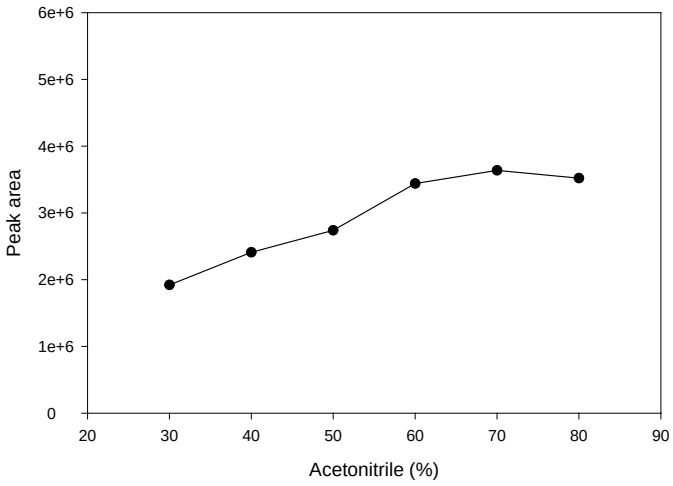
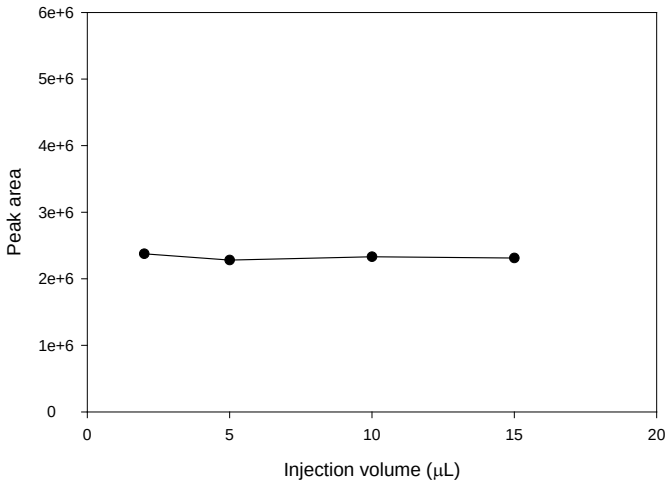
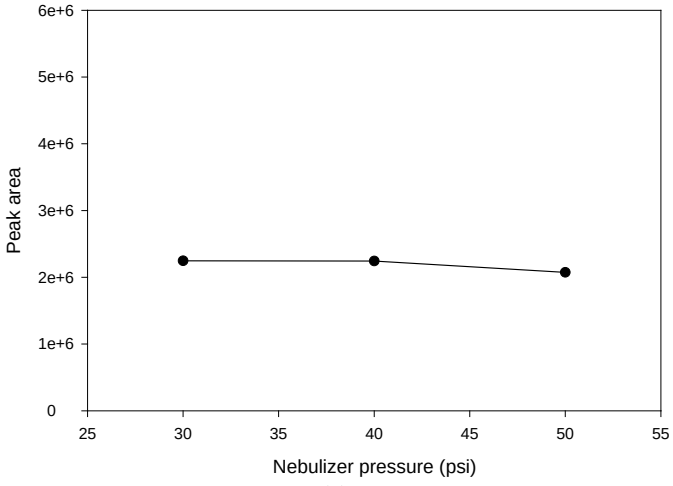

Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
20
30
40
50
60
70
80
90
Acetonitrile (%)

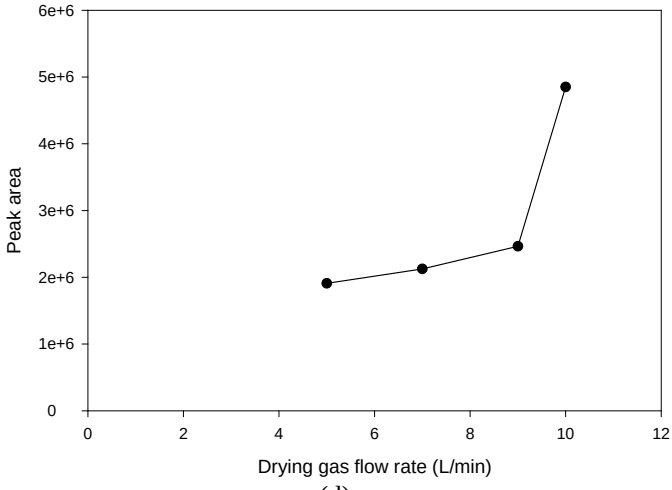
(a)


Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
0
5
10
15
20
Injection volume (μL)

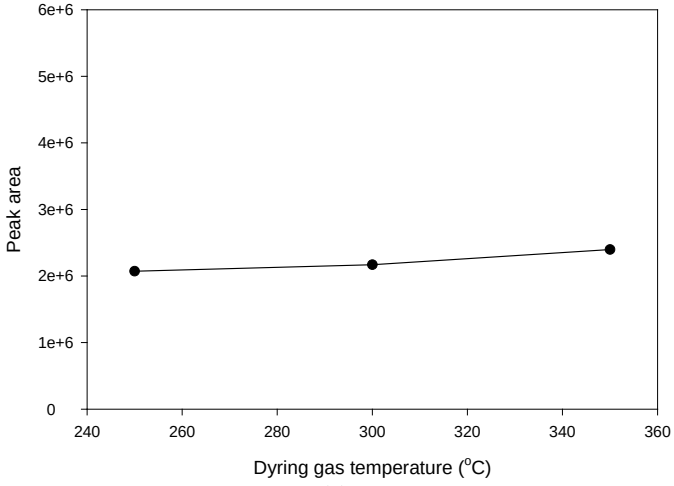
(b)


Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
25
30
35
40
45
50
55
Nebulizer pressure (psi)

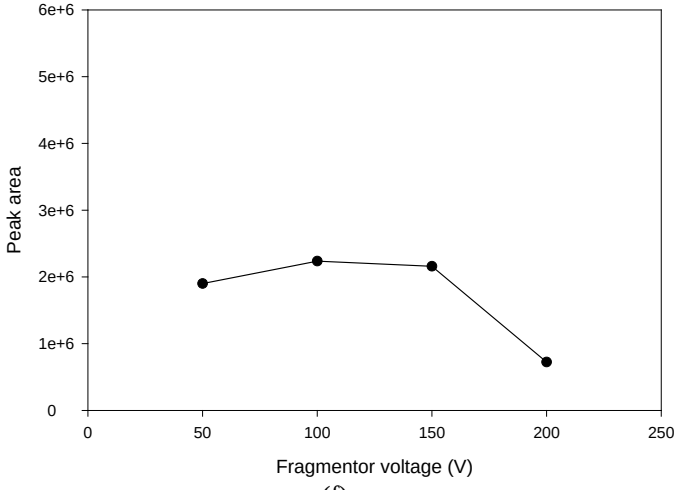
(c)


Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
0
2
4
6
8
10
12
Drying gas flow rate (L/min)

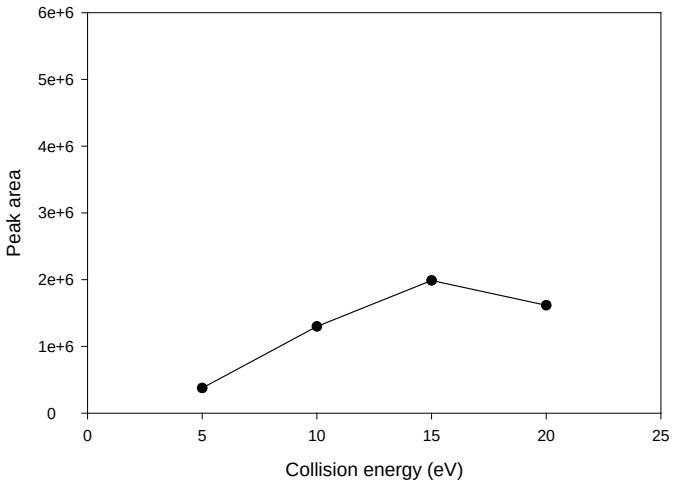
(d)


Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
240
260
280
300
320
340
360
Dyring gas temperature (°C)

(e)


Peak area
6e+6
5e+6
4e+6
3e+6
2e+6
1e+6
0
0
50
100
150
200
250
Fragmentor voltage (V)

(f)



(g)

Fig. S1. The sensitivity test for the (a) solvent composition, (b) injection volume, (c) nebulizer pressure, (d) drying gas flow rate, (e) drying gas temperature, (f) fragmentor voltage, and (g) collision energy used to select major factors for optimizing the HPLC-MS/MS.

