

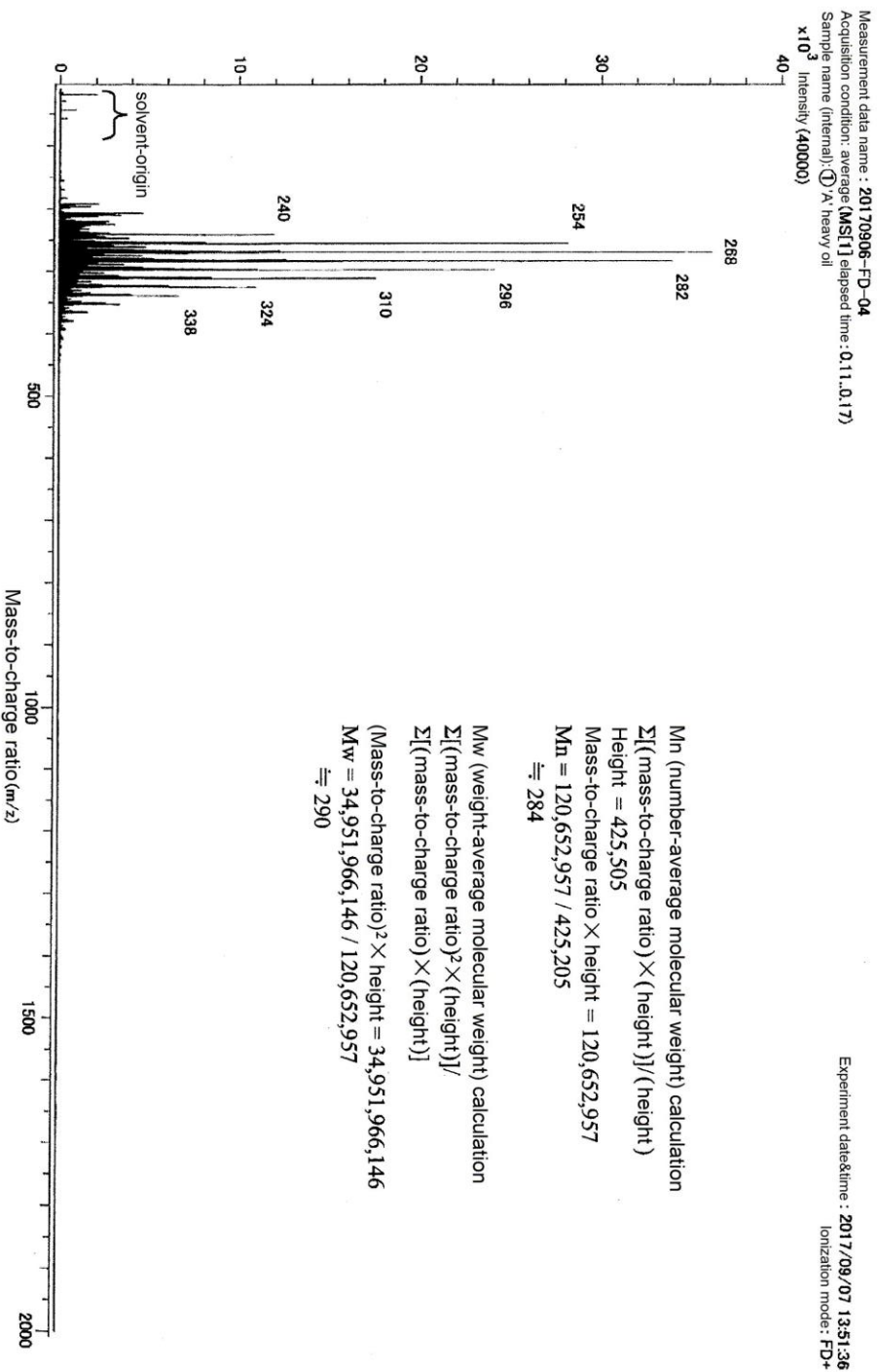


