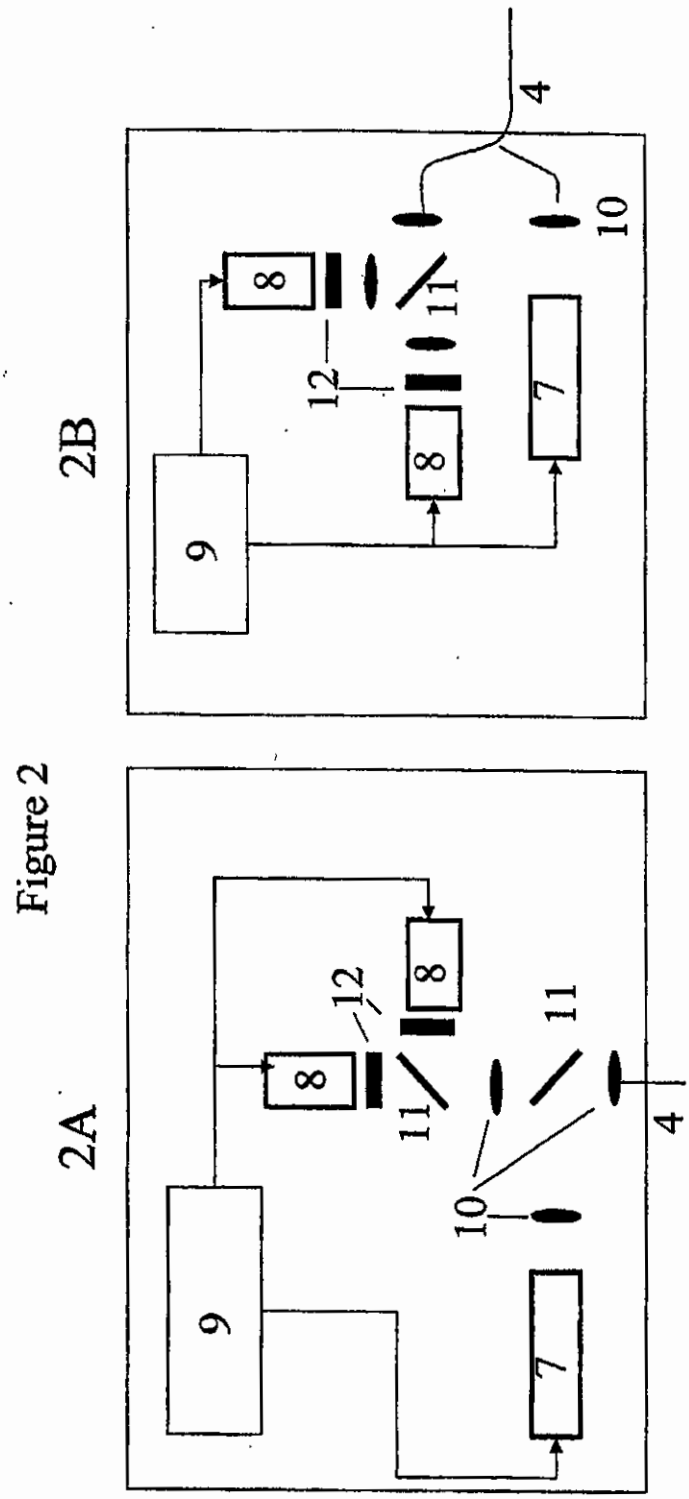
Biosensor

Figure 1

2 = optical system
3 = computer/microprocessor
4 = optical conduit
5 = disposable tip
6 = sensing element

Figure 2



2 = optical system
4 = optical conduit
7 = excitation source
8 = detector
9 = power supply or battery
10 = focusing/collimating optics
11 = dichroic optics
12 = bandpass filters

