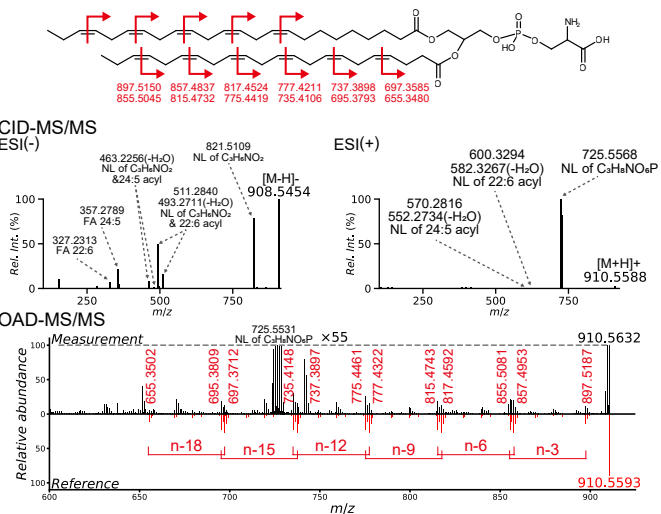


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice eye**

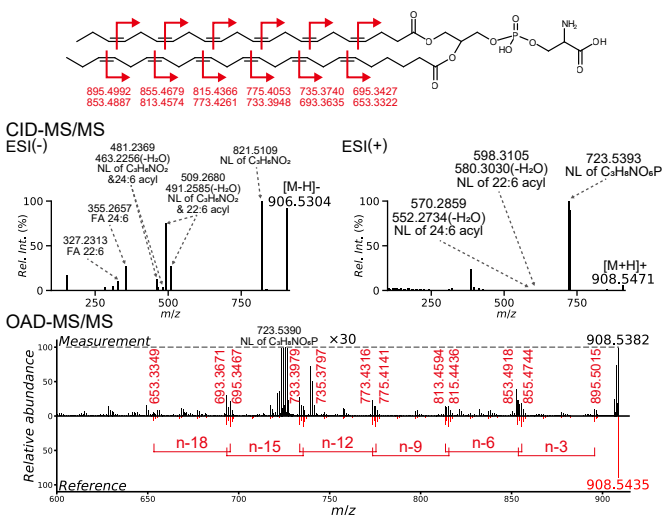
(a) PS 22:5(n-3,6,9,12,15,18)_22:6(n-3,6,9,12,15,18)



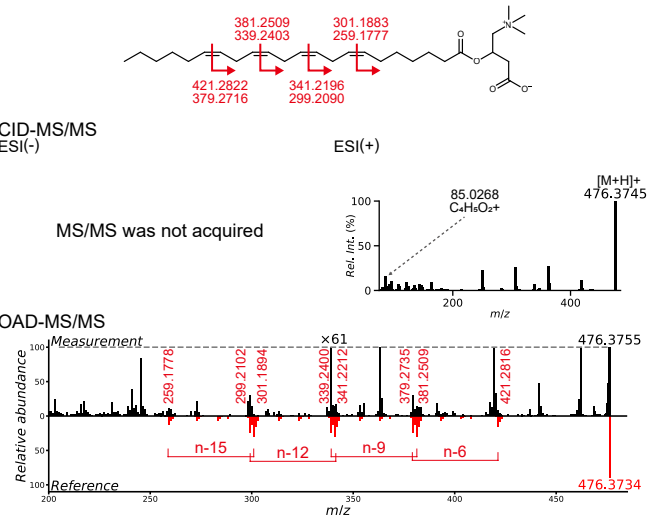
(b) PS 24:5(n-3,6,9,12,15,18)_22:6(n-3,6,9,12,15,18)



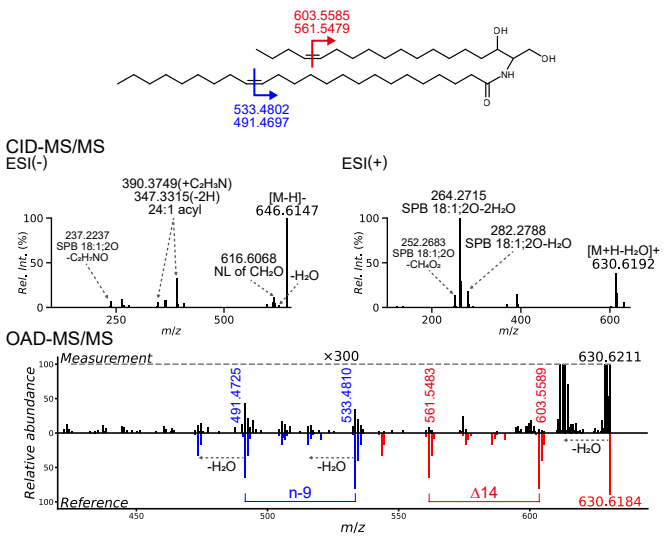
(c) PS 22:6(n-3,6,9,12,15,18)_24:6(n-3,6,9,12,15,18)



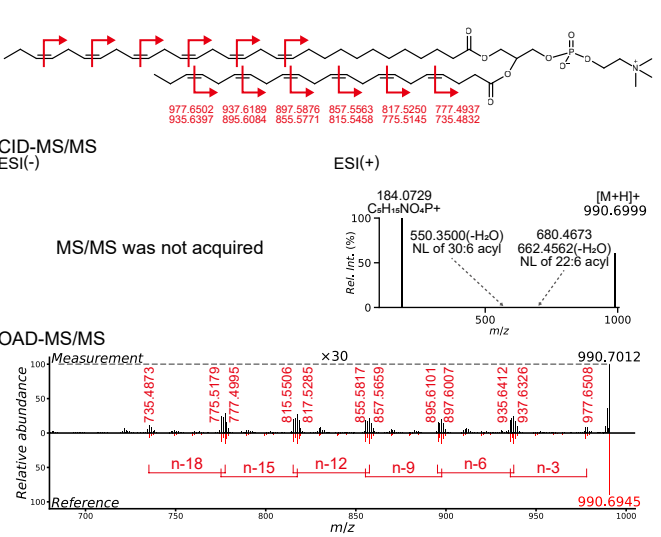
(d) CAR 22:4(n-6,9,12,15)



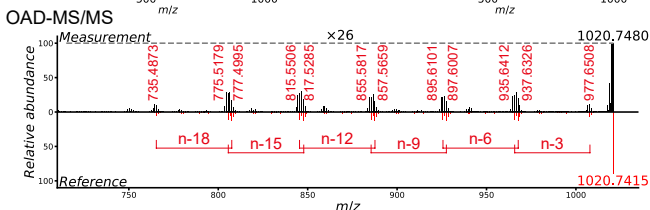
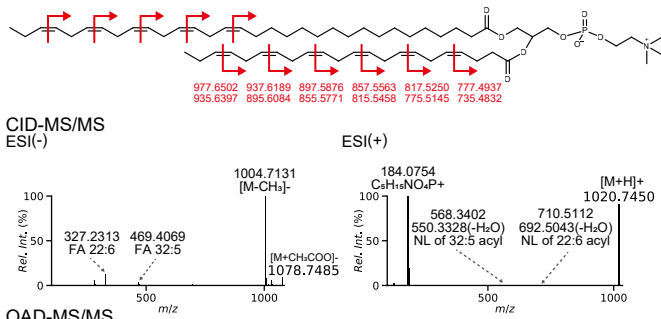
(e) Cer 18:1(Δ14):20/24:1(n-9)



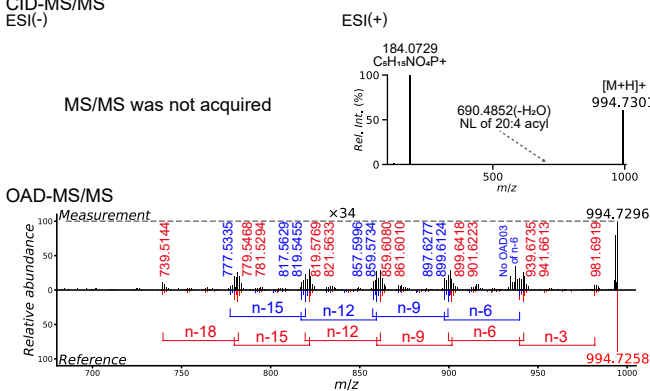
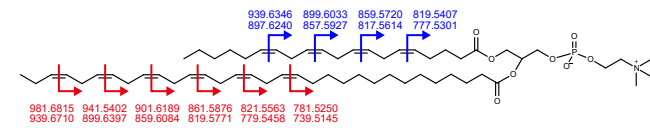
(f) PC 22:6(n-3,6,9,12,15,18)_30:6(n-3,6,9,12,15,18)



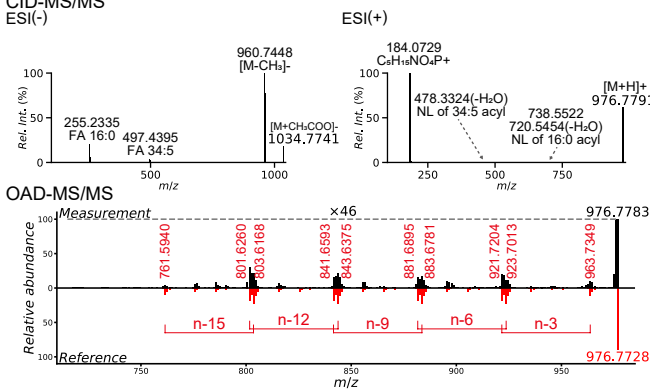
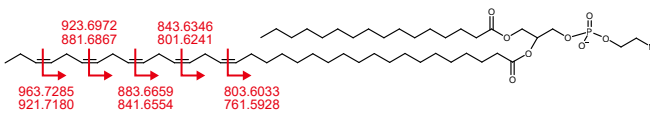
(g) PC 32:5(n-3,6,9,12,15)_22:6(n-3,6,9,12,15,18)



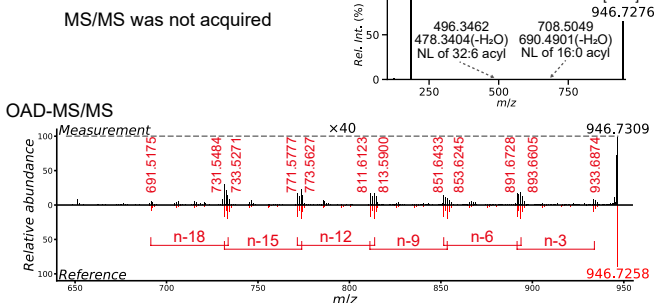
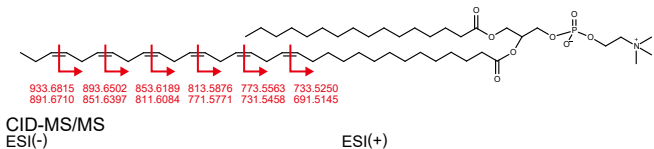
(i) PC 20:4(n-6,9,12,15)_32:6(n-3,6,9,12,15,18)