Figure 1

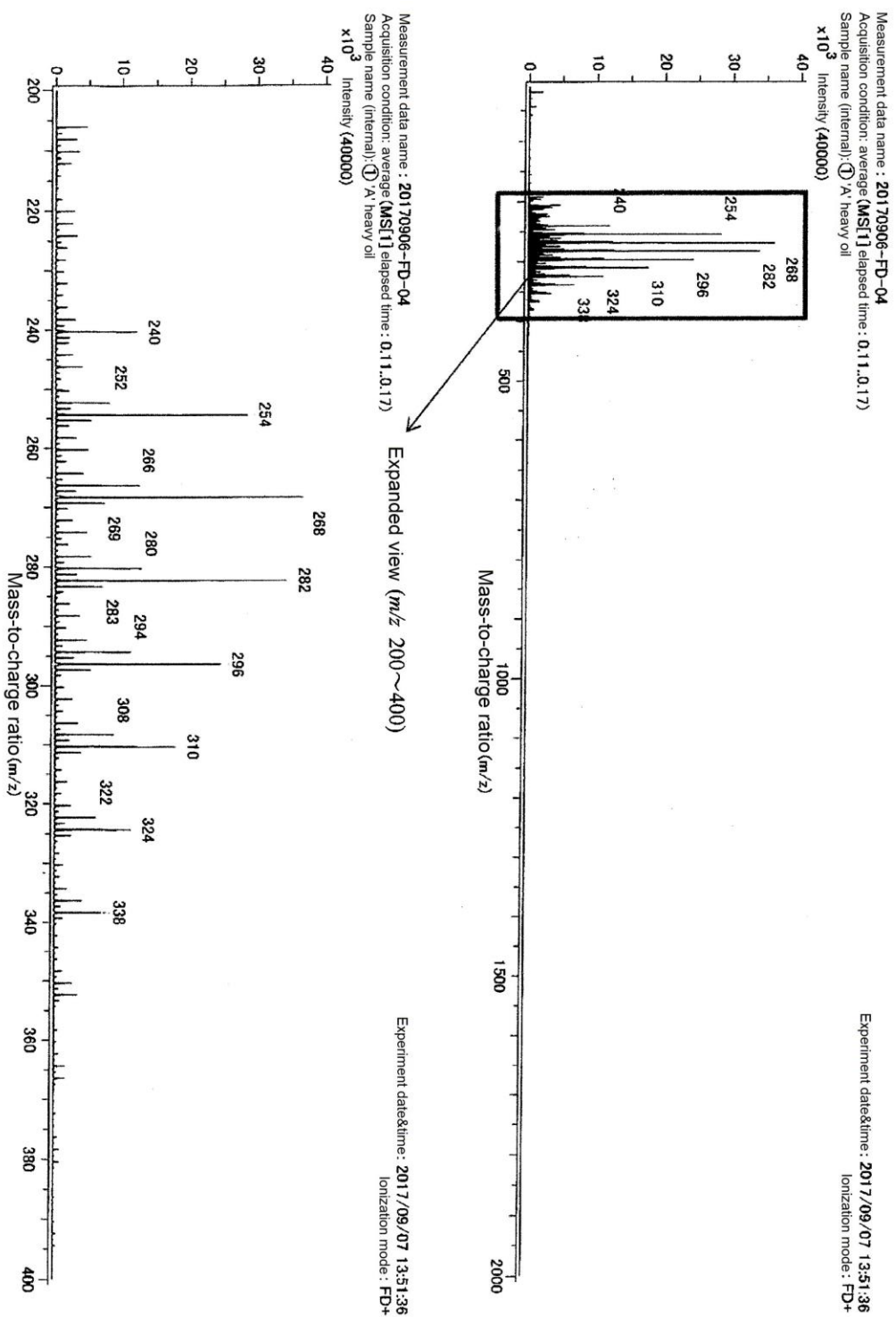
