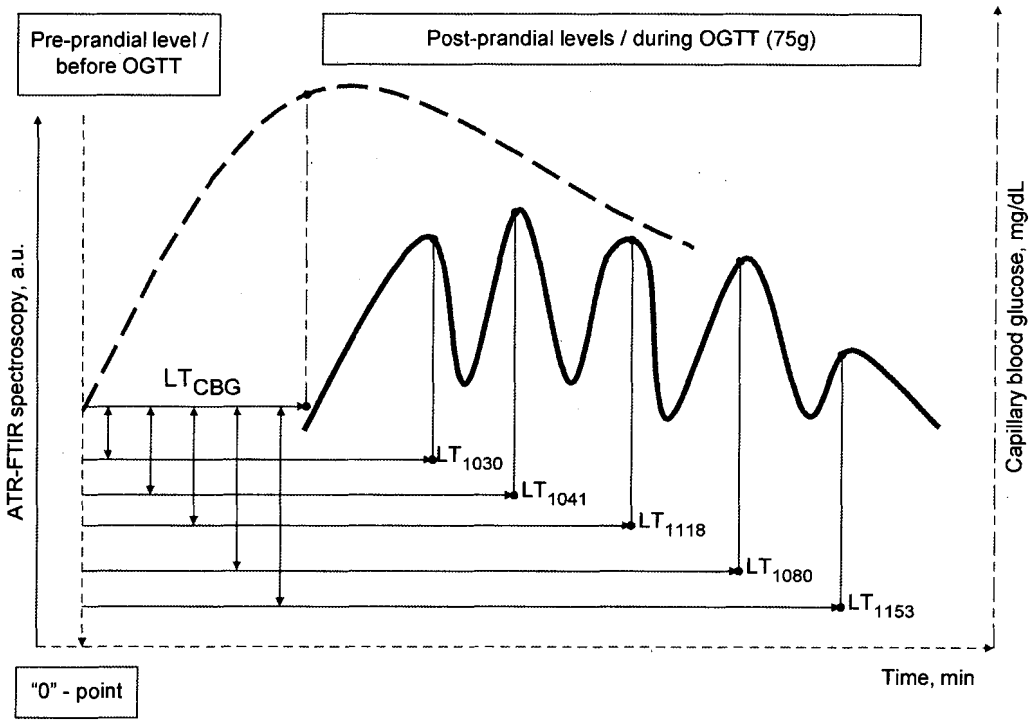

Pre-prandial level / before OGTT
Post-prandial levels / during OGTT (75g)
ATR-FTIR spectroscopy, a.u.
Capillary blood glucose, mg/dL
LT_CBG
LT_1030
LT_1041
LT_1118
LT_1080
LT_1153
"0" - point
Time, min

Fig. 1

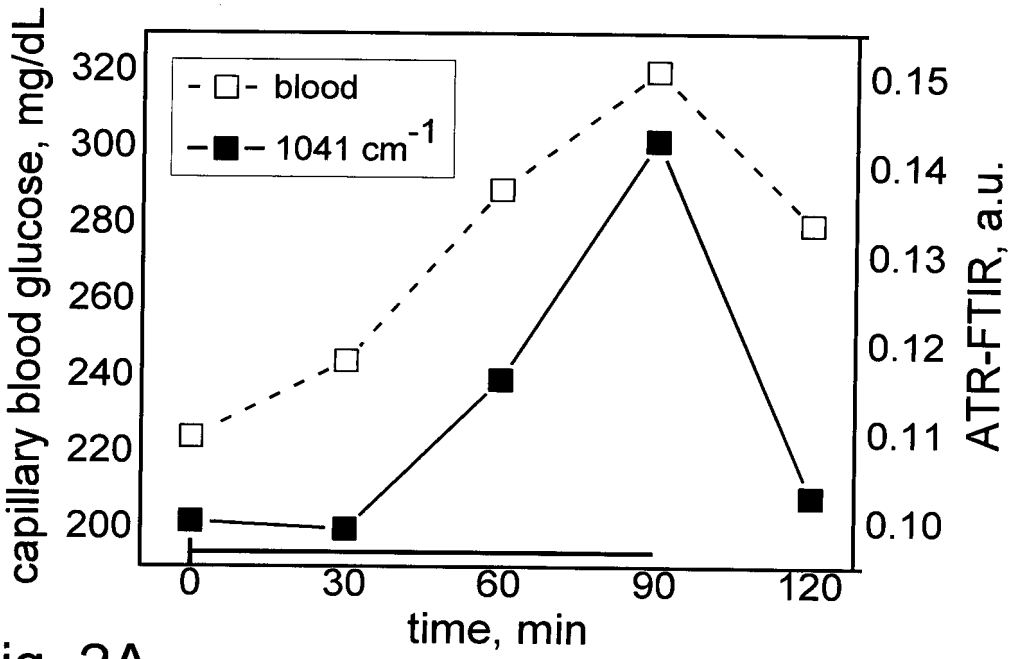

capillary blood glucose, mg/dL
320
300
280
260
240
220
200
blood
1041 cm-1
0.15
0.14
0.13
0.12
0.11
0.10
ATR-FTIR, a.u.
0
30
60
90
120
time, min