Tip Designs

Figure 3

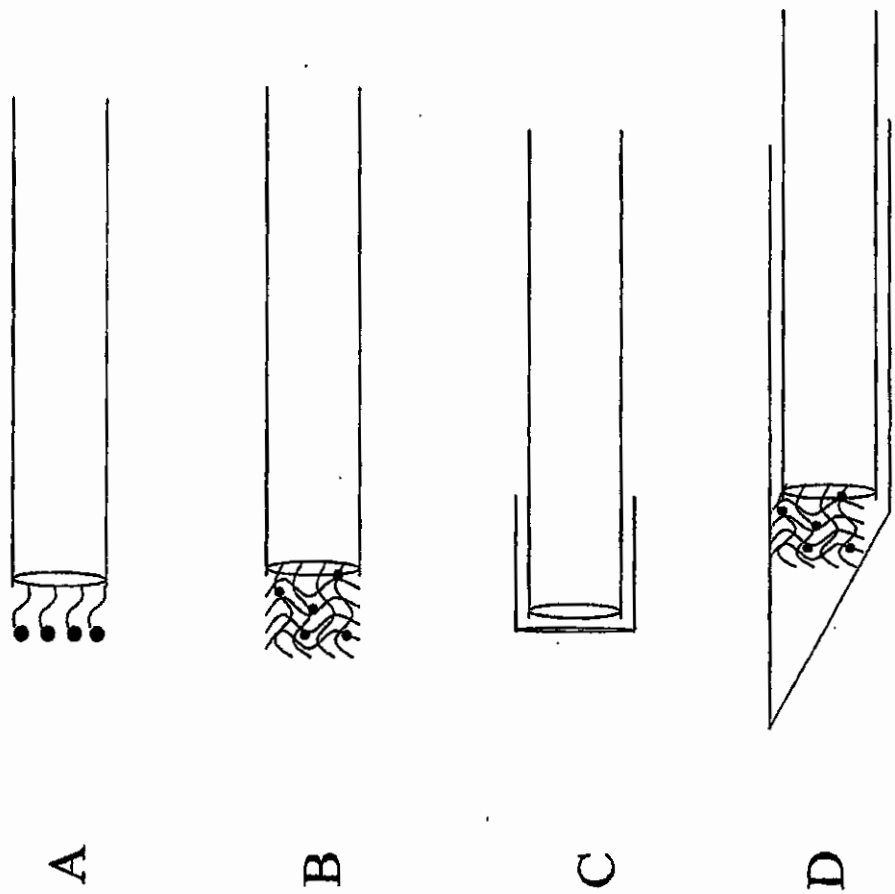


Figure 4

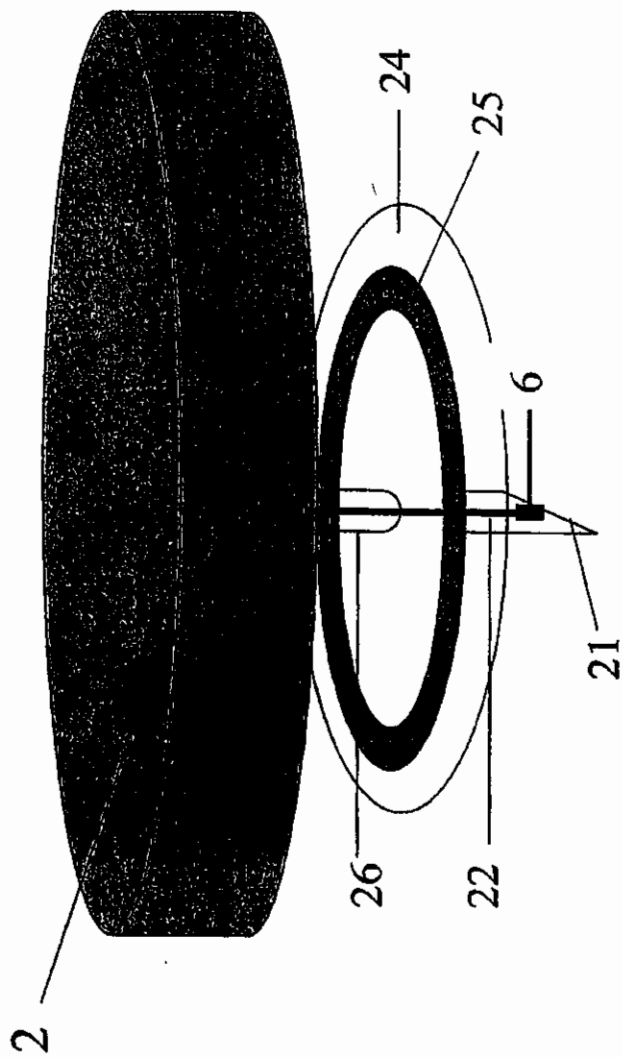


Figure 5

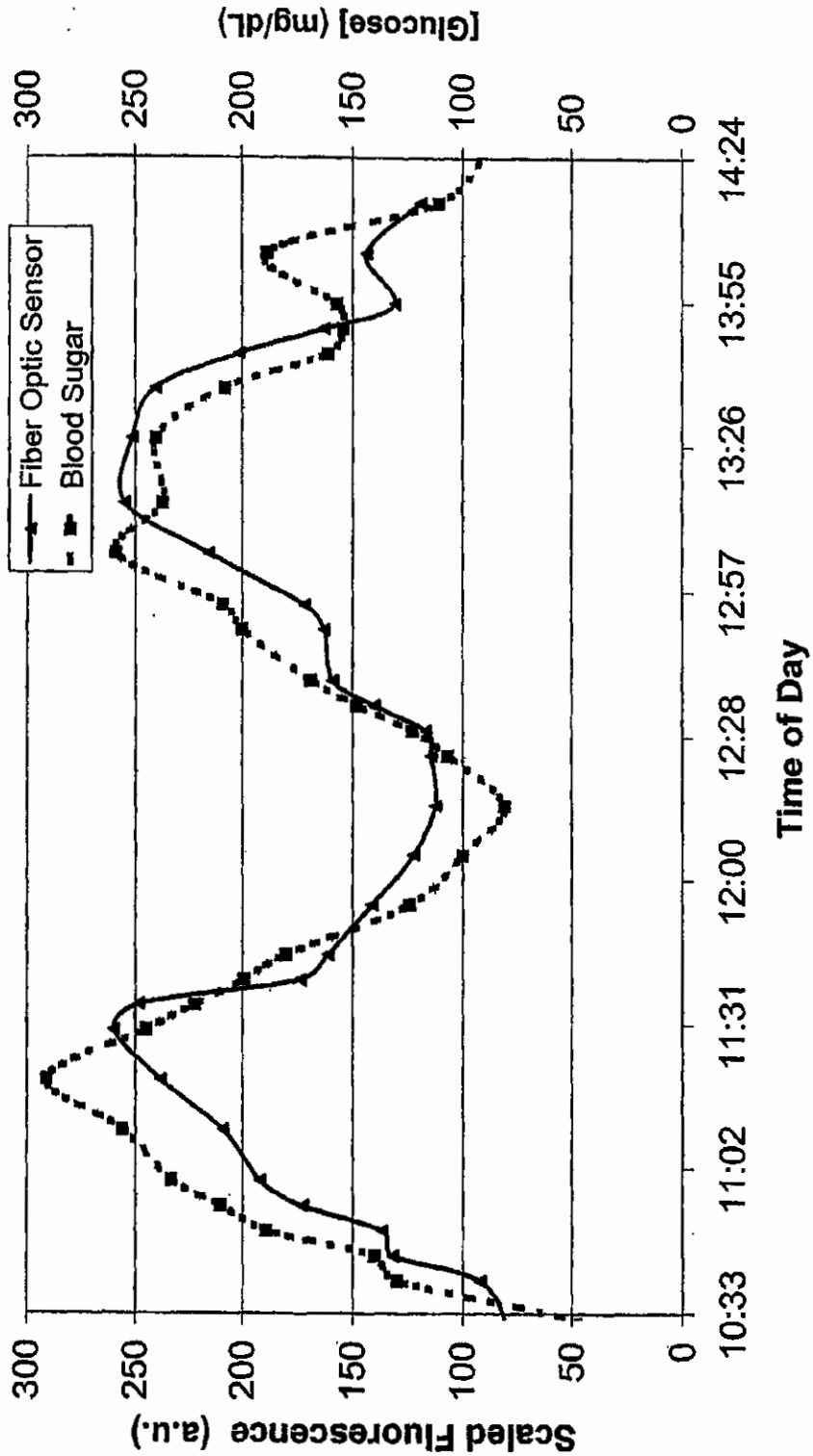

Scaled Fluorescence (a.u.)
[Glucose] (mg/dL)
Time of Day
Fiber Optic Sensor
Blood Sugar
300
250
200
150
100
50
0
10:33
11:02
11:31
12:00
12:28
12:57
13:26
13:55
14:24