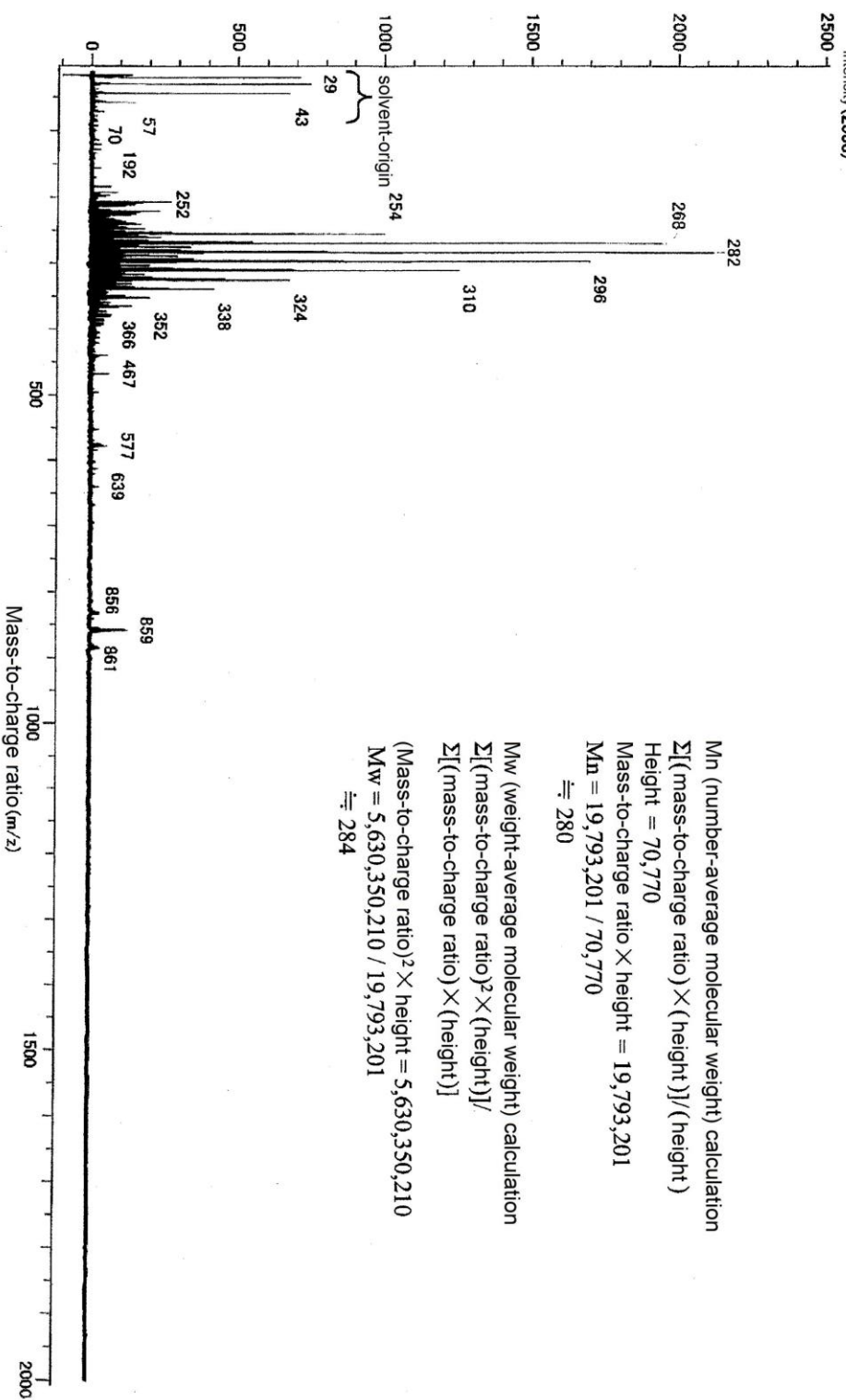