Fig. 2A

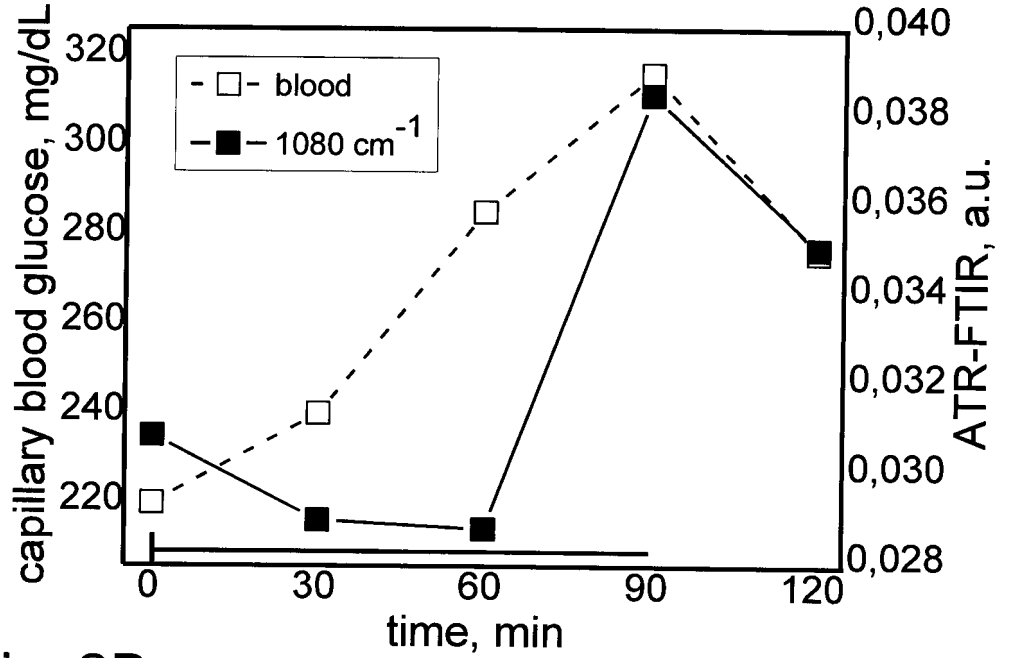

capillary blood glucose, mg/dL
320
300
280
260
240
220
blood
1080 cm-1
0,040
0,038
0,036
0,034
0,032
0,030
0,028
ATR-FTIR, a.u.
0
30
60
90
120
time, min

Fig. 2B

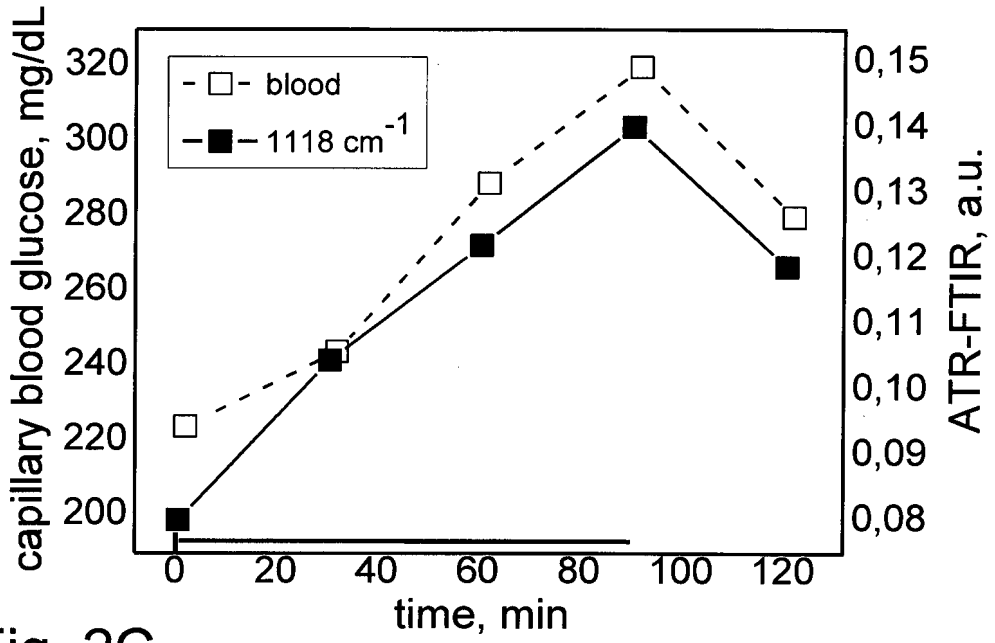

capillary blood glucose, mg/dL
320
300
280
260
240
220
200
blood
1118 cm-1
0,15
0,14
0,13
0,12
0,11
0,10
0,09
0,08
ATR-FTIR, a.u.
0
20
40
60
80
100
120
time, min

Fig. 2C

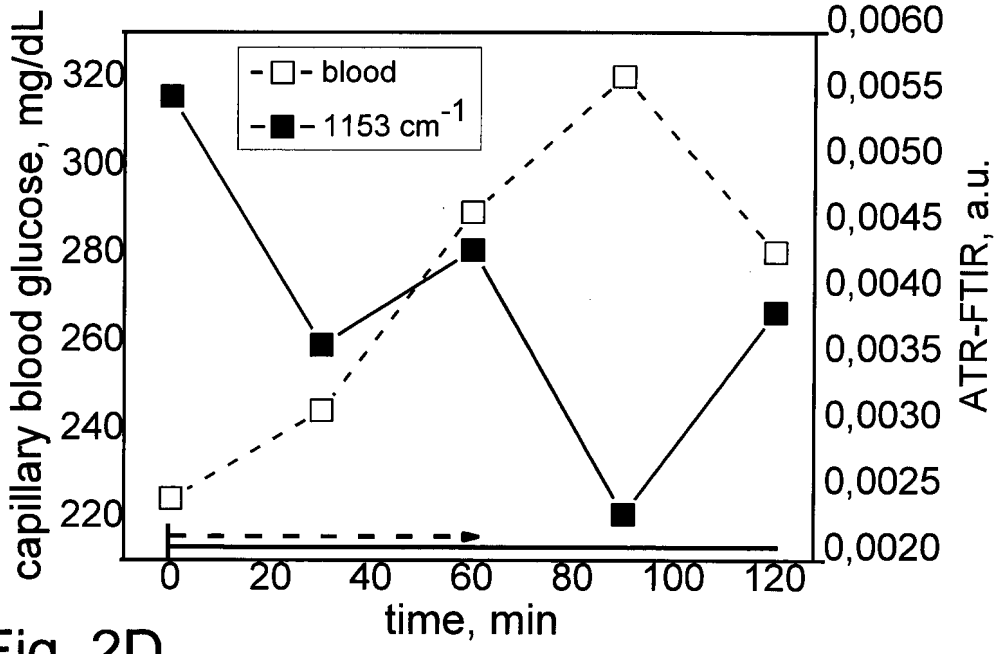

capillary blood glucose, mg/dL
320
300
280
260
240
220
blood
1153 cm-1
0,0060
0,0055
0,0050
0,0045
0,0040
0,0035
0,0030
0,0025
0,0020
ATR-FTIR, a.u.
0
20
40
60
80
100
120
time, min