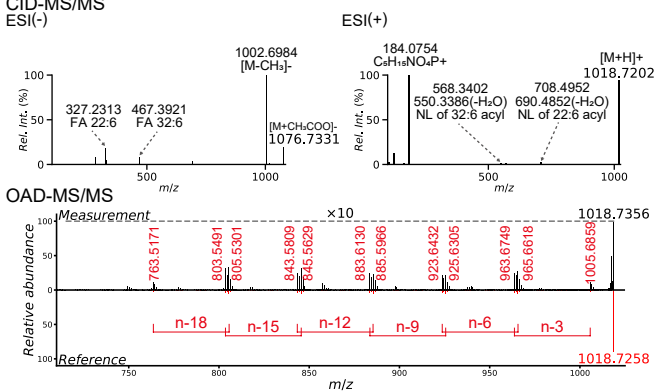
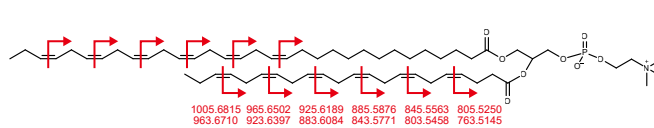
(k) PC 16:0_34:5(n-3,6,9,12,15)



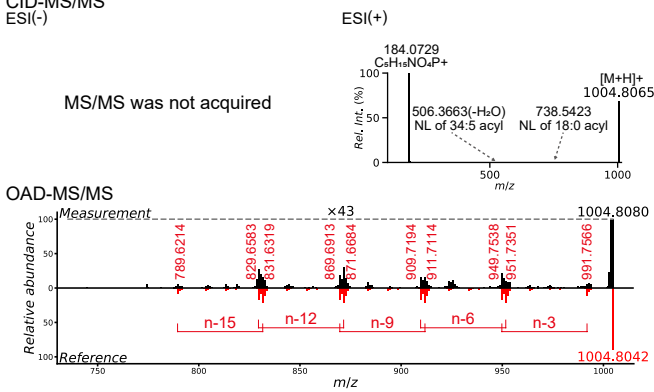
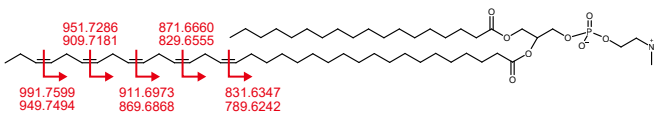
(h) PC 16:0_32:6(n-3,6,9,12,15,18)



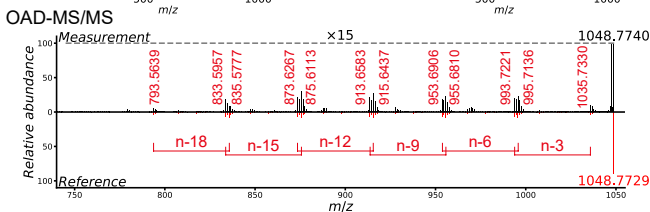
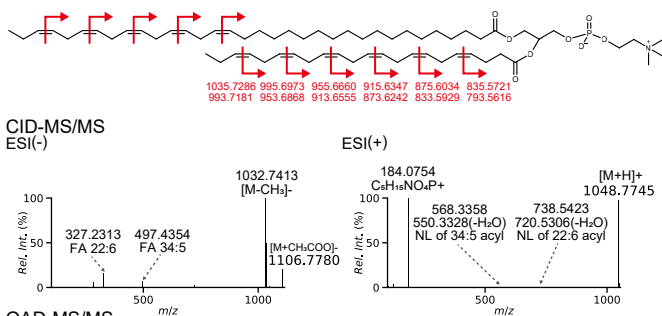
(j) PC 22:6(n-3,6,9,12,15,18)_32:6(n-3,6,9,12,15,18)



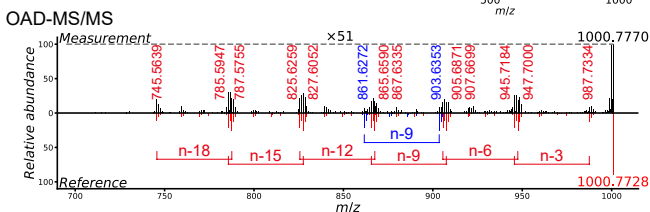
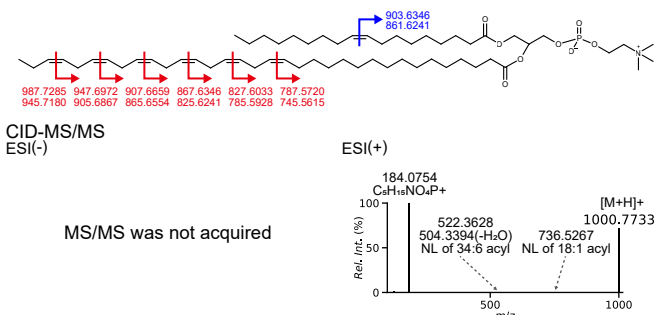
(l) PC 18:0_34:5(n-3,6,9,12,15)



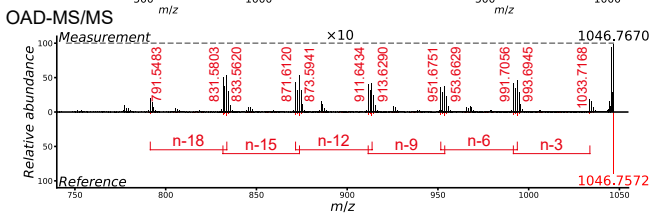
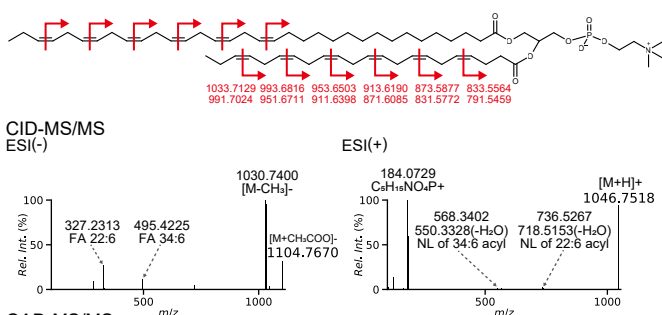
(m) PC 34:5(n-3,6,9,12,15)_22:6(n-3,6,9,12,15,18)



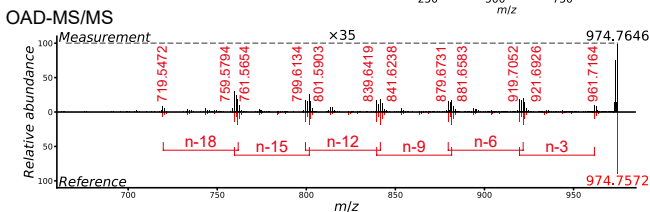
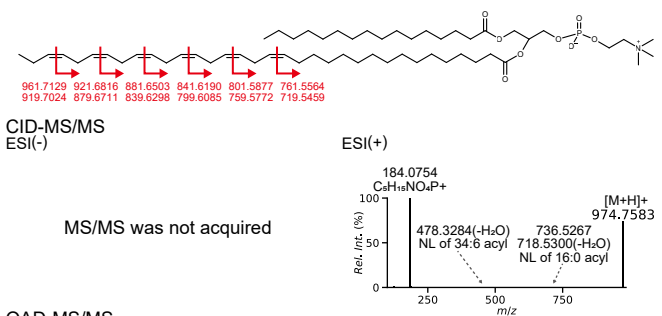
(o) PC 18:1(n-9)_34:6(n-3,6,9,12,15,18)



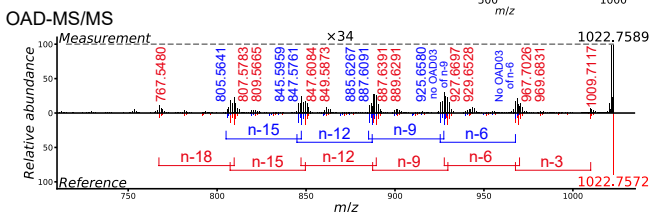
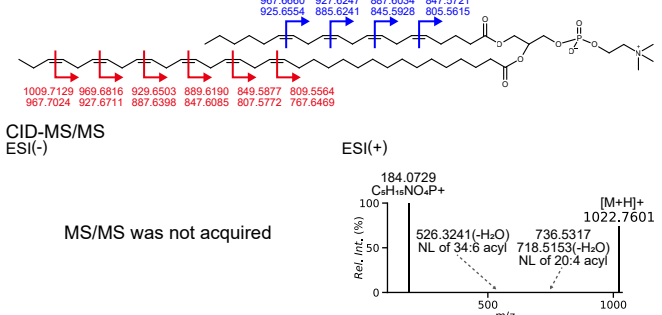
(q) PC 22:6(n-3,6,9,12,15,18)_34:6(n-3,6,9,12,15,18)



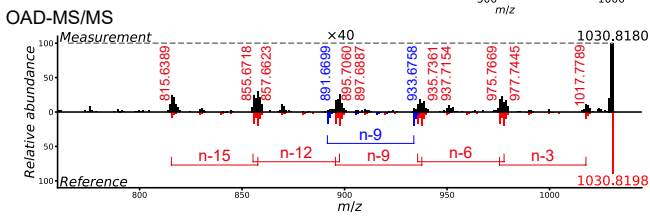
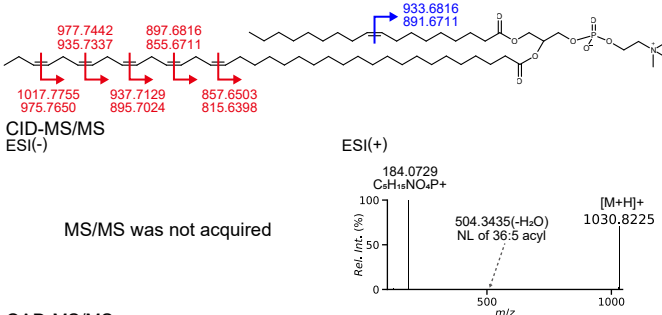
(n) PC 16:0_34:6(n-3,6,9,12,15,18)



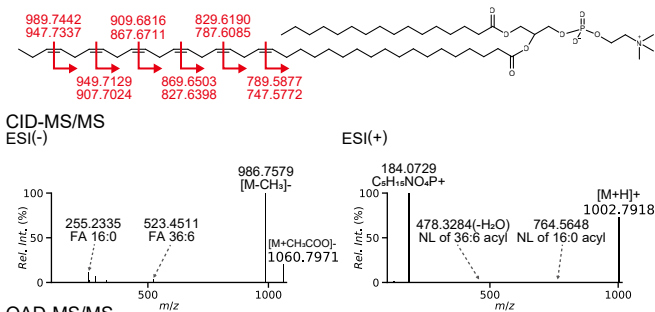
(p) PC 20:4(n-6,9,12,15)_34:6(n-3,6,9,12,15,18)