Figure 6

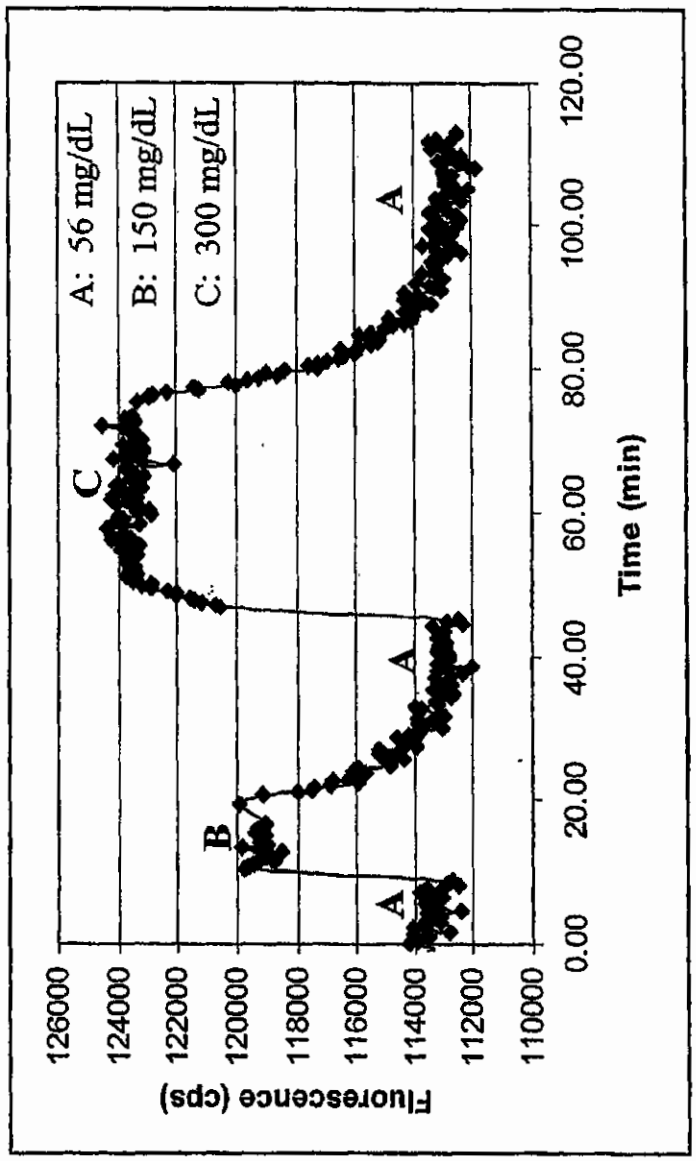

A: 56 mg/dL
B: 150 mg/dL
C: 300 mg/dL
A
B
C
A
A
Fluorescence (cps)
126000
124000
122000
120000
118000
116000
114000
112000
110000
0.00
20.00
40.00
60.00
80.00
100.00
120.00
Time (min)