Fig. 2D

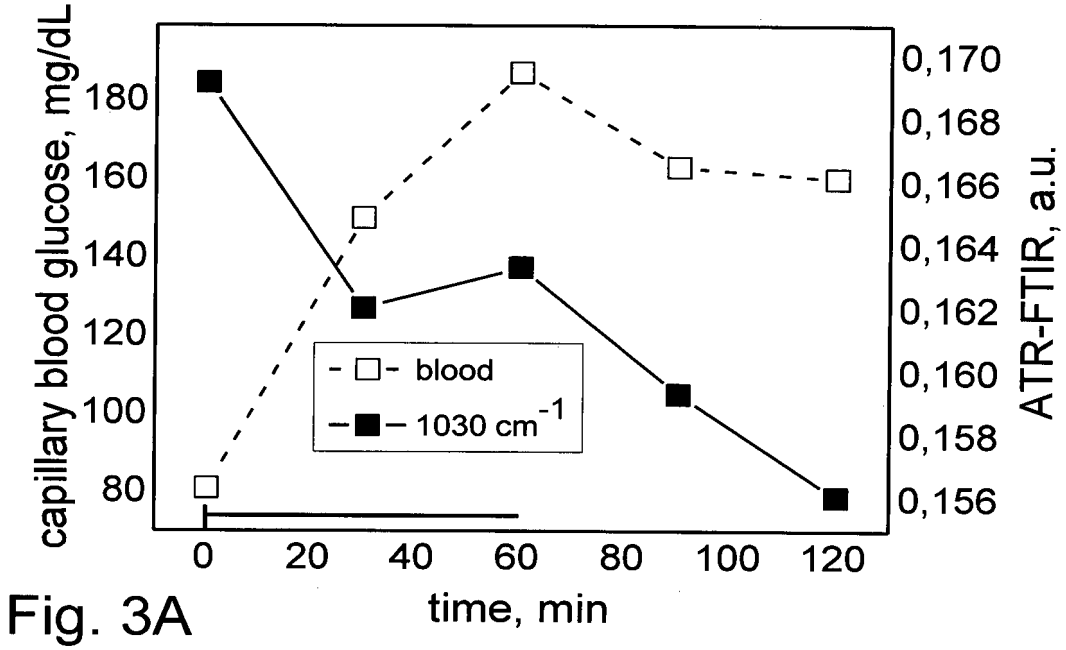

capillary blood glucose, mg/dL
180
160
140
120
100
80
0,170
0,168
0,166
0,164
0,162
0,160
0,158
0,156
ATR-FTIR, a.u.
blood
1030 cm-1
0
20
40
60
80
100
120
time, min

Fig. 3A

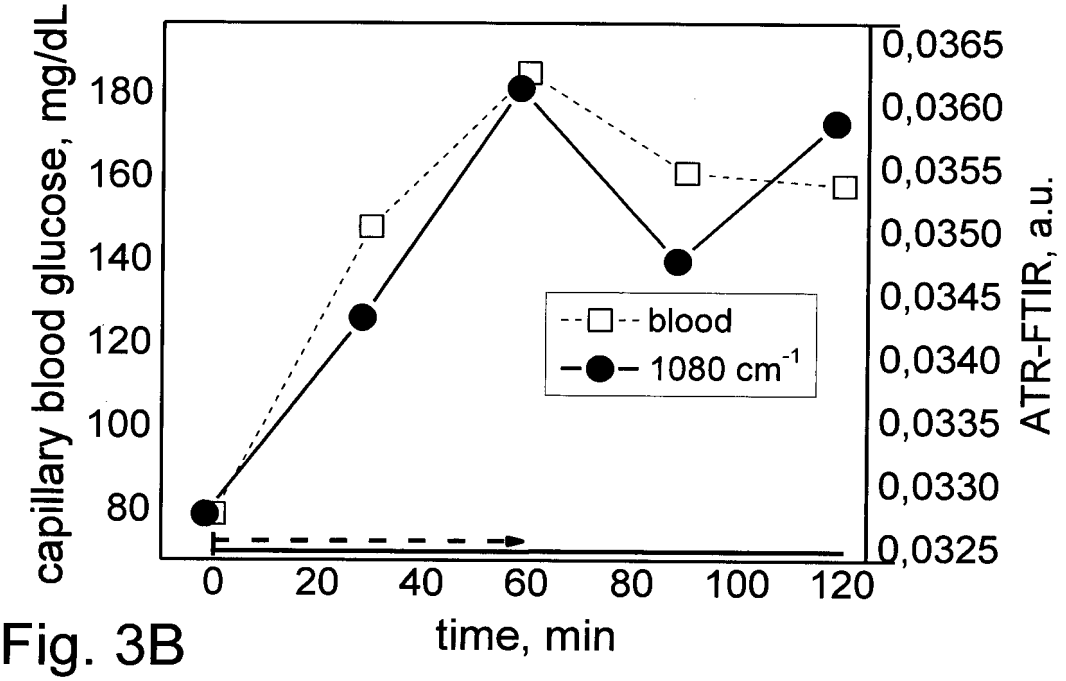

capillary blood glucose, mg/dL
180
160
140
120
100
80
0,0365
0,0360
0,0355
0,0350
0,0345
0,0340
0,0335
0,0330
0,0325
ATR-FTIR, a.u.
blood
1080 cm-1
0
20
40
60
80
100
120
time, min

