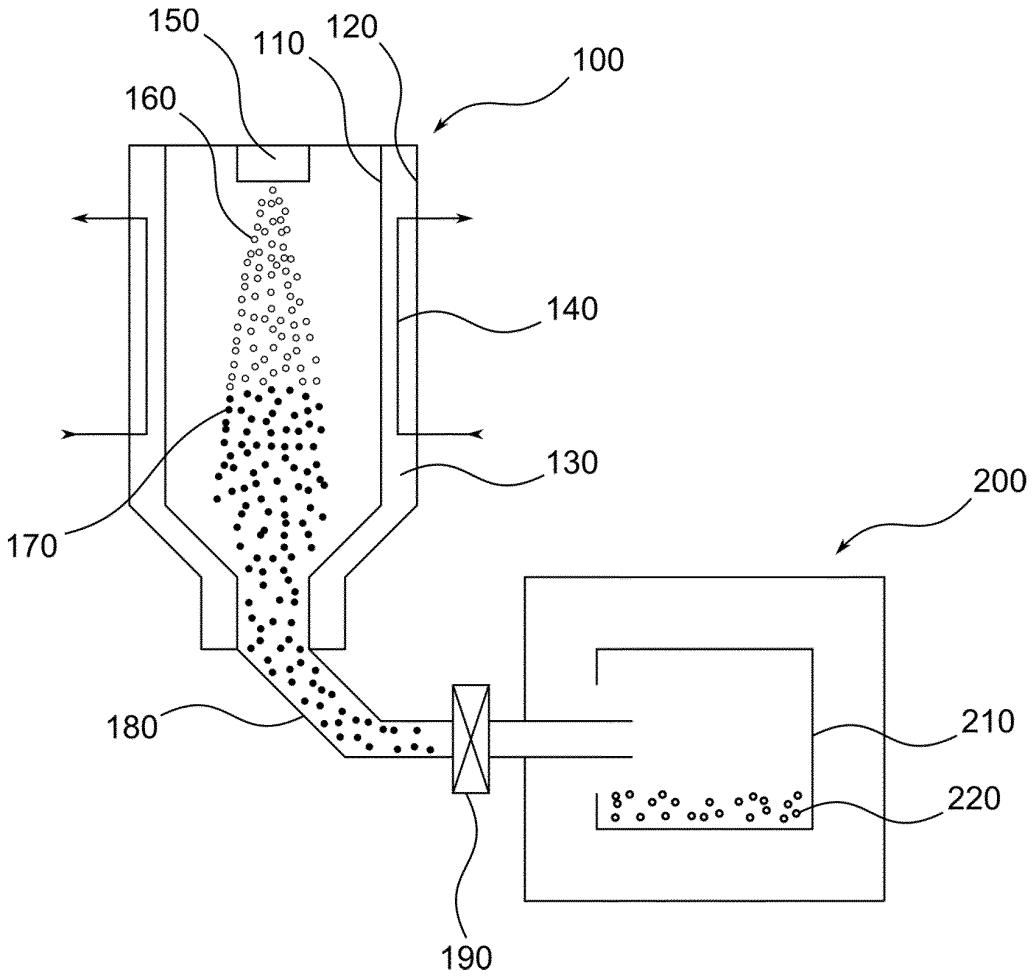


FIG. 1

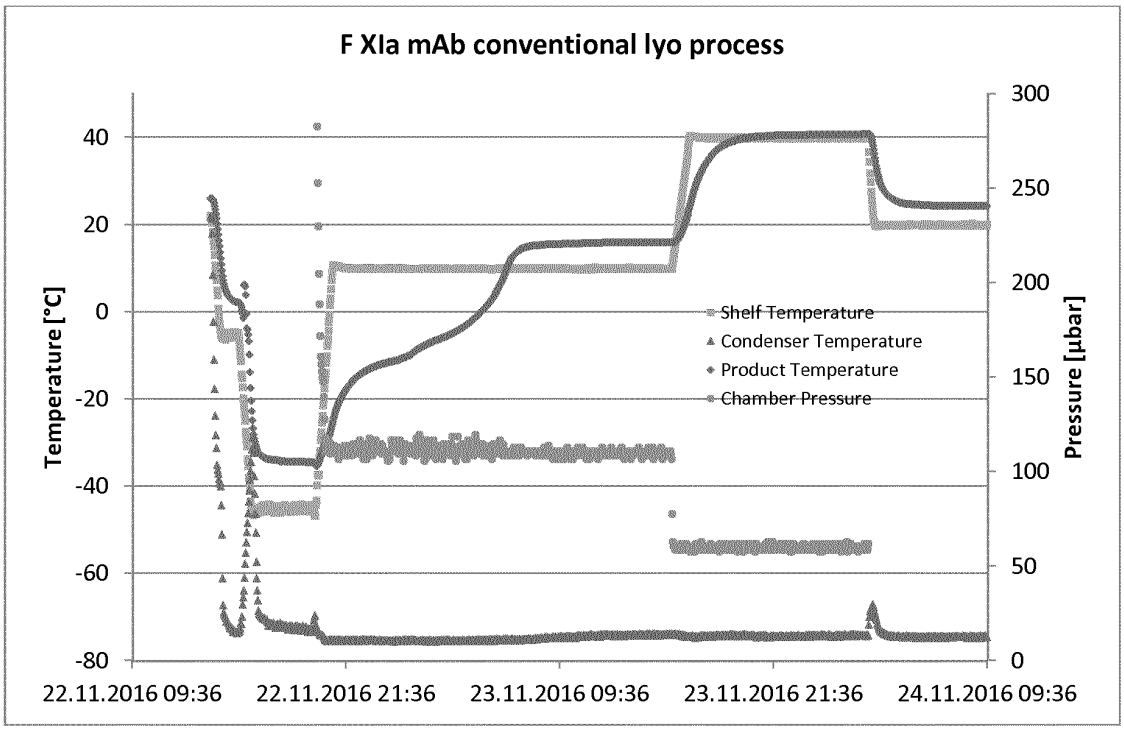

F XIa mAb conventional lyo process
Temperature [°C]
Pressure [µbar]
40
20
0
-20
-40
-60
-80
300
250
200
150
100
50
0
Shelf Temperature
Condenser Temperature
Product Temperature
Chamber Pressure
22.11.2016 09:36
22.11.2016 21:36
23.11.2016 09:36
23.11.2016 21:36
24.11.2016 09:36