Figure 7

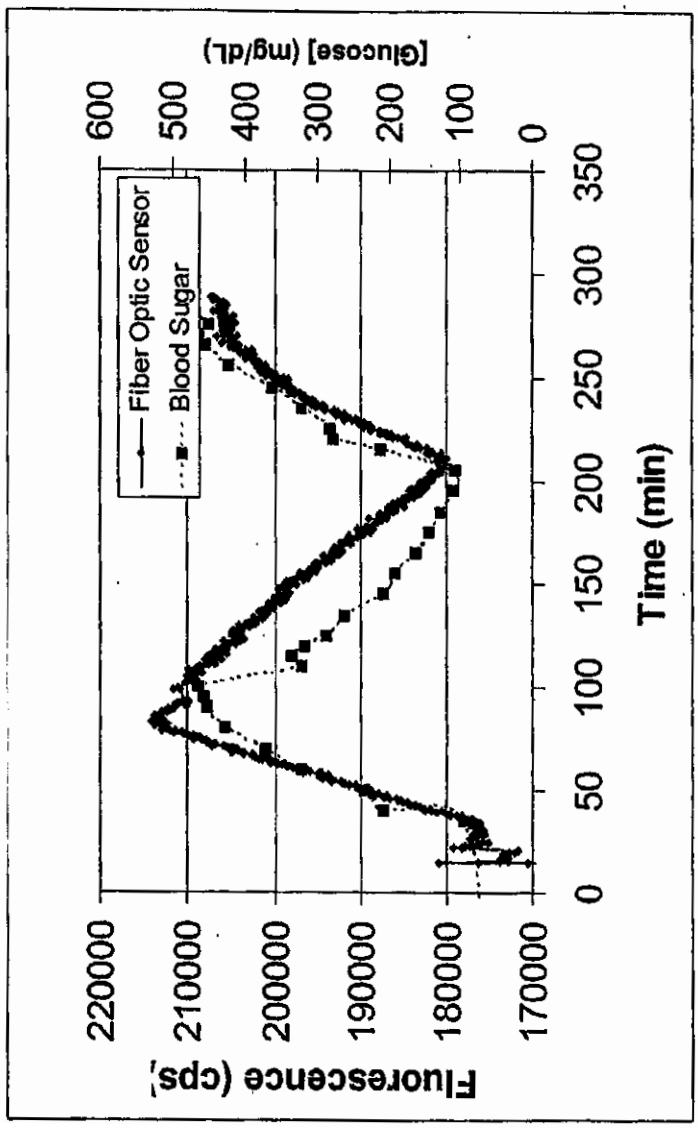
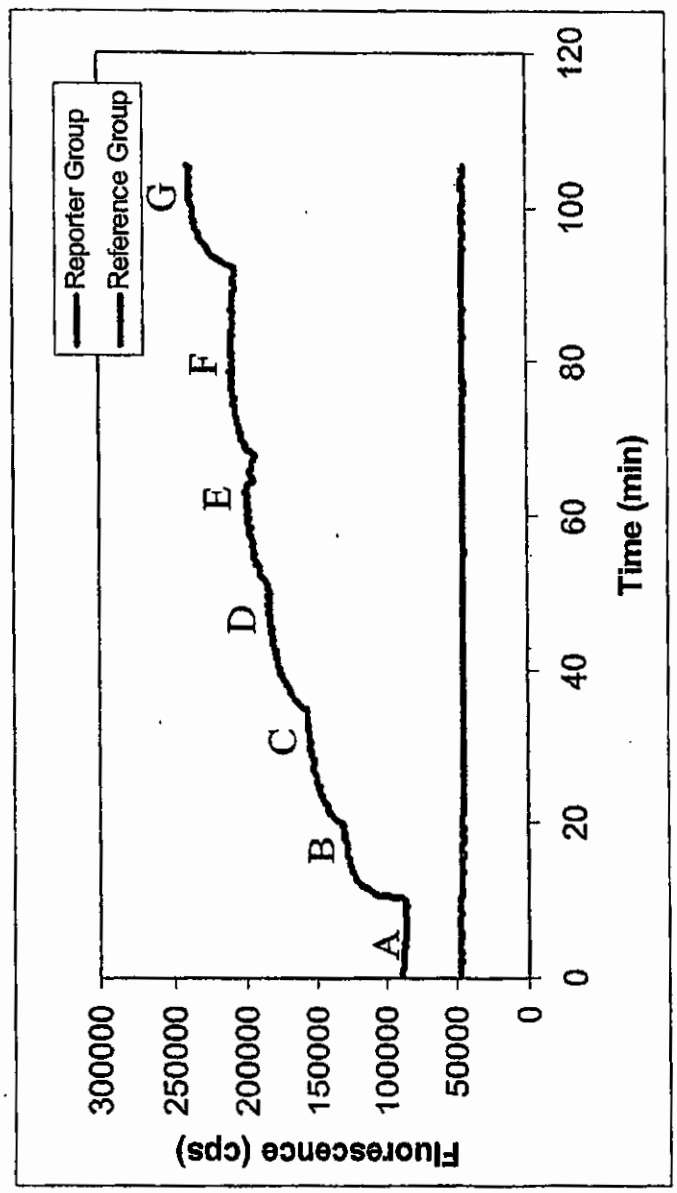

Fiber Optic Sensor
Blood Sugar
Fluorescence (cps)
220000
210000
200000
190000
180000
170000
[Glucose] (mg/dL)
600
500
400
300
200
100
0
0
50
100
150
200
250
300
350
Time (min)

Figure 8


A: 0 mg/dL
B: 45 mg/dL
C: 90 mg/dL
D: 180 mg/dL
E: 360 mg/dL
F: 540 mg/dL
G: 1800 mg/dL
Reporter Group
Reference Group
Fluorescence (cps)
Time (min)
300000
250000
200000
150000
100000
50000
0
0
20
40
60
80
100
120
A
B
C
D
E
F
G