Fig. 3B

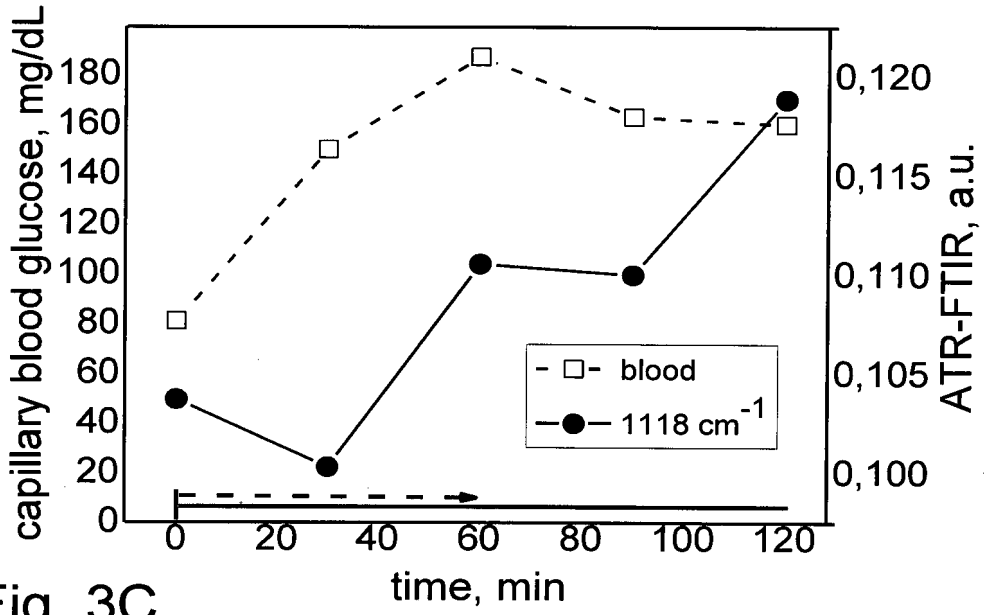

capillary blood glucose, mg/dL
180
160
140
120
100
80
60
40
20
0
0,120
0,115
0,110
0,105
0,100
ATR-FTIR, a.u.
blood
1118 cm-1
0
20
40
60
80
100
120
time, min

Fig. 3C

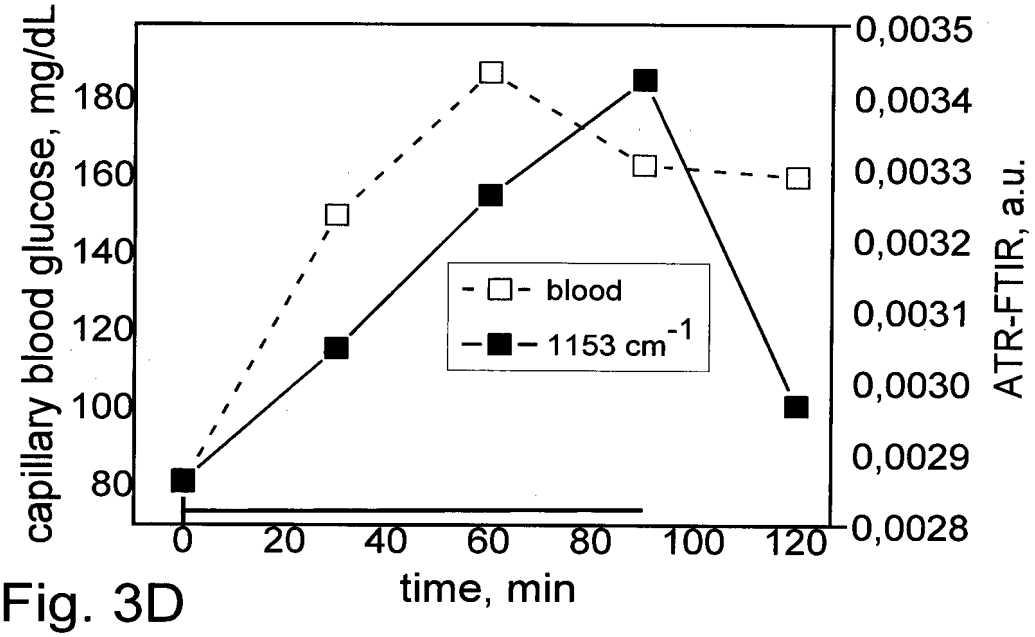

capillary blood glucose, mg/dL
180
160
140
120
100
80
0,0035
0,0034
0,0033
0,0032
0,0031
0,0030
0,0029
0,0028
ATR-FTIR, a.u.
blood
1153 cm-1
0
20
40
60
80
100
120
time, min

Fig. 3D

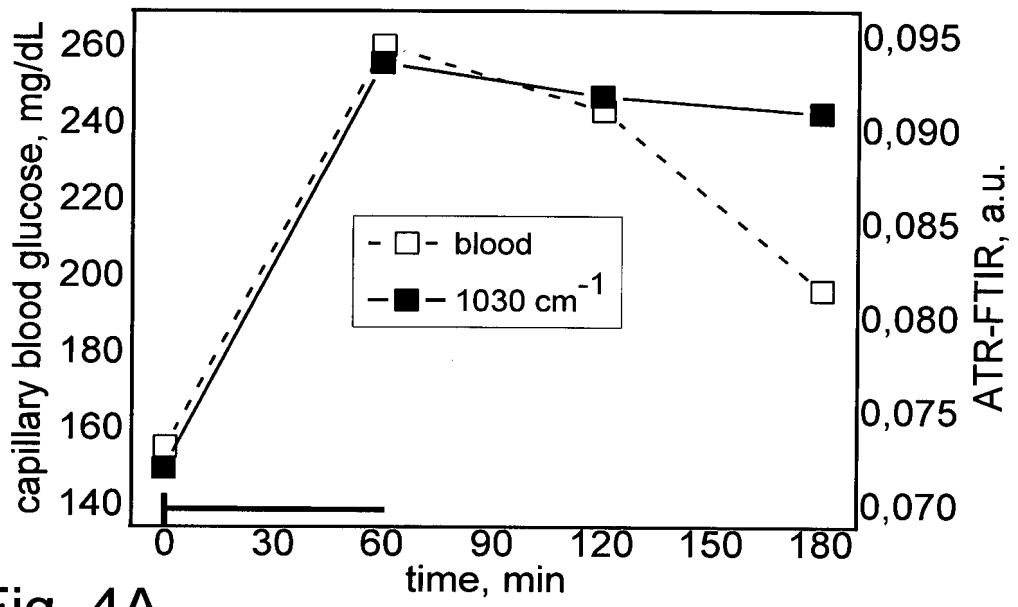

capillary blood glucose, mg/dL
260
240
220
200
180
160
140
0,095
0,090
0,085
0,080
0,075
0,070
ATR-FTIR, a.u.
blood
1030 cm-1
0
30
60
90
120
150
180
time, min