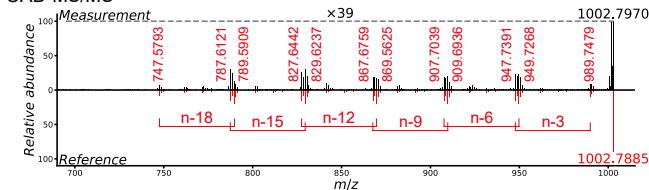
(r) PC 18:1(n-9)_36:5(n-3,6,9,12,15)



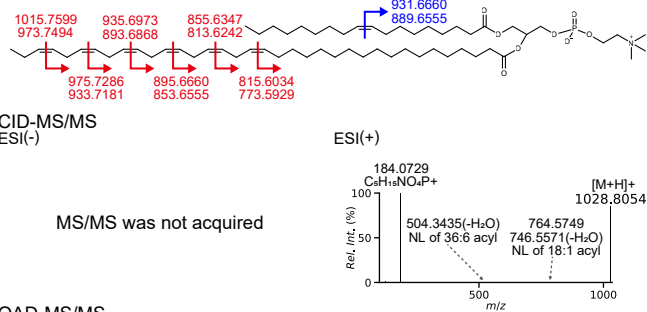
(s) PC 16:0_36:6(n-3,6,9,12,15,18)



OAD-MS/MS

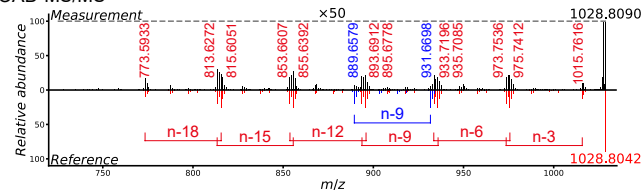


(t) PC 18:1(n-9)_36:6(n-3,6,9,12,15,18)

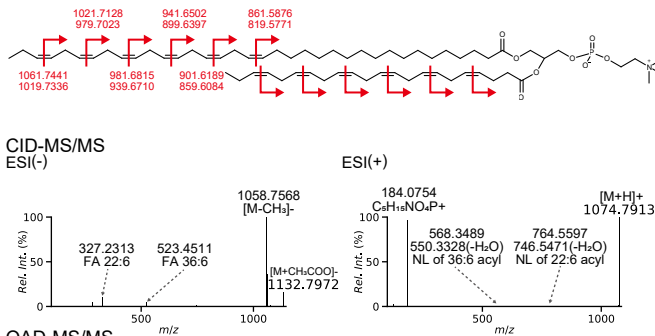


MS/MS was not acquired

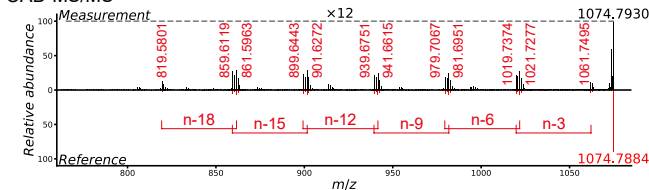
OAD-MS/MS



(u) PC 22:6(n-3,6,9,12,15,18)_36:6(n-3,6,9,12,15,18)

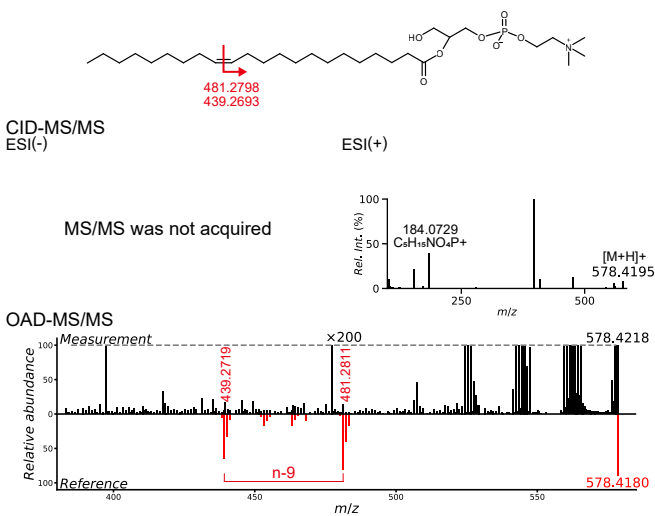


OAD-MS/MS

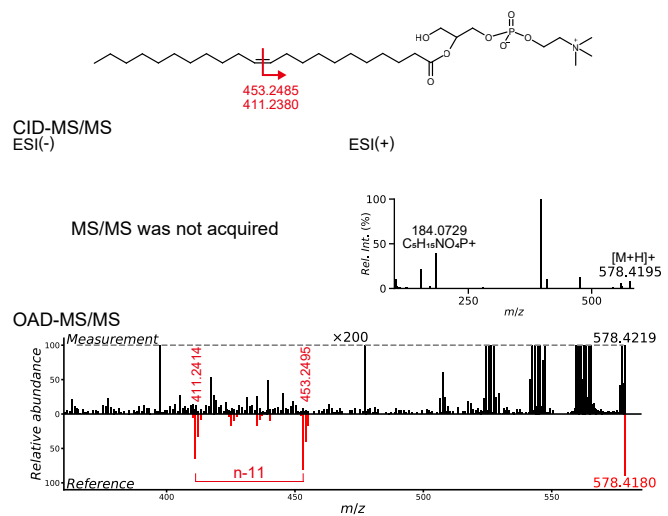


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice feces**

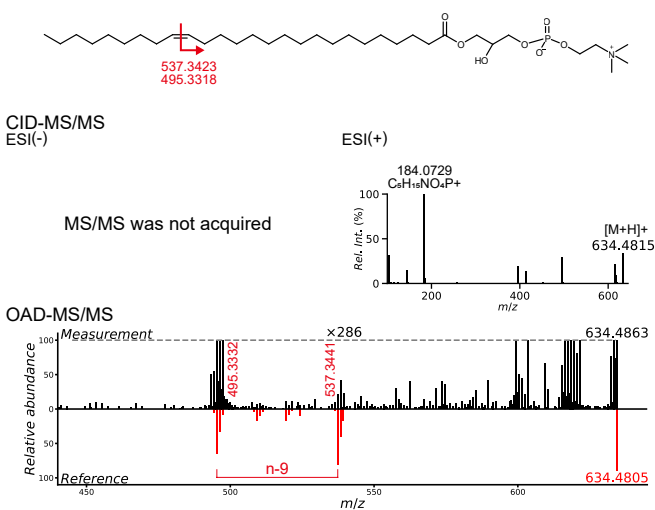
(a) LPC 22:1(n-9)



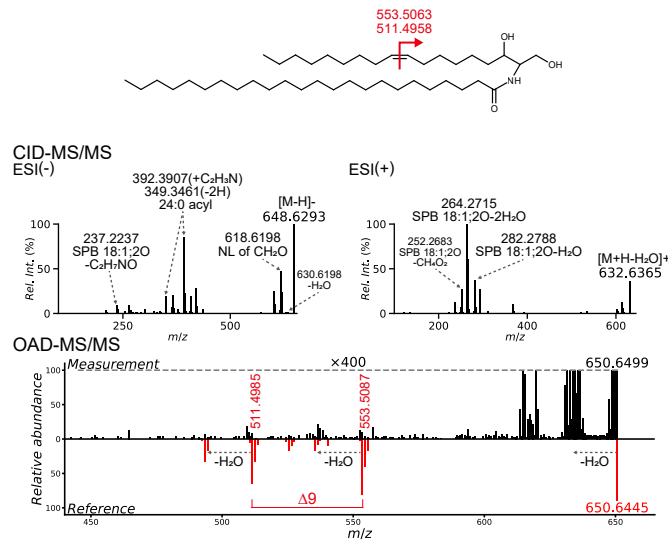
(b) LPC 22:1(n-11)



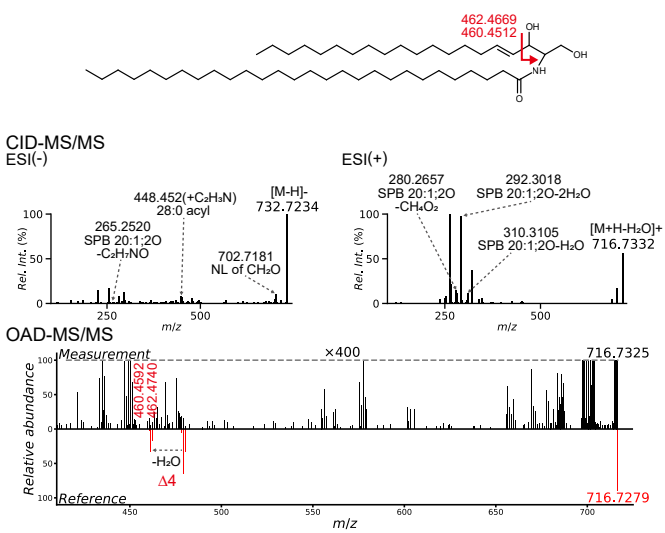
(c) LPC 26:1(n-9)/0:0



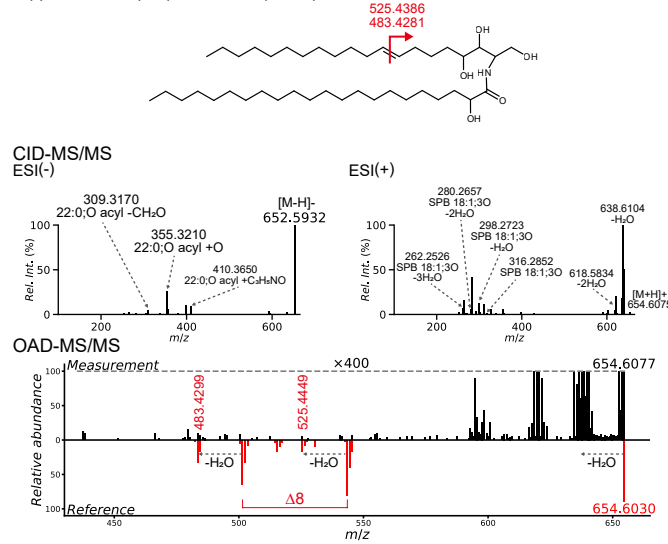
(d) Cer 18:1(Δ9);20:0/24:0



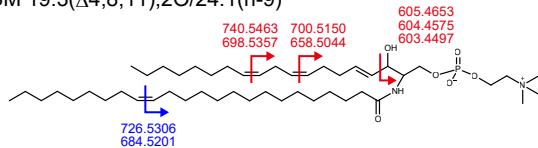
(e) Cer 20:1(Δ4);20:0/28:0



(f) Cer 18:1(Δ8);30:0/22:0;(20H)