Figure 2

Measurement data name : 20170906-FD-02
 Acquisition condition: average (MS[1] elapsed time: 0.13,0.46)
 Sample name (internal): ② Treated oil

Experiment date&time: 2017/09/07 13:21:07
 Ionization mode: FD+



Mn (number-average molecular weight) calculation

$\Sigma[(\text{mass-to-charge ratio}) \times (\text{height})] / (\text{height})$

Height = 70,770

Mass-to-charge ratio $\times$ height = 19,793,201

$Mn = 19,793,201 / 70,770$

≈ 280

Mw (weight-average molecular weight) calculation

$\Sigma[(\text{mass-to-charge ratio})^2 \times (\text{height})] /$

$\Sigma[(\text{mass-to-charge ratio}) \times (\text{height})]$

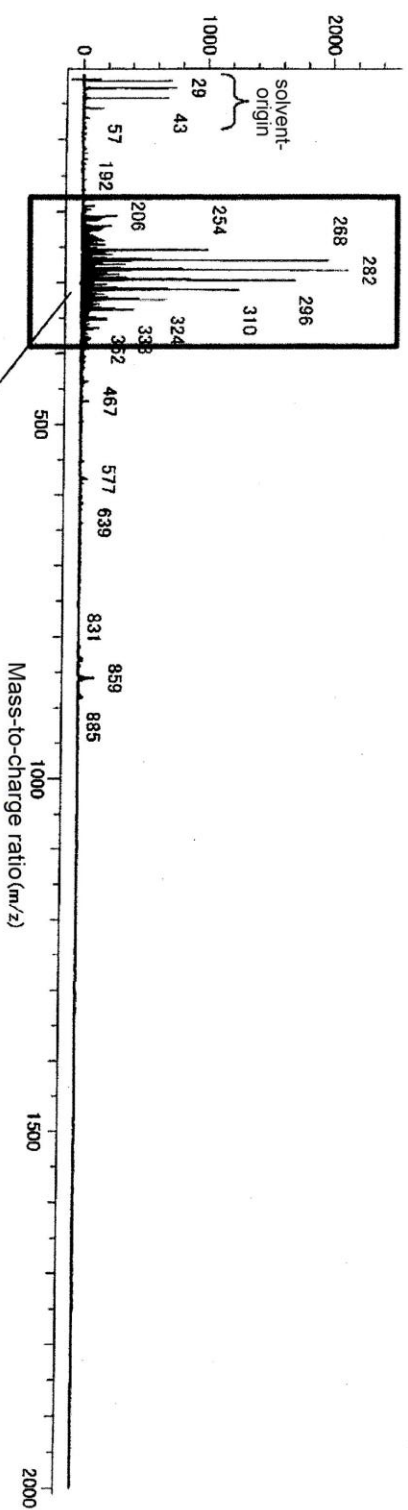
(Mass-to-charge ratio) $^2 \times$ height = 5,630,350,210