FIG. 2

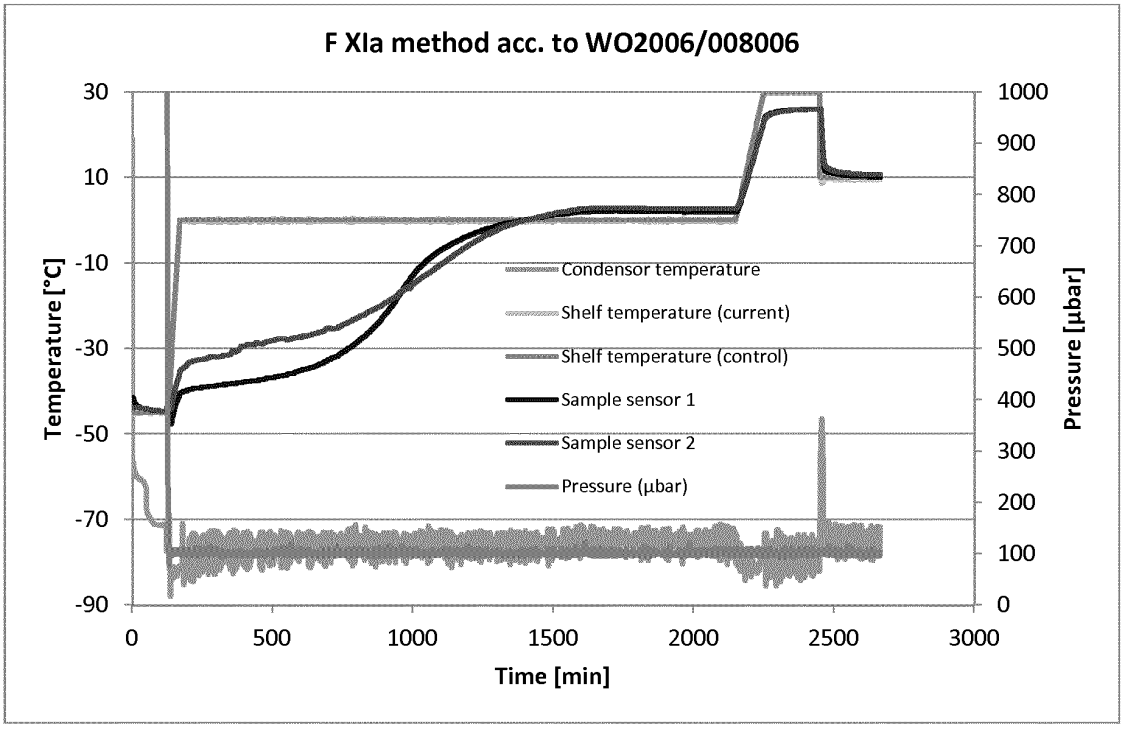

F XIa method acc. to WO2006/008006
Temperature [°C]
30
10
-10
-30
-50
-70
-90
Pressure [µbar]
1000
900
800
700
600
500
400
300
200
100
0
0
500
1000
1500
2000
2500
3000
Time [min]
Condensor temperature
Shelf temperature (current)
Shelf temperature (control)
Sample sensor 1
Sample sensor 2
Pressure (µbar)

FIG. 3

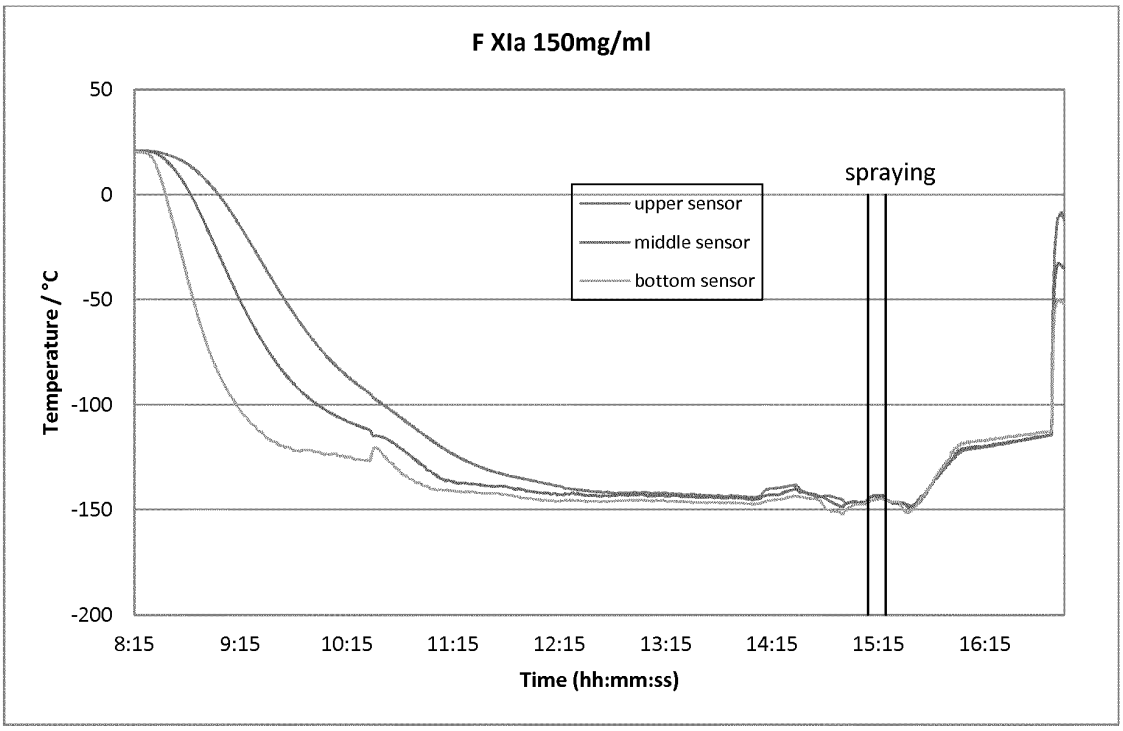

F XIa 150mg/ml
50
0
-50
-100
-150
-200
Temperature / °C
8:15
9:15
10:15
11:15
12:15
13:15
14:15
15:15
16:15
Time (hh:mm:ss)
spraying
upper sensor
middle sensor
bottom sensor