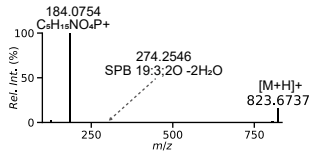
(g) SM 19:3(Δ 4,8,11);2O/24:1(n-9)



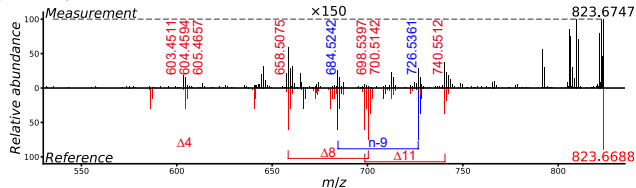
CID-MS/MS
ESI(-)

ESI(+)

MS/MS was not acquired

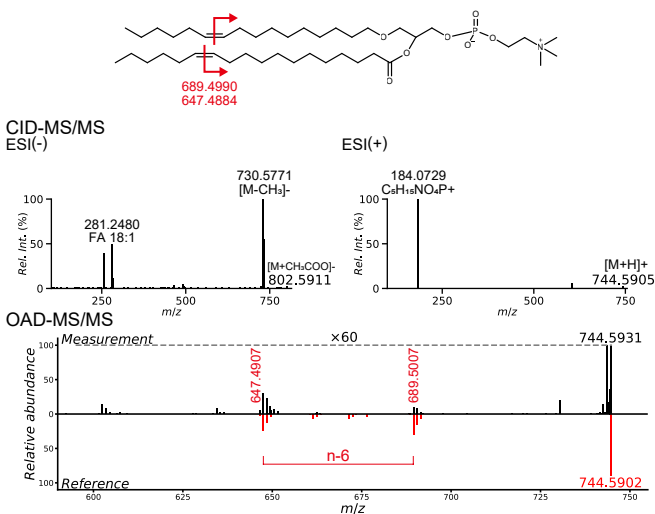


OAD-MS/MS

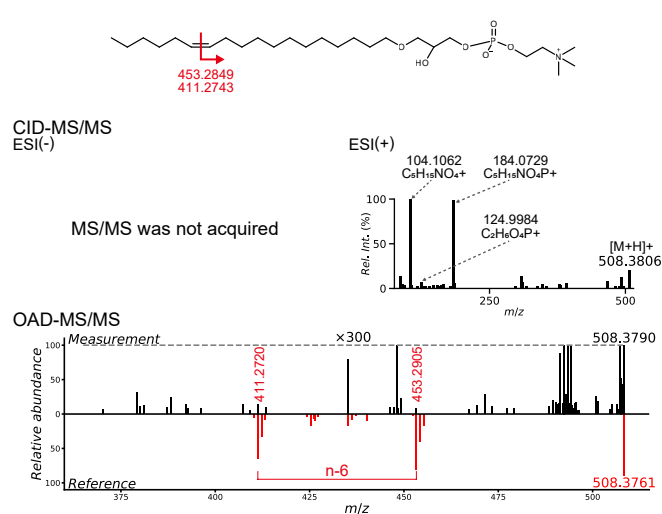


CID- and OAD-MS/MS spectra of characteristic lipids in **human plasma**

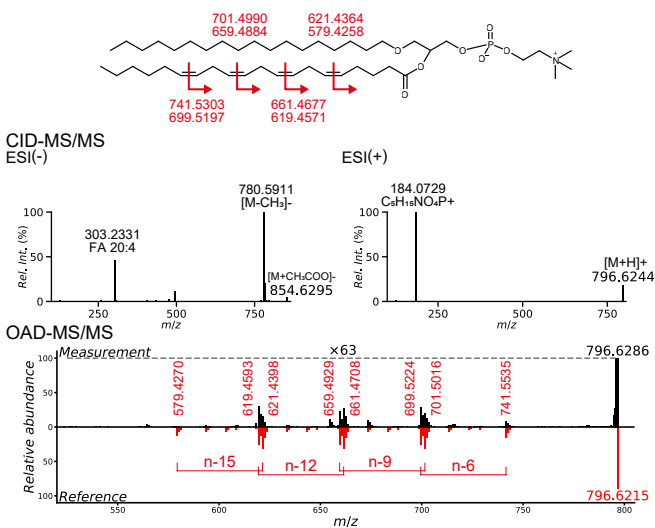
(a) PC O-16:1(n-6)_18:1(n-6)



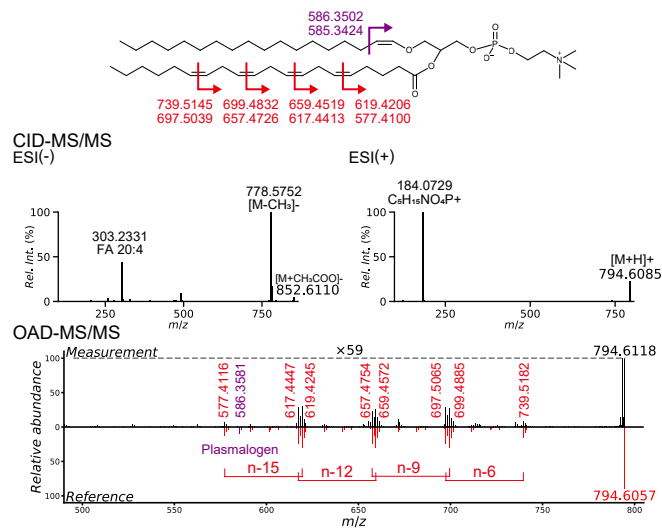
(b) LPC O-18:1(n-6)



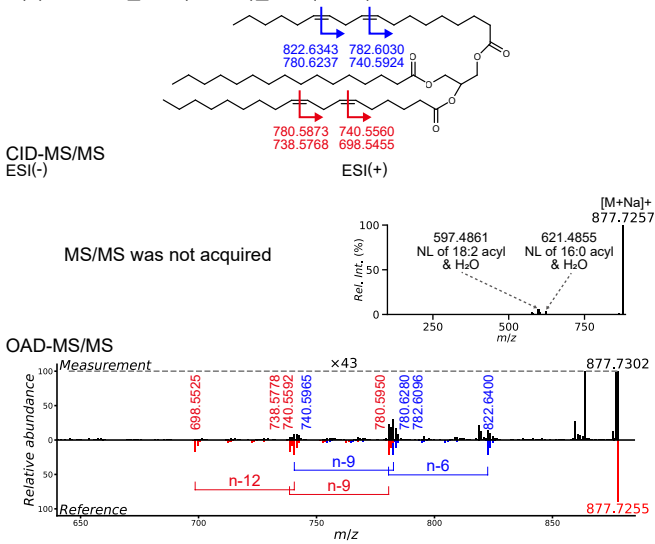
(c) PC O-18:0_20:4(n-6,9,12,15)



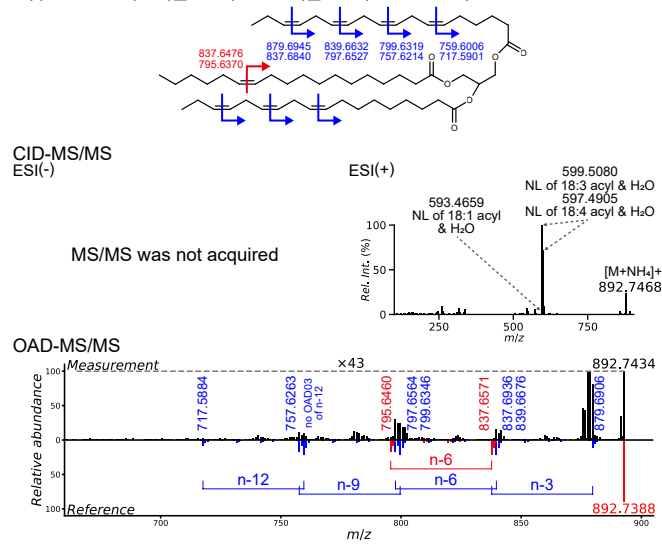
(d) PC P-18:0_20:4(n-6,9,12,15)



(e) TG 16:0_18:2(n-9,12)_18:2(n-6,9)

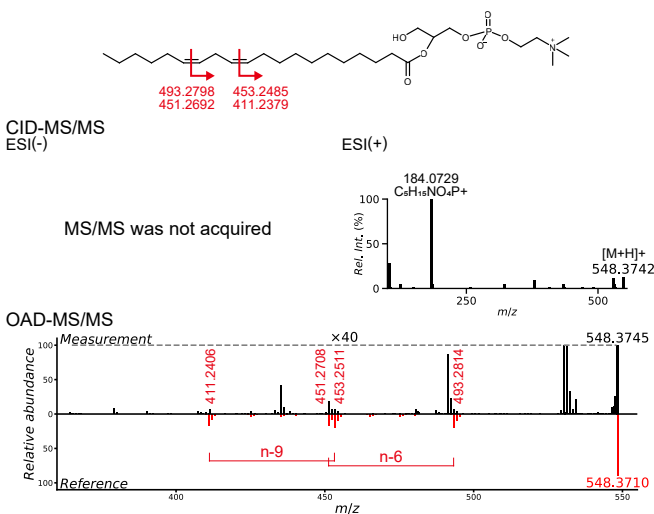


(f) TG 18:1(n-6)_18:3(n-3,6,9)_18:4(n-3,6,9,12)