Fig. 4A

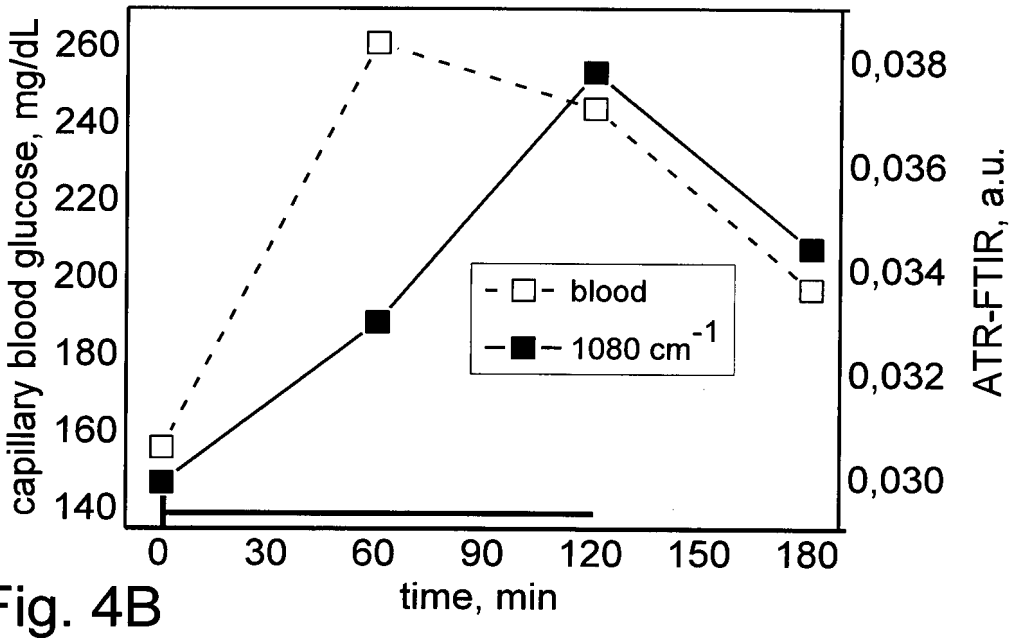

capillary blood glucose, mg/dL
260
240
220
200
180
160
140
0,038
0,036
0,034
0,032
0,030
ATR-FTIR, a.u.
blood
1080 cm-1
0
30
60
90
120
150
180
time, min

Fig. 4B

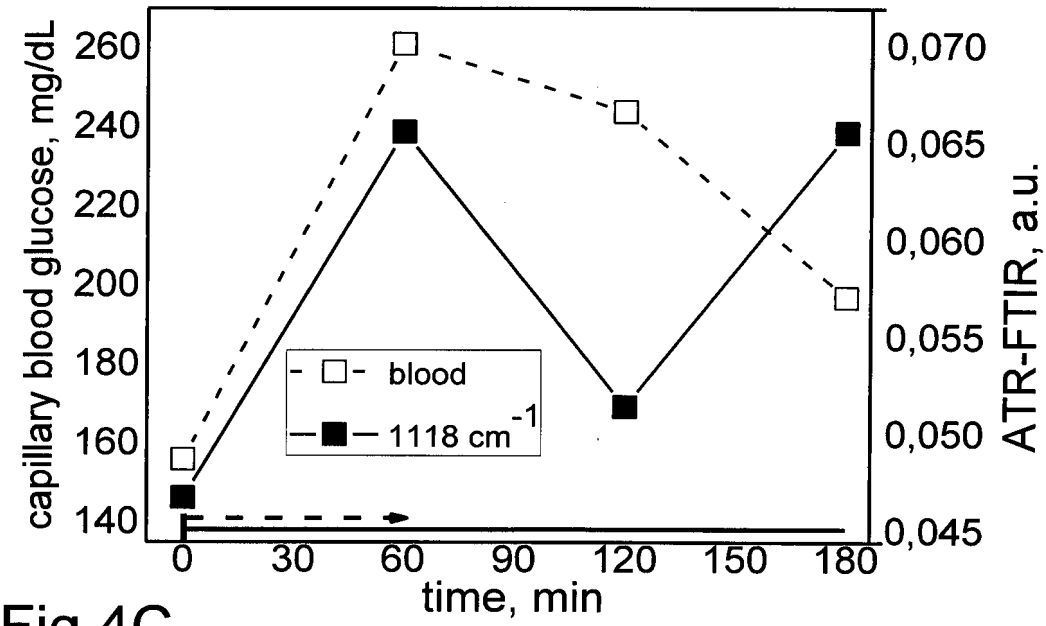

capillary blood glucose, mg/dL
260
240
220
200
180
160
140
0,070
0,065
0,060
0,055
0,050
0,045
ATR-FTIR, a.u.
blood
1118 cm-1
0
30
60
90
120
150
180
time, min

Fig.4C

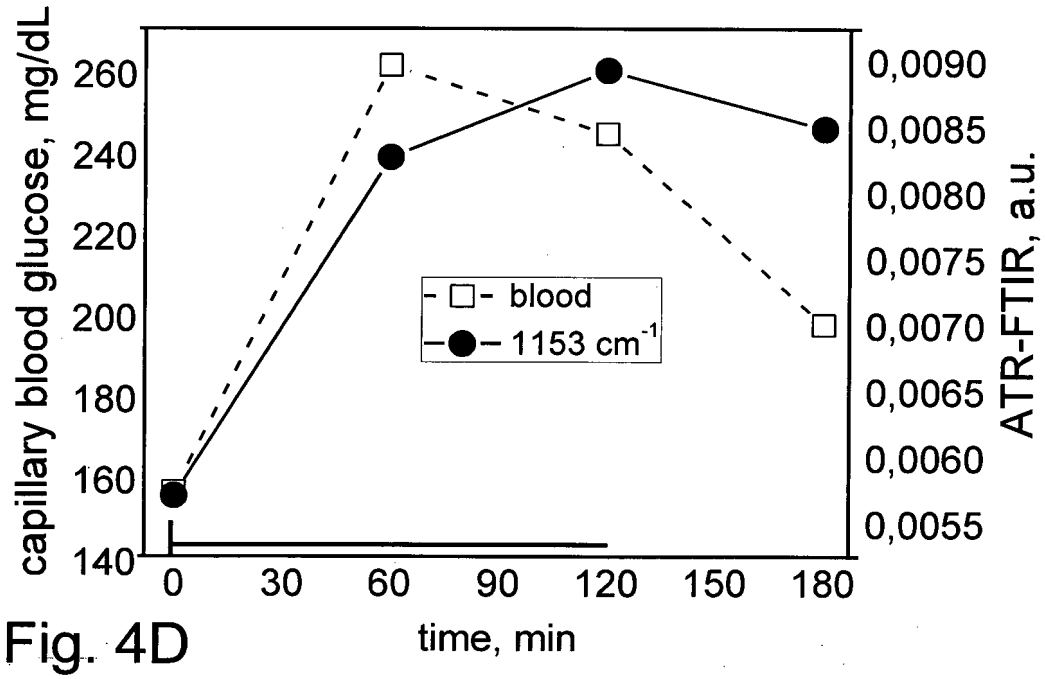

capillary blood glucose, mg/dL
260
240
220
200
180
160
140
0,0090
0,0085
0,0080
0,0075
0,0070
0,0065
0,0060
0,0055
ATR-FTIR, a.u.
blood
1153 cm-1
0
30
60
90
120
150
180
time, min