$Mw = 5,630,350,210 / 19,793,201$

≈ 284

Figure 3

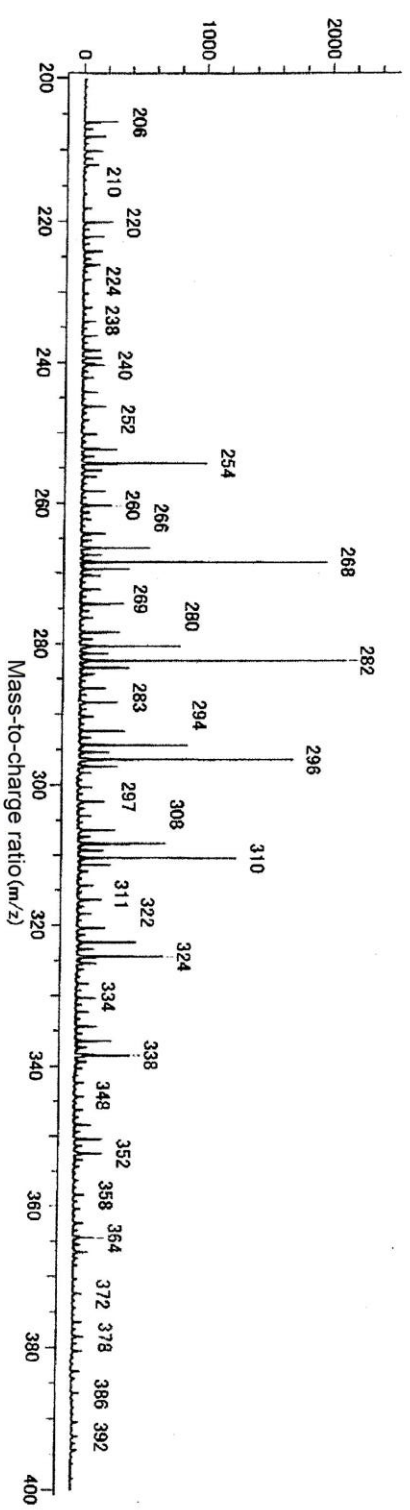
Measurement data name : 20170906-FD-02
 Acquisition condition: average (MS1) elapsed time: 0.13.0.46)
 Sample name (internal): ② Treated oil
 Intensity (2500)



Experiment date&time : 2017/09/07 13:21:07
 Ionization mode : FD+

Measurement data name : 20170906-FD-02
 Acquisition condition: average (MS1) elapsed time: 0.13.0.46)
 Sample name (internal): ② Treated oil
 Intensity (2500)

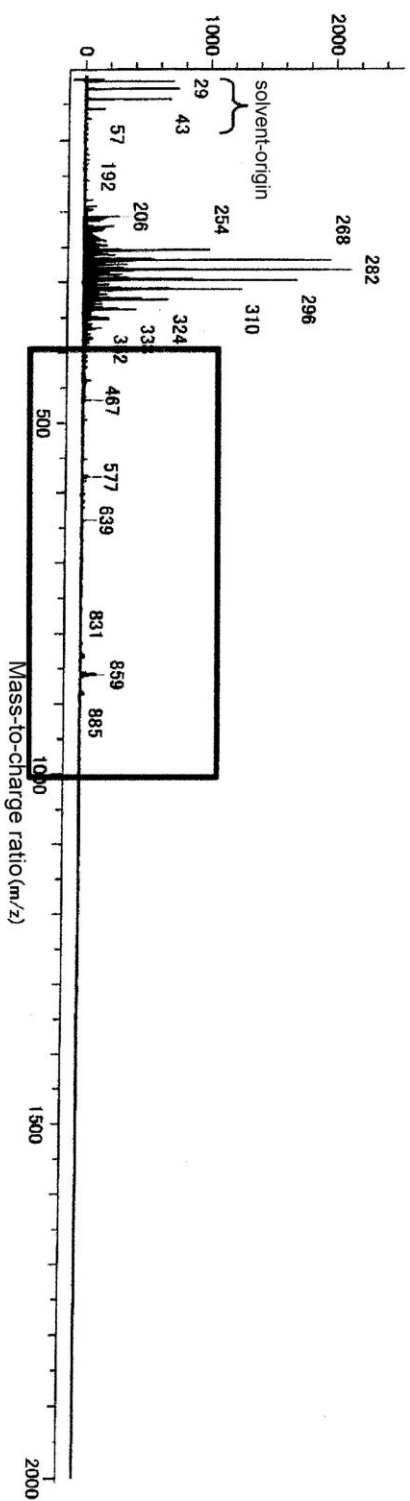
Expanded view (m/z 200~400)



Experiment date&time : 2017/09/07 13:21:07
 Ionization mode : FD+

Figure 4

Measurement data name : 20170906-FD-02
Acquisition condition: average (MS1) elapsed time: 0.13, 0.46
Sample name (internal): ② Treated oil
Intensity (2500)