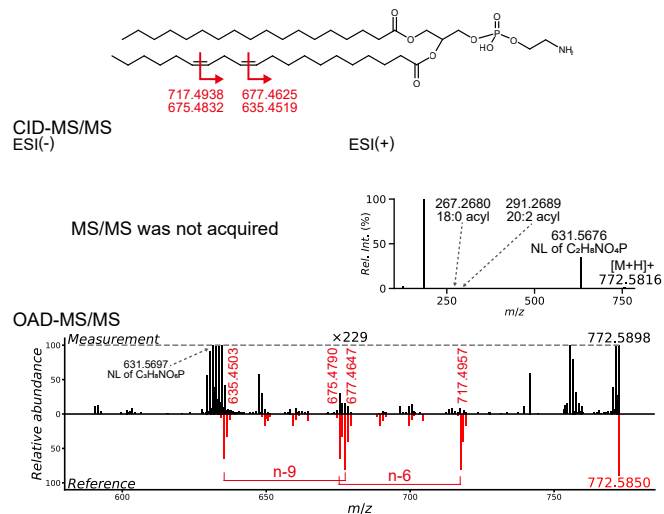


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice liver**

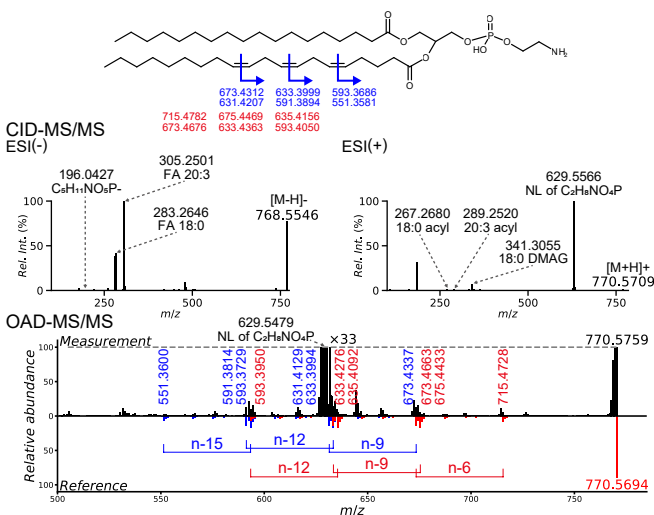
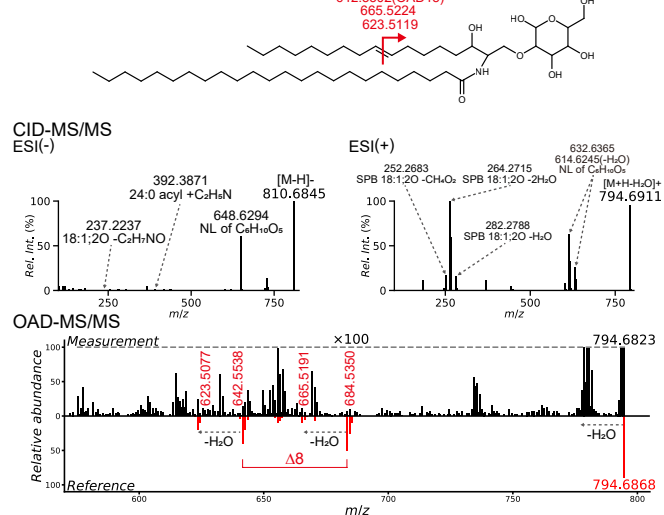
(a) LPC 20:2(n-6,9)



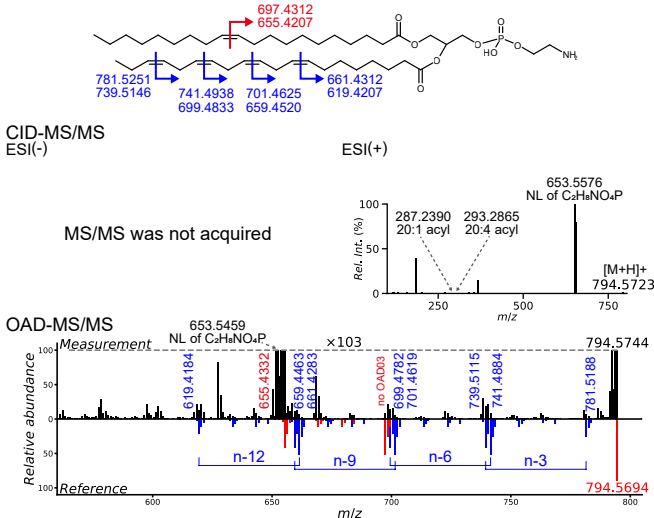
(b) PE 18:0_20:2(n-6,9)



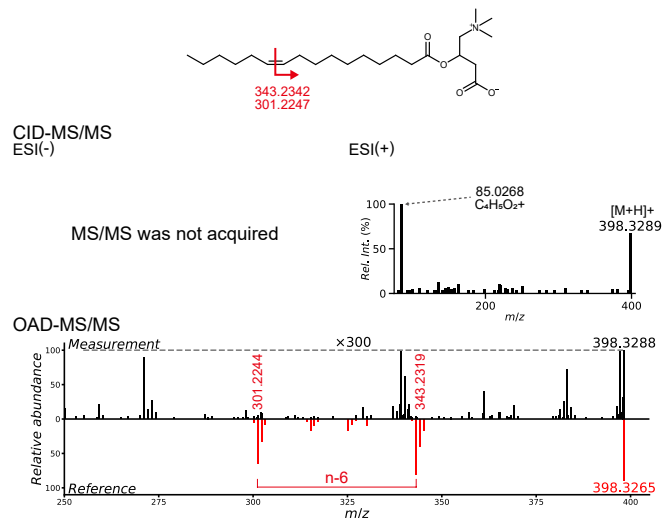
(c) PE 18:0_20:3(n-9,12,15)

(d) HexCer 18:1($\Delta 8$);20:24:0

(e) PE 20:1(n-9)_20:4(n-3,6,9,12)

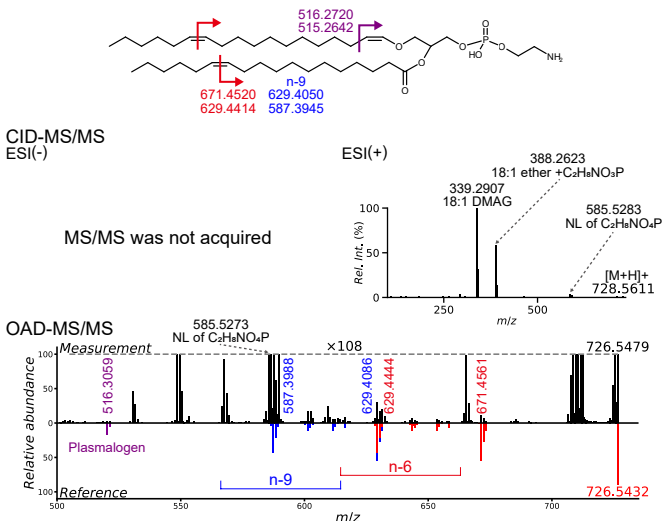


(f) CAR 16:1(n-6)

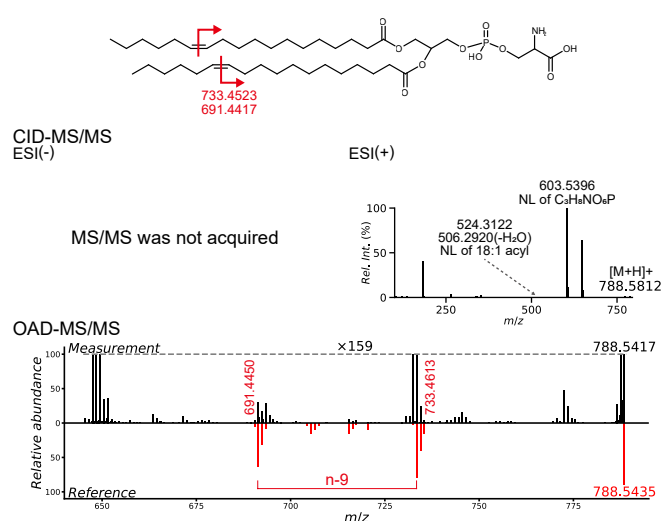


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice skin**

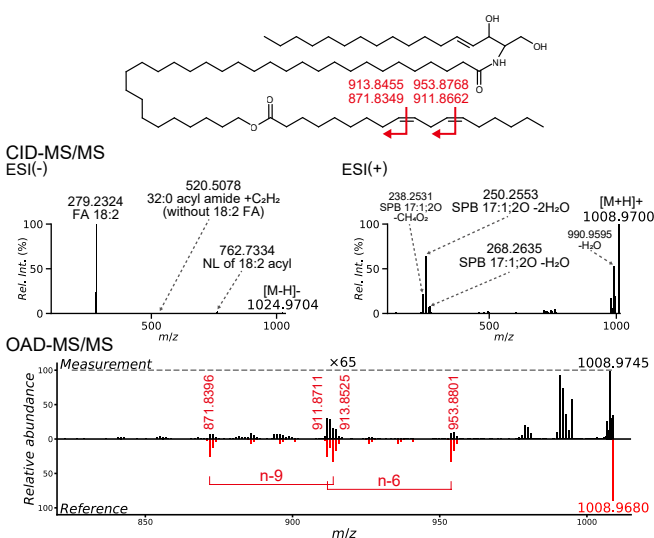
(a) PE P-18:1(n-6&9)_18:1(n-6&9)



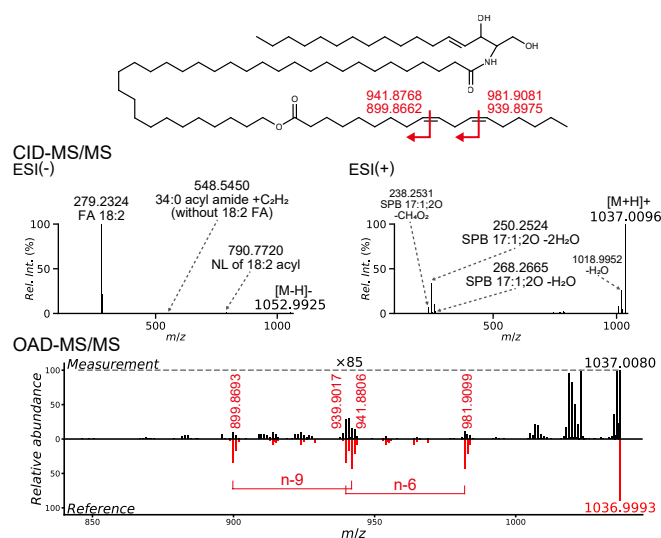
(b) PS 18:1(n-6)_18:1(n-6)



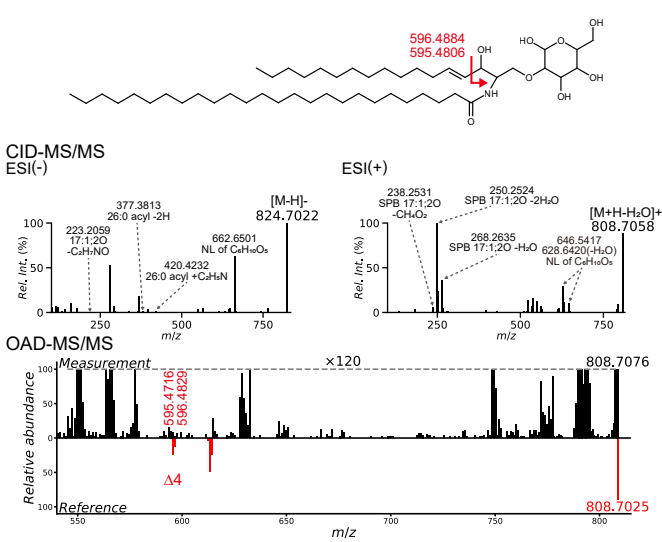
(c) Cer 17:1;2O/32:0;O(FA 18:2(n-6,9))