Fig. 4D

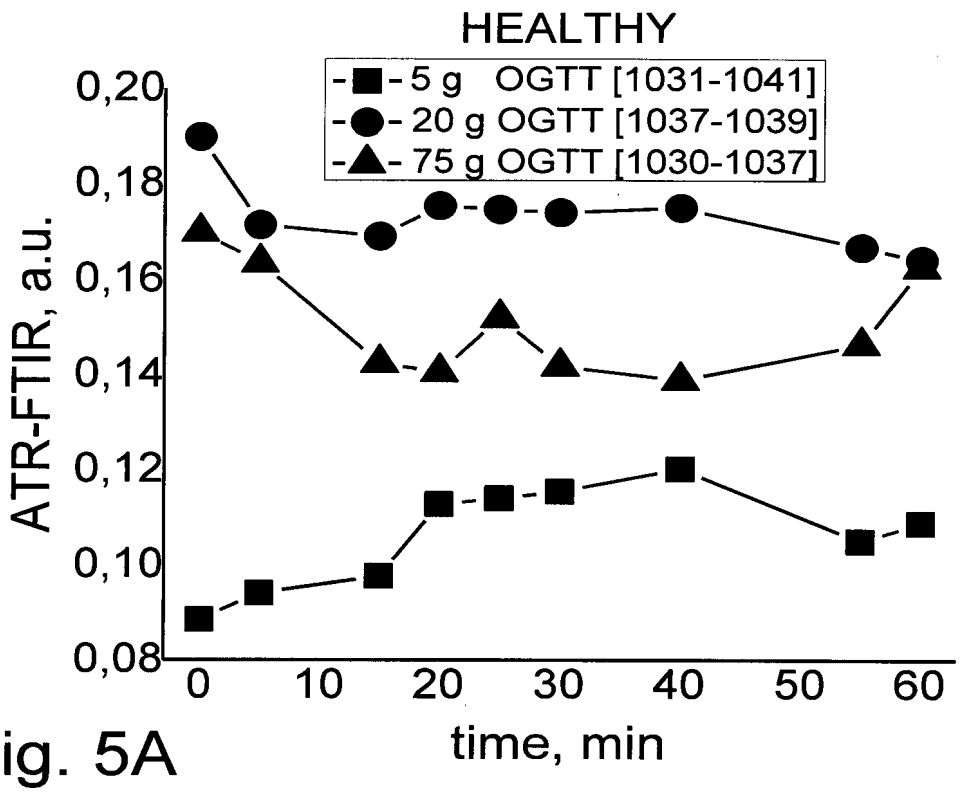

HEALTHY
5 g OGTT [1031-1041]
20 g OGTT [1037-1039]
75 g OGTT [1030-1037]
ATR-FTIR, a.u.
0,20
0,18
0,16
0,14
0,12
0,10
0,08
0
10
20
30
40
50
60
time, min

Fig. 5A

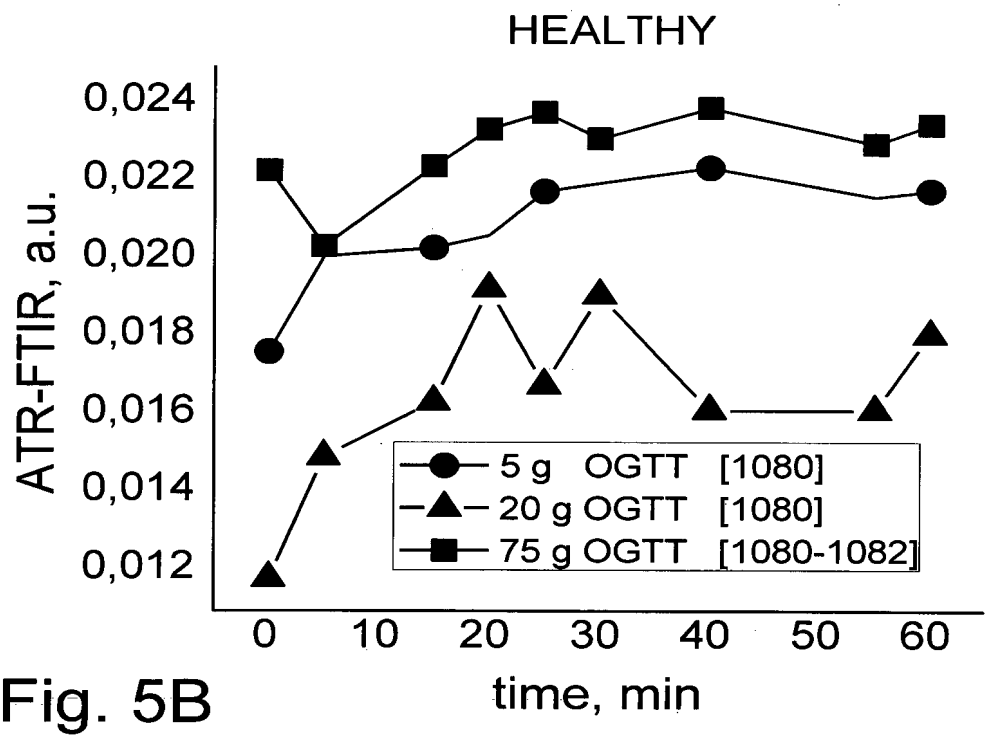

HEALTHY
ATR-FTIR, a.u.
0,024
0,022
0,020
0,018
0,016
0,014
0,012
5 g OGTT [1080]
20 g OGTT [1080]
75 g OGTT [1080-1082]
0
10
20
30
40
50
60
time, min