FIG. 4

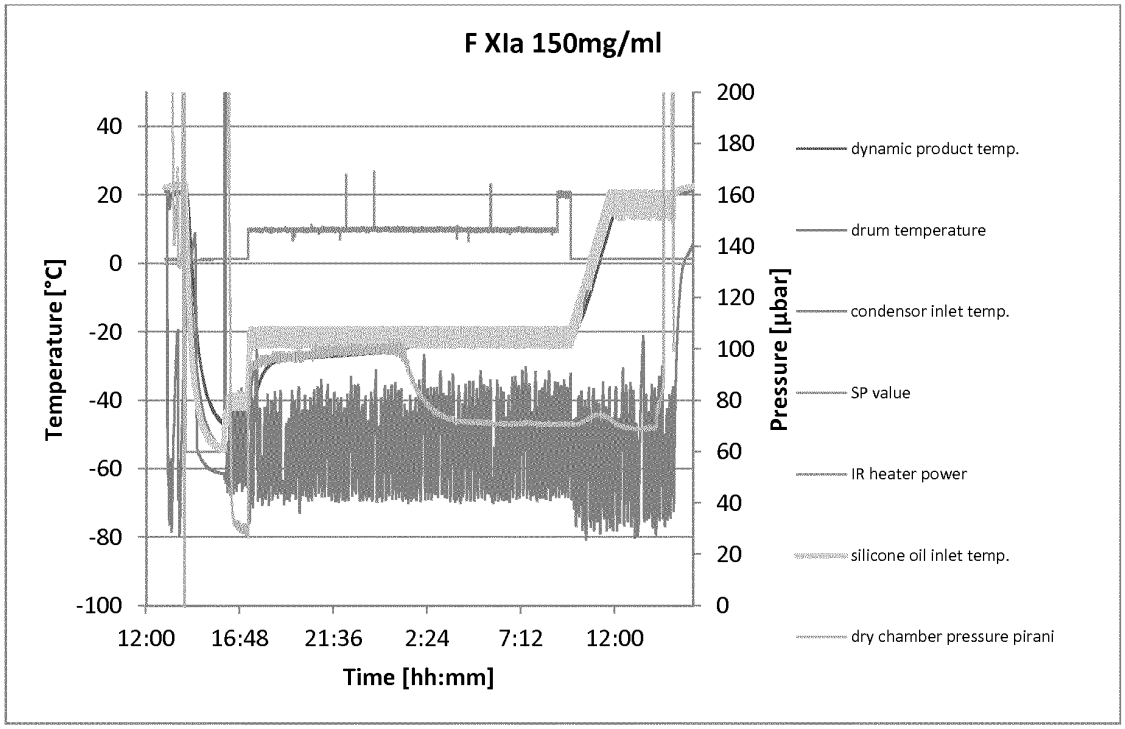

F XIa 150mg/ml
Temperature [°C]
40
20
0
-20
-40
-60
-80
-100
12:00
16:48
21:36
2:24
7:12
12:00
Time [hh:mm]
200
180
160
140
120
100
80
60
40
20
0
Pressure [µbar]
dynamic product temp.
drum temperature
condensor inlet temp.
SP value
IR heater power
silicone oil inlet temp.
dry chamber pressure pirani