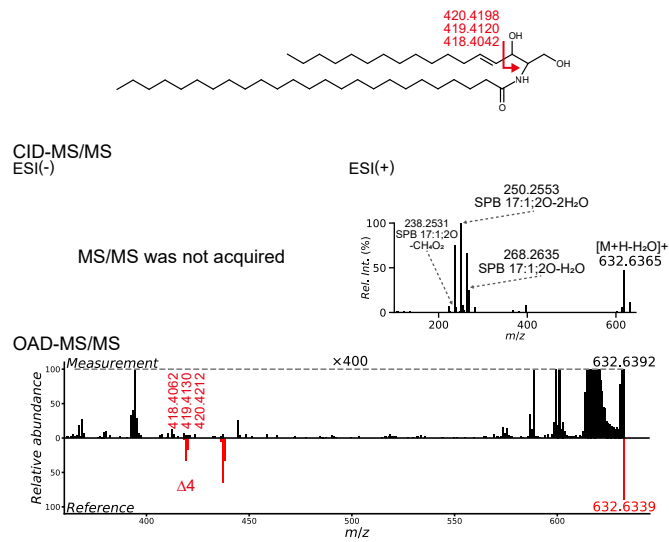
(d) Cer 17: 1;2O/34:0;O(FA 18:2(n-6,9))



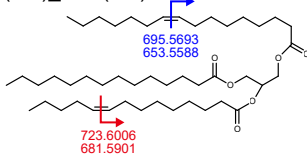
(e) HexCer 17:1(Δ4);2O/26:0



(f) Cer 17:1(Δ4);2O/25:0

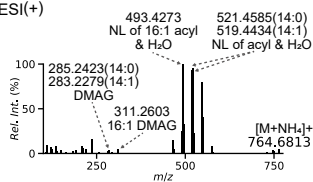


(g) TG 14:0_14:1(n-5)_16:1(n-7)

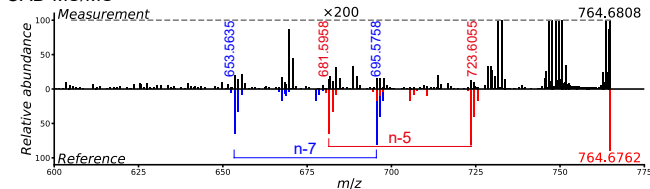
CID-MS/MS
ESI(-)

ESI(+)

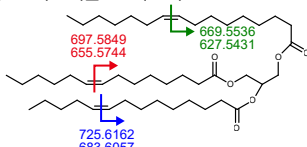
MS/MS was not acquired



OAD-MS/MS

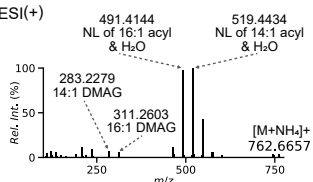


(i) TG 14:1(n-6)_14:1(n-5)_16:1(n-7)

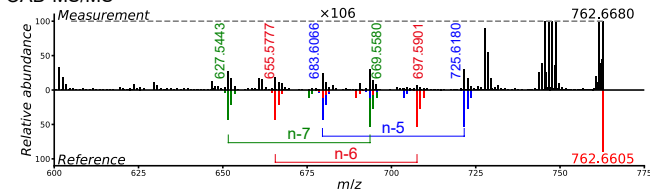
CID-MS/MS
ESI(-)

ESI(+)

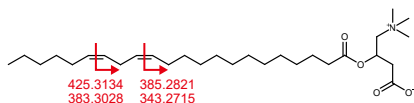
MS/MS was not acquired



OAD-MS/MS

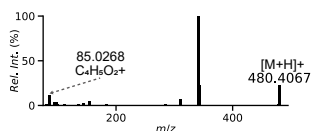


(k) CAR 22:2(n-6,9)

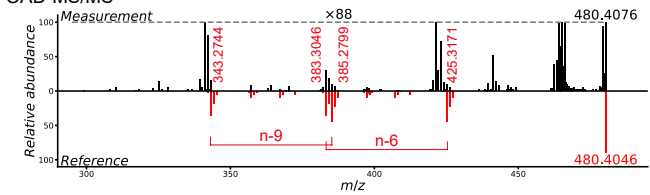
CID-MS/MS
ESI(-)

ESI(+)

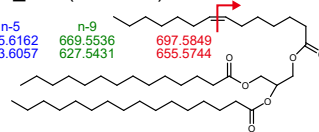
MS/MS was not acquired



OAD-MS/MS

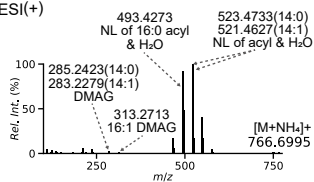


(h) TG 14:0_16:1(n-7&5&9)

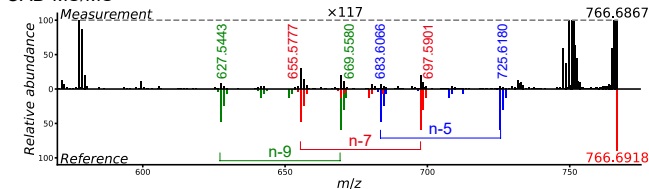
CID-MS/MS
ESI(-)

ESI(+)

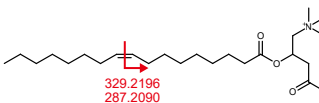
MS/MS was not acquired



OAD-MS/MS

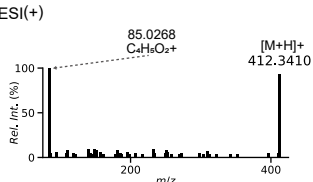


(j) CAR 17:1(n-8)

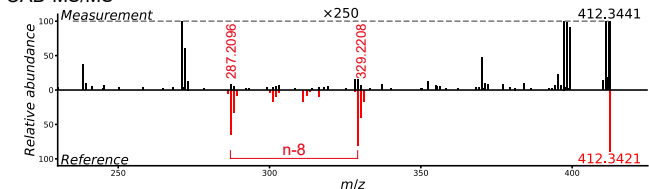
CID-MS/MS
ESI(-)

ESI(+)

MS/MS was not acquired

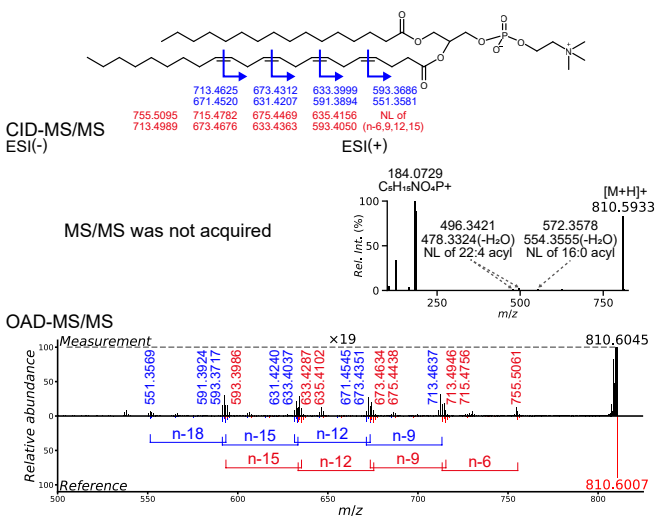


OAD-MS/MS

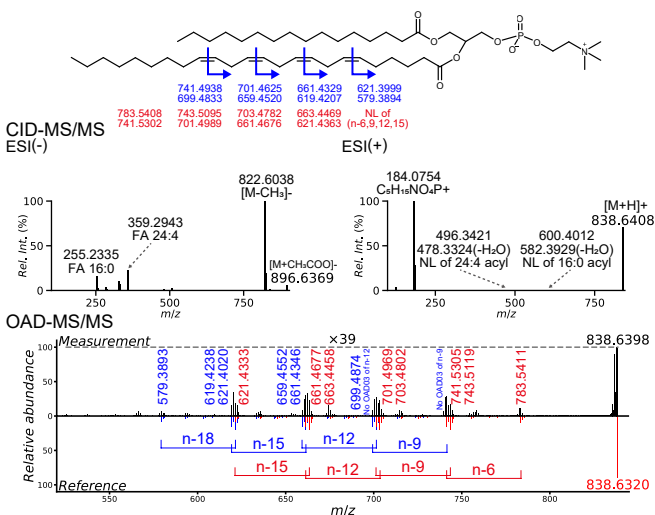


CID- and OAD-MS/MS spectra of
characteristic lipids in **mice testis**

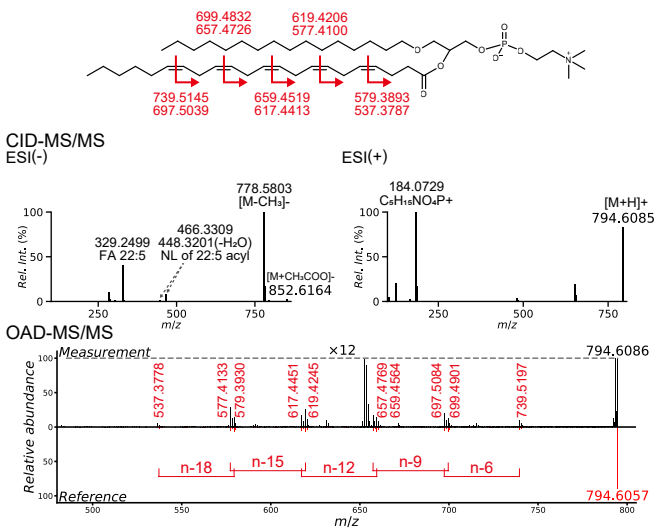
(a) PC 16:0_22:4(n-9,12,15,18)



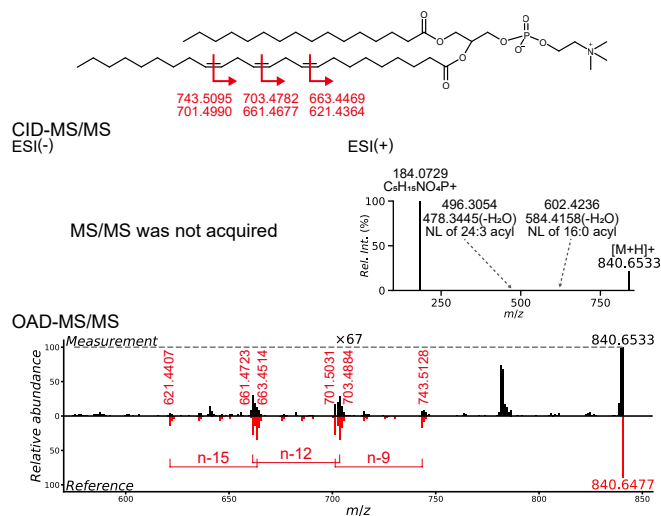
(c) PC 16:0_24:4(n-9,12,15,18)