Fig. 5B

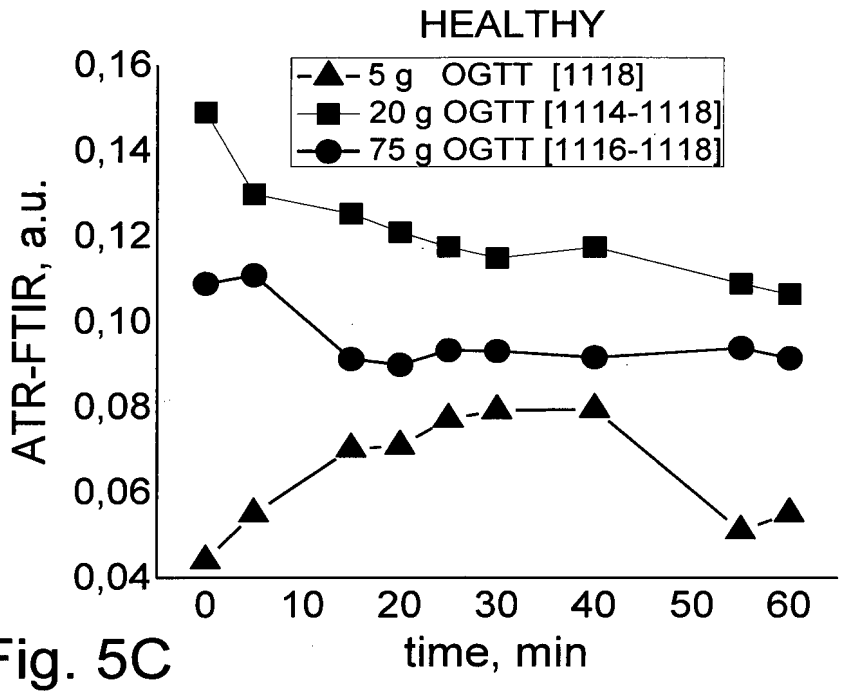

HEALTHY
5 g OGTT [1118]
20 g OGTT [1114-1118]
75 g OGTT [1116-1118]
ATR-FTIR, a.u.
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0
10
20
30
40
50
60
time, min

Fig. 5C

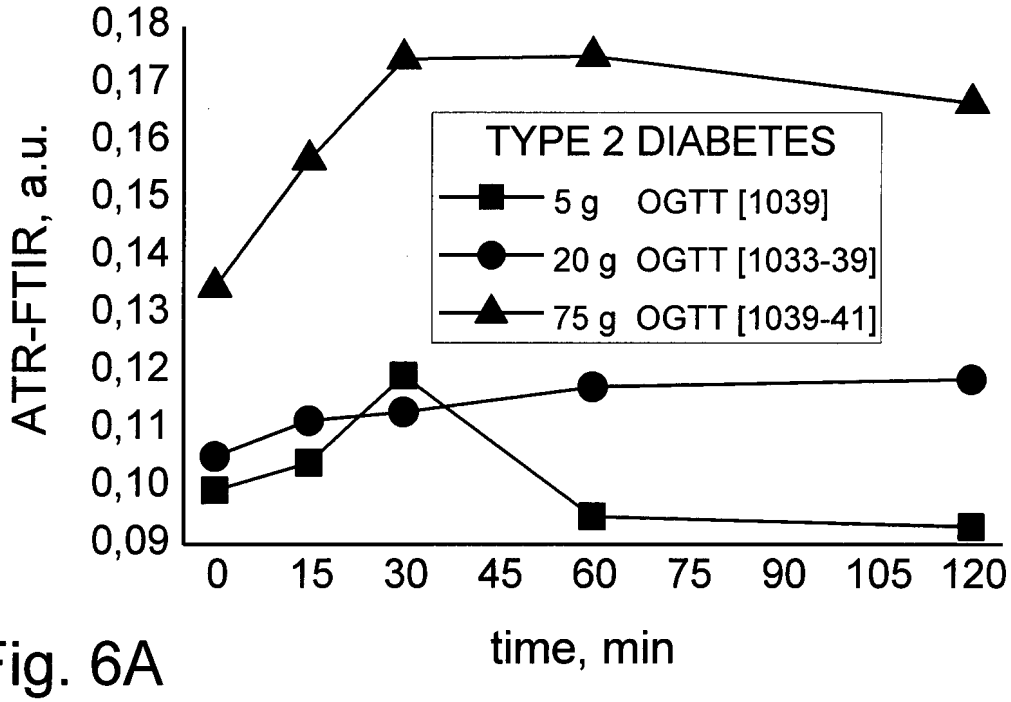

TYPE 2 DIABETES
5 g OGTT [1039]
20 g OGTT [1033-39]
75 g OGTT [1039-41]
ATR-FTIR, a.u.
0,18
0,17
0,16
0,15
0,14
0,13
0,12
0,11
0,10
0,09
0
15
30
45
60
75
90
105
120
time, min

Fig. 6A

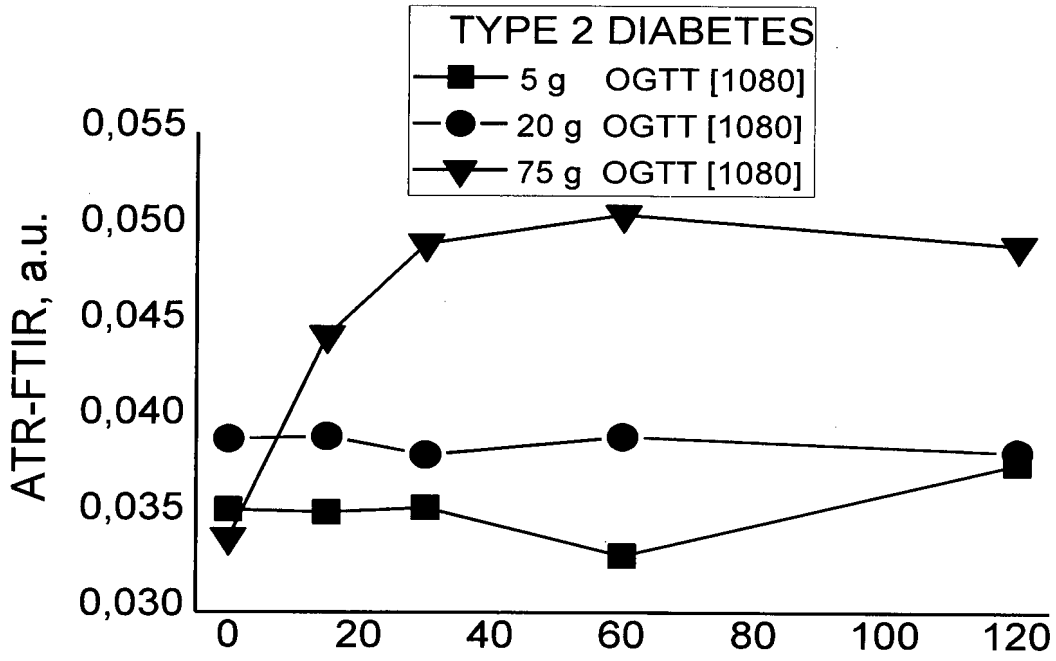

TYPE 2 DIABETES
5 g OGTT [1080]
20 g OGTT [1080]
75 g OGTT [1080]
ATR-FTIR, a.u.
0,055
0,050
0,045
0,040
0,035
0,030
0
20
40
60
80
100
120
time, min