Experiment date&time : 2017/09/07 13:21:07
Ionization mode : FD+

Measurement data name : 20170906-FD-02
Acquisition condition: average (MS1) elapsed time: 0.13, 0.46
Sample name (internal): ② Treated oil
Intensity (1000)

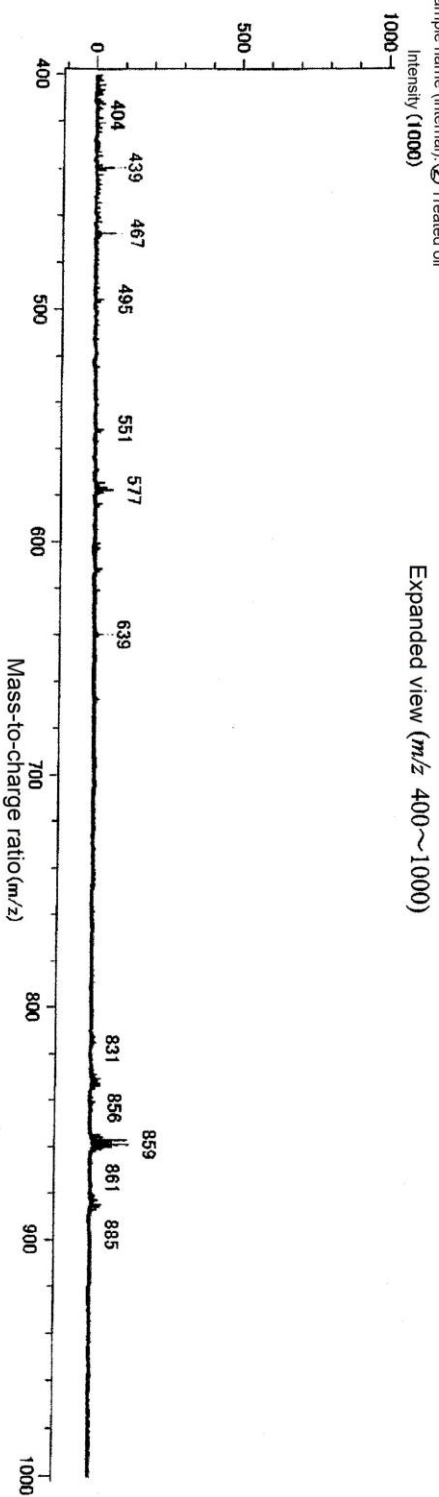


Figure 5

Headquarters



General Incorporated Association
Nippon Kaiji Kentei Kyokai

Japanese government approved



Offices

Major ports throughout the country

ORIGINAL

(Ref. AG)

Test Report

Yokohama

October 3, 2017

Report No.ZPE3384.2/17

Requester : Innova Industries Inc.

Sample names : 'A' Heavy Oil and Fule Oil (Clean Oil 'A' Heavy Oil)

Samples provided by : Requester

Test Results :

Test item	'A' Heavy Oil	Fuel Oil	Test method
1. Density @15°C, g/cm ³	0.8584	0.8643	ASTM D4052
2. Flash point (PM), °C	88.0	96.0	ASTM D93
4. Pour point , °C	−21	−18	ASTM D97
5. Kinematic viscosity@50°C, mm ² /s	2.688	3.534	ASTM D445
6. Sulfur content , mass%	0.388	0.330	ASTM D4294
7. Water content (KF) , mg/kg	113	167	ASTM D6304
8. Ash, mass%	<0.001	0.001	ASTM D482
9. Residual carbon content, mass%	0.05	0.08	ASTM D189
10. Calorific value , J/g	45,280	44,675	ASTM D240

General Incorporated Association Nippon Kaiji Kentei Kyokai
Physical and Chemical Analysis Center

Director Hitoshi Yamamoto



For questions about this report, contact :



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