FIG 5

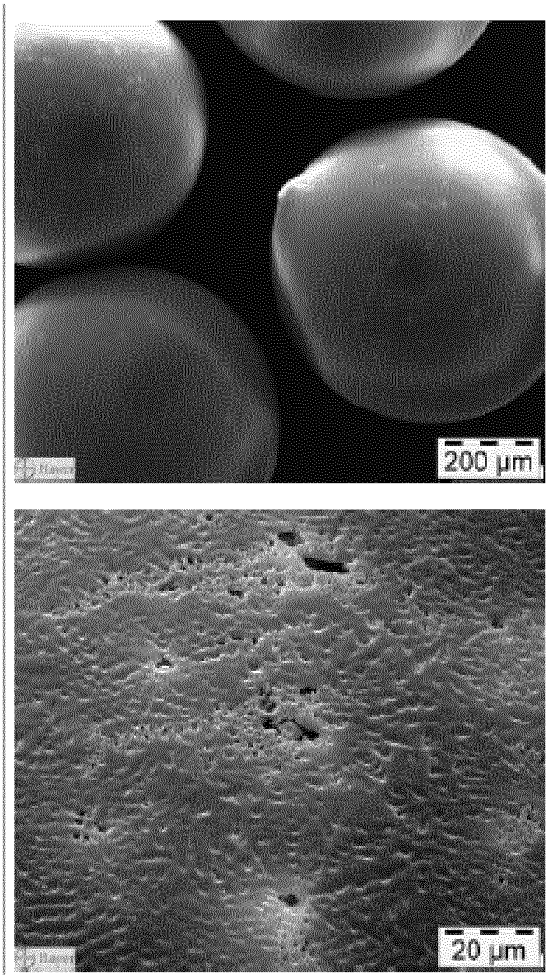


FIG. 6

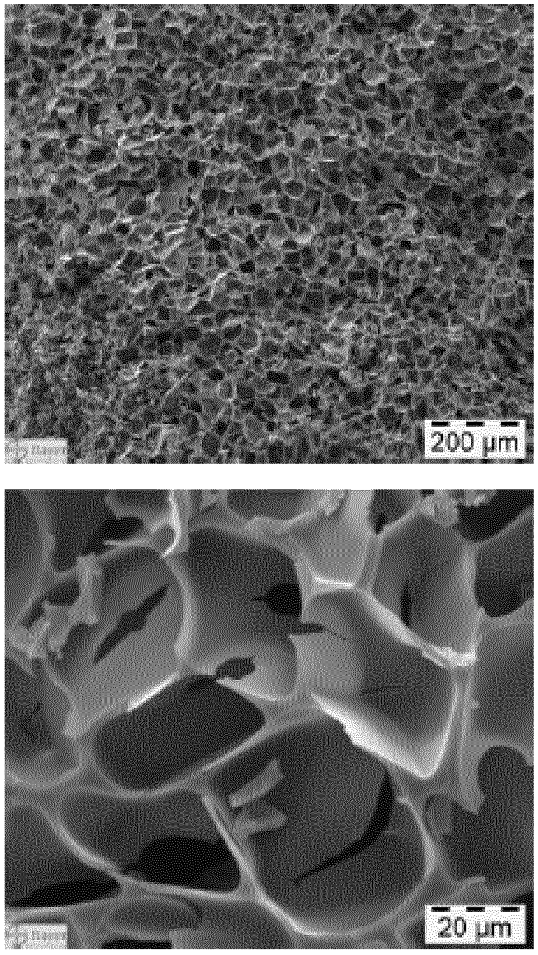


FIG. 7

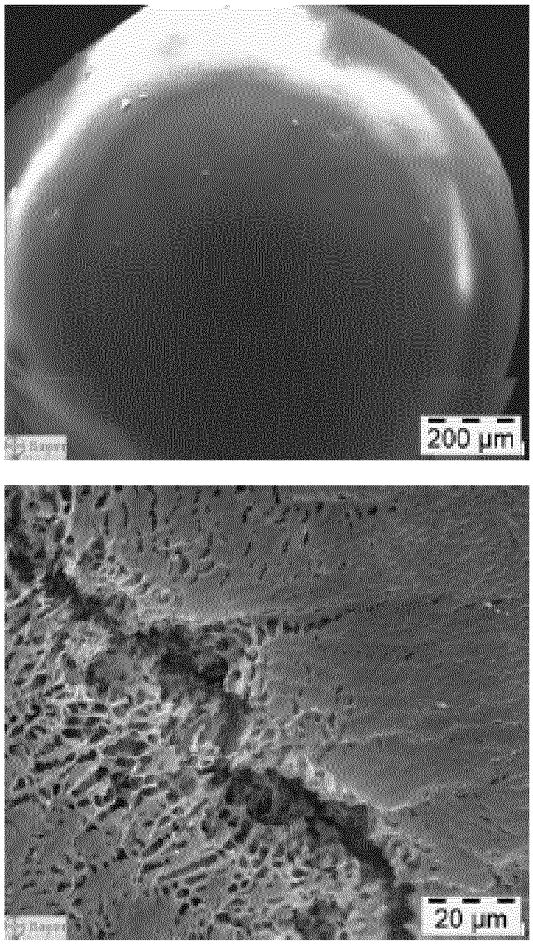


FIG. 8