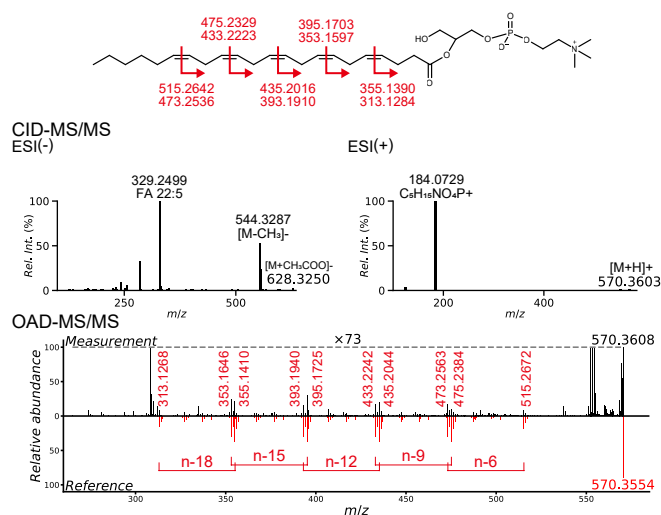
(e) PC O-16:0_22:5(n-6,9,12,15,18)



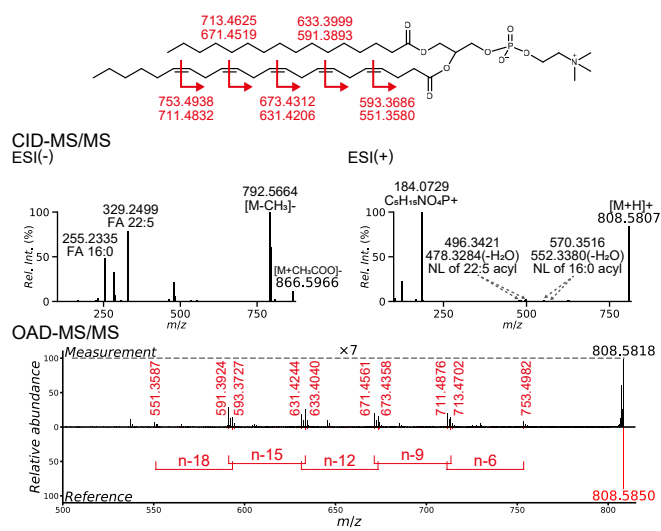
(b) PC 16:0_24:3(n-9,12,15)



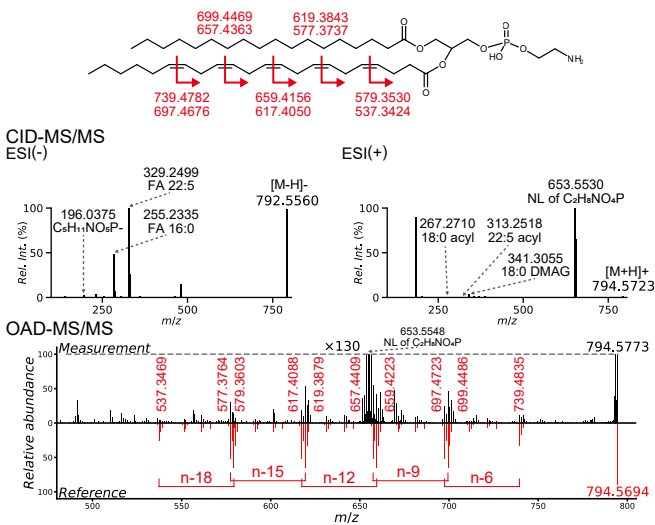
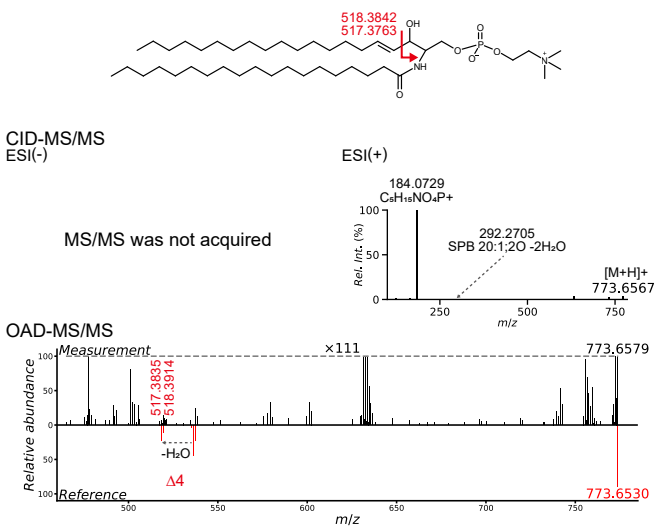
(d) LPC 22:5(n-6,9,12,15,18)



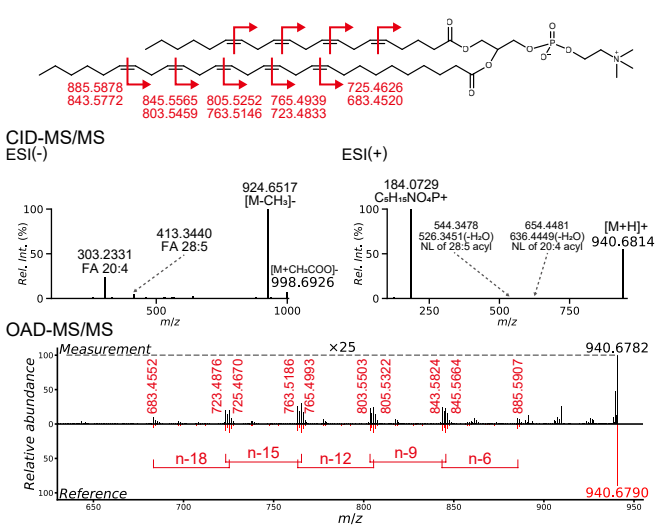
(f) PC 16:0_22:5(n-6,9,12,15,18)



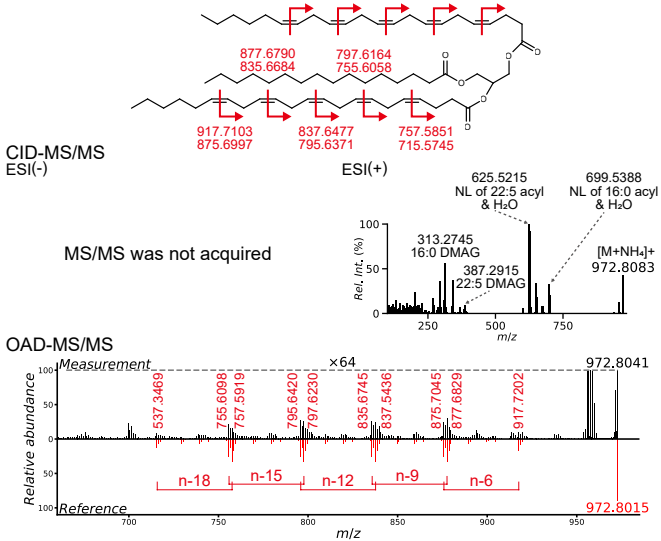
(g) PE 18:0_22:5(n-6,9,12,15,18)

(i) SM 20:1(Δ 4);20/19:0

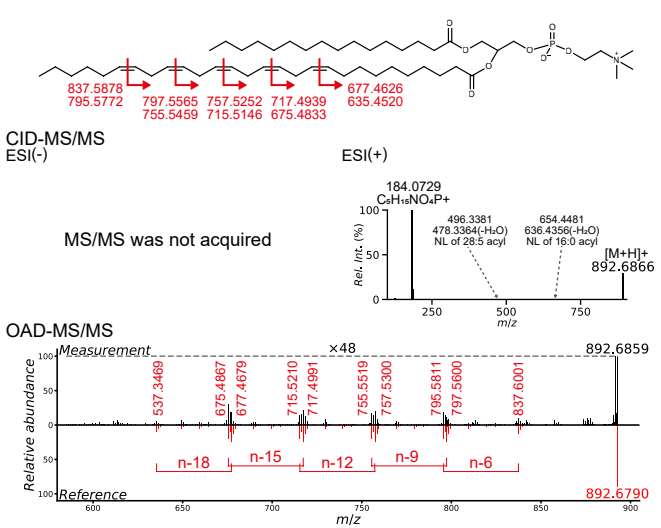
(k) PC 20:4(n-6,9,12,15)_28:5(n-6,9,12,15,18)



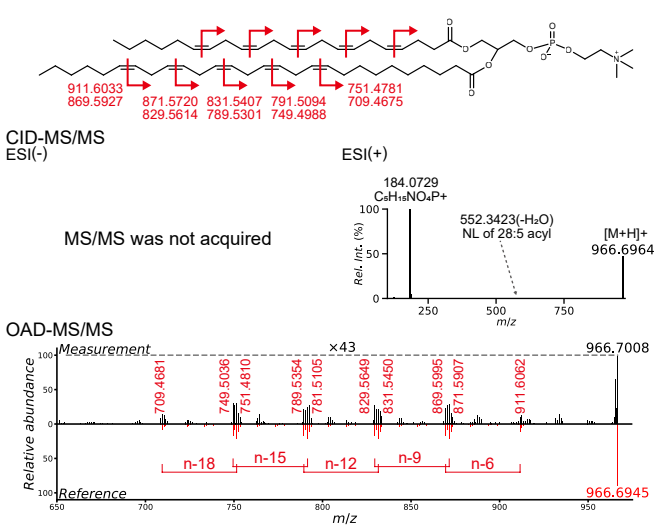
(h) TG 16:0_22:5(n-6,9,12,15,18)_22:5(n-6,9,12,15,18)



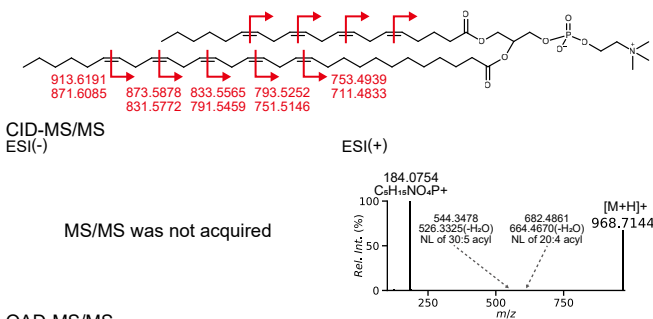
(j) PC 16:0_28:5(n-6,9,12,15,18)