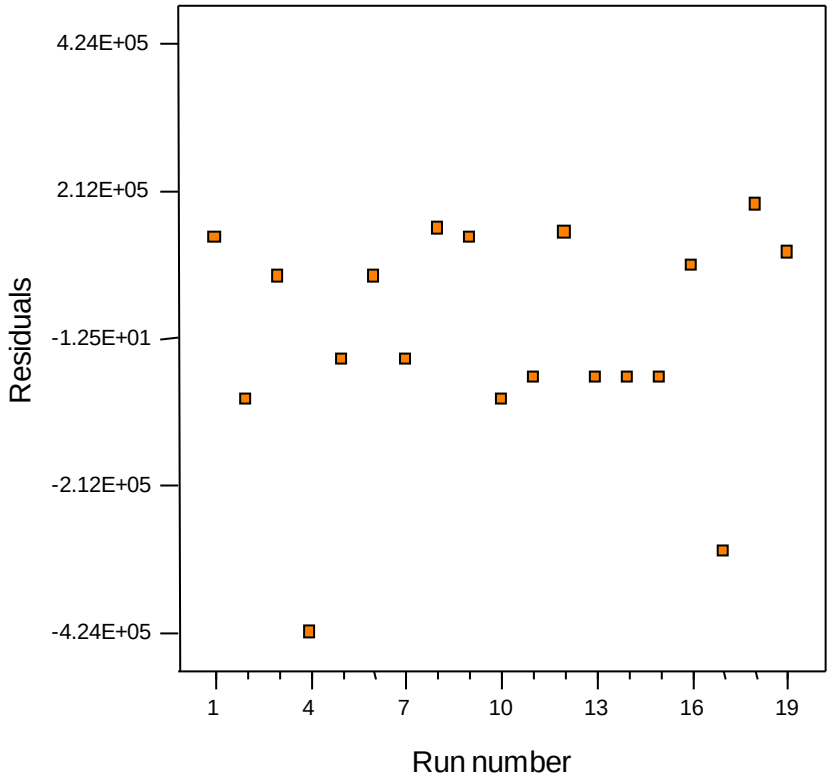
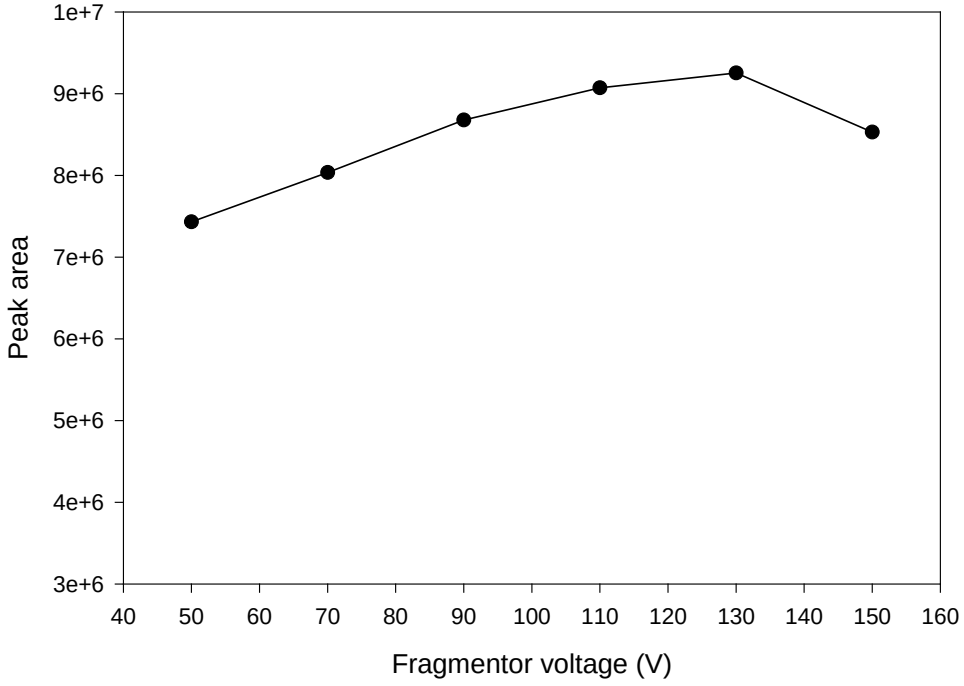
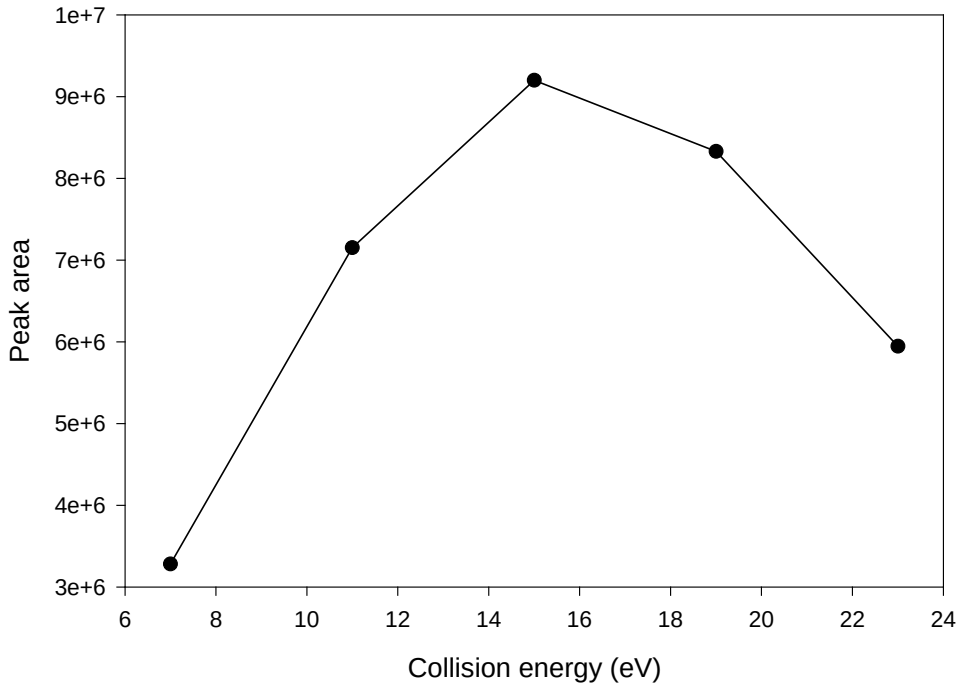