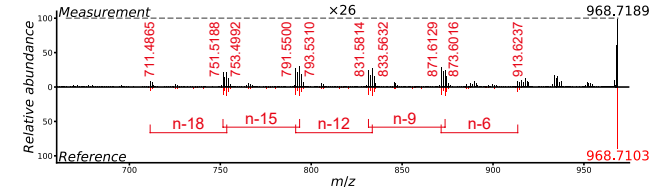
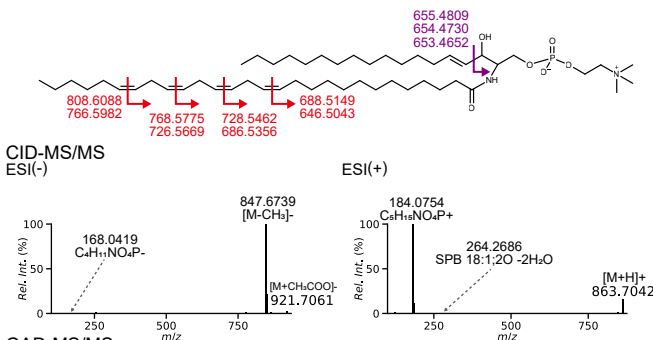
(l) PC 22:5(n-6,9,12,15,18)_28:5(n-6,9,12,15,18)



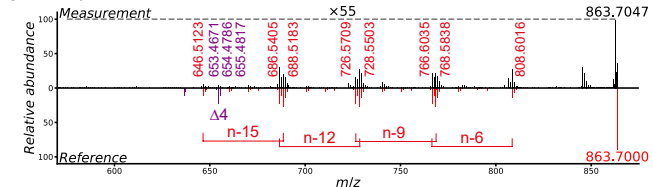
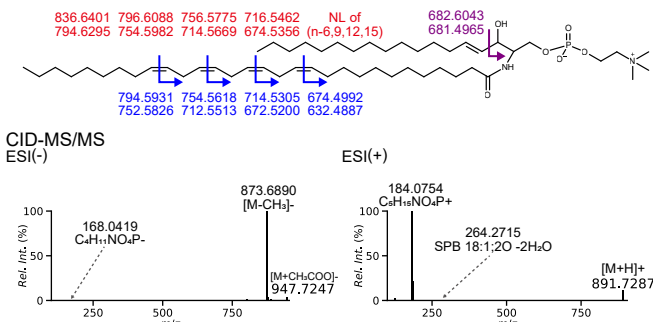
(m) PC 20:4(n-6,9,12,15)_30:5(n-6,9,12,15,18)



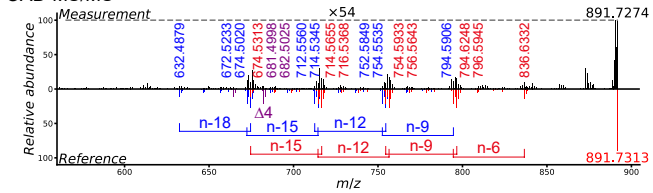
OAD-MS/MS

(o) SM 18:1(Δ_4);20/28:4(n-6,9,12,15)

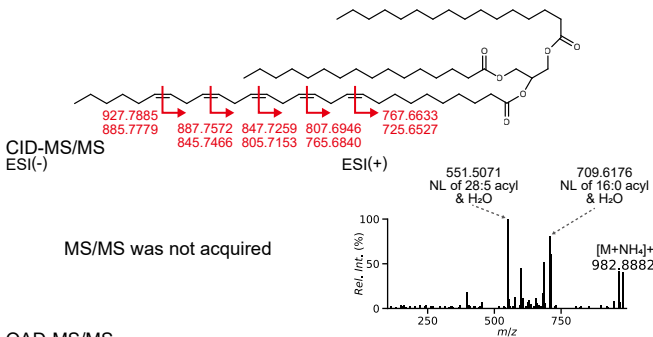
OAD-MS/MS

(q) SM 18:1(Δ_4);20/30:4(n-6&9)

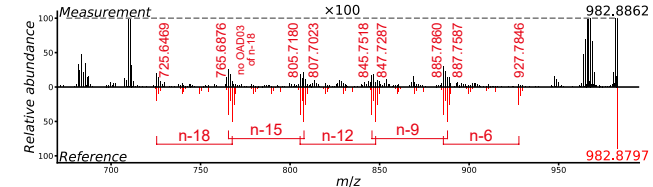
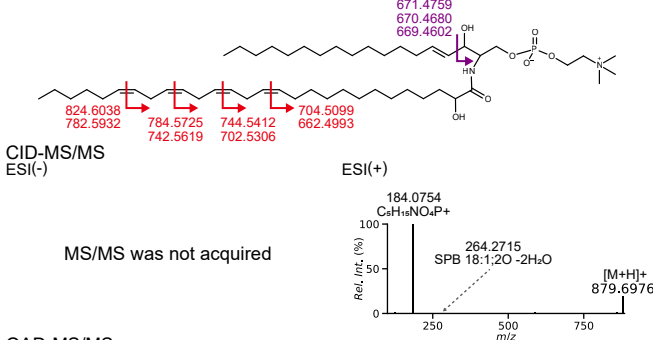
OAD-MS/MS



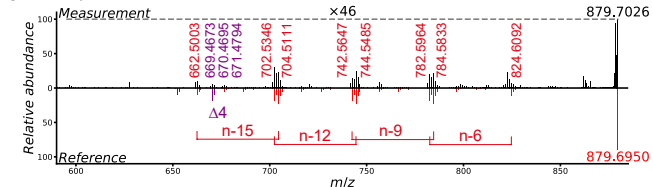
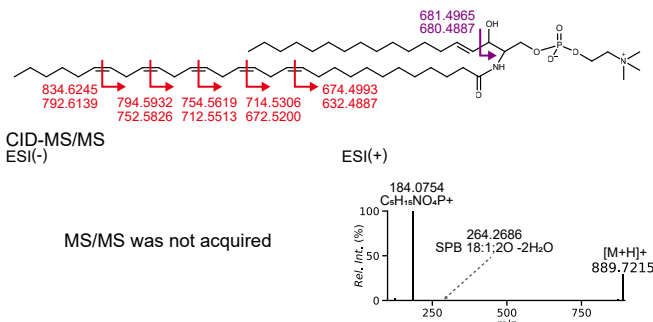
(n) TG 16:0_16:0_28:5(n-6,9,12,15,18)



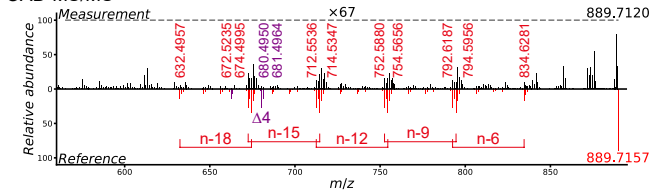
OAD-MS/MS

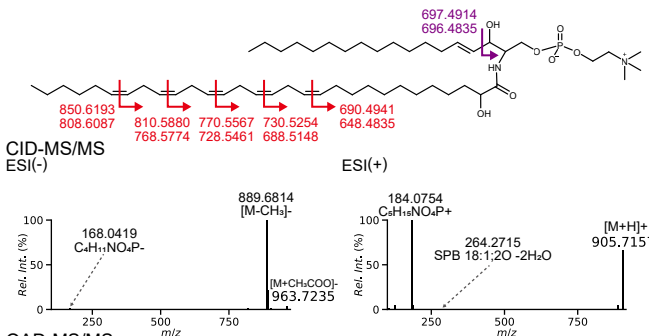
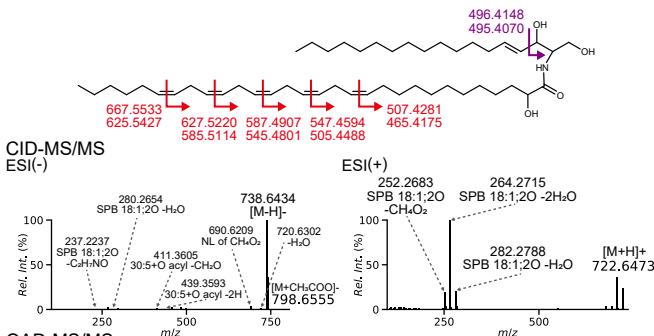
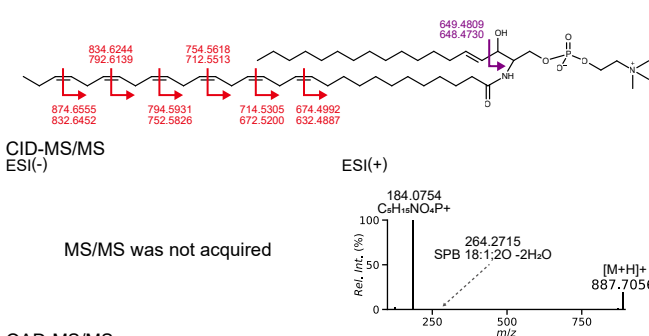
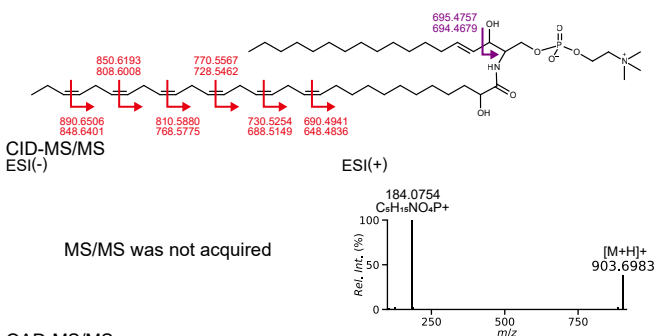
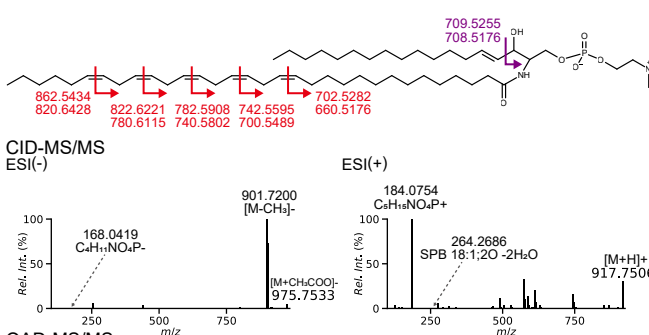
(p) SM 18:1(Δ_4);20/28:4(n-6,9,12,15);O

OAD-MS/MS

(r) SM 18:1(Δ_4);20/30:5(n-6,9,12,15,18)

OAD-MS/MS



(s) SM 18:1($\Delta 4$);2O/30:5(n-6,9,12,15,18);O(t) Cer 18:1($\Delta 4$);2O/30:5(n-6,9,12,15,18);O(u) SM 18:1($\Delta 4$);2O/30:6(n-3,6,9,12,15,18)(v) SM 18:1($\Delta 4$);2O/30:6(n-3,6,9,12,15,18);O(w) SM 18:1($\Delta 4$);2O/32:5(n-6,9,12,15,18)(x) SM 18:1($\Delta 4$);2O/32:5(n-6,9,12,15,18);O