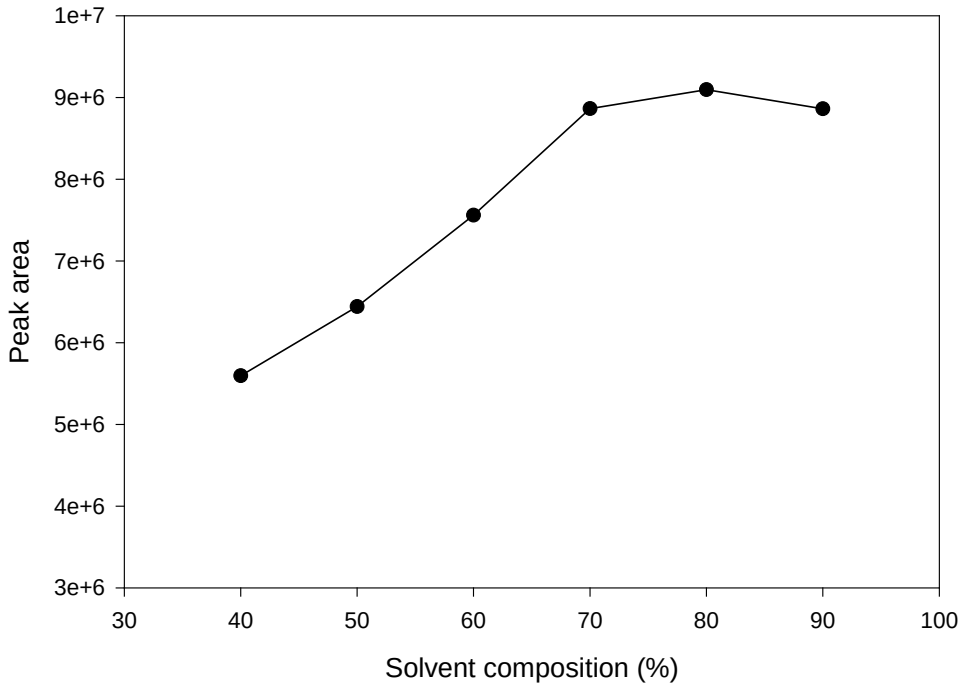
Fig. S2. Residual plots of the partial cubic model for the peak area of product ion 462 *m/z*. Each residual was calculated using Eq. (3).


1e+7
9e+6
8e+6
7e+6
6e+6
5e+6
4e+6
3e+6
Peak area
40
50
60
70
80
90
100
110
120
130
140
150
160
Fragmentor voltage (V)

(a)


1e+7
9e+6
8e+6
7e+6
6e+6
5e+6
4e+6
3e+6
Peak area
6
8
10
12
14
16
18
20
22
24
Collision energy (eV)

(b)



(c)

Fig. S3. The variance in the peak area according to changing one factor at a time. One factor among (a) fragmentor voltage, (b) collision energy, and (c) solvent composition was tested while the other independent variables were fixed at the optimum conditions.