Fig. 6B

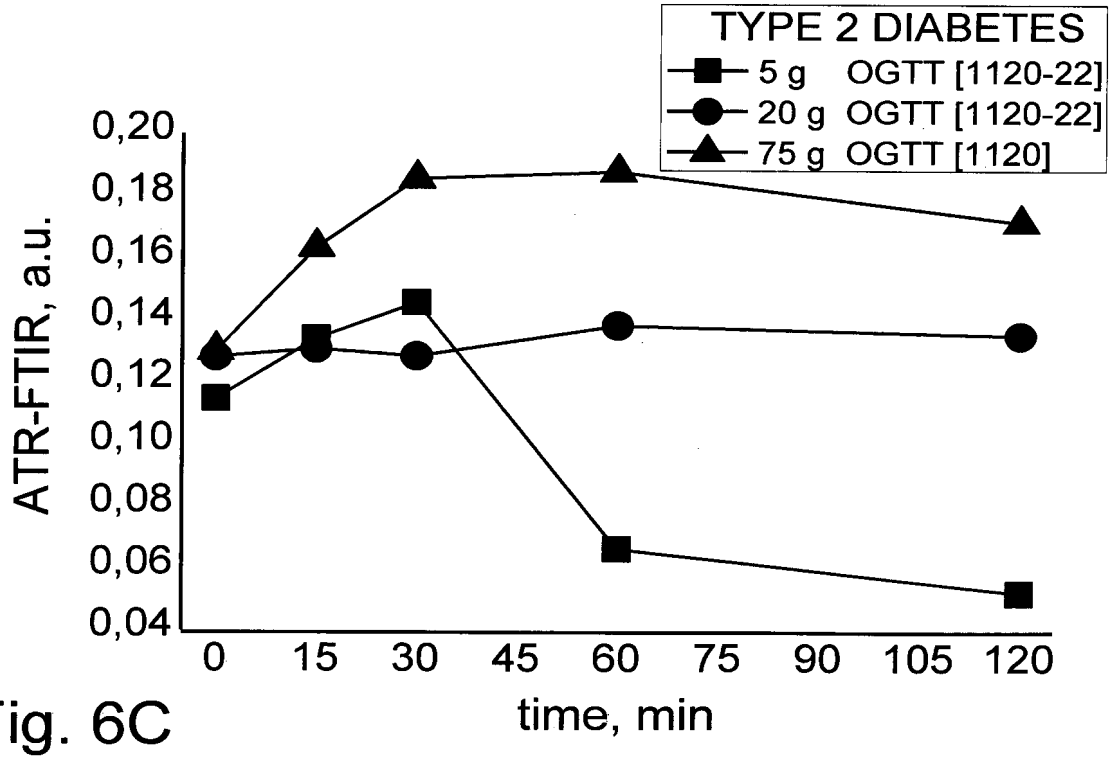

TYPE 2 DIABETES
5 g OGTT [1120-22]
20 g OGTT [1120-22]
75 g OGTT [1120]
ATR-FTIR, a.u.
0,20
0,18
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0
15
30
45
60
75
90
105
120
time, min

Fig. 6C

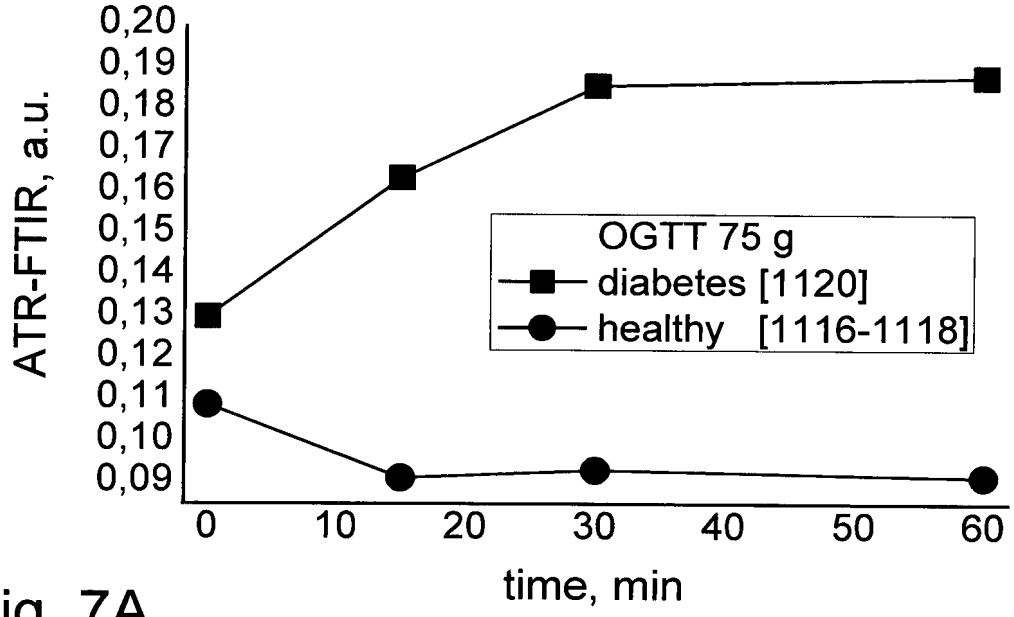

ATR-FTIR, a.u.
0,20
0,19
0,18
0,17
0,16
0,15
0,14
0,13
0,12
0,11
0,10
0,09
0
10
20
30
40
50
60
time, min
OGTT 75 g
diabetes [1120]
healthy [1116-1118]

Fig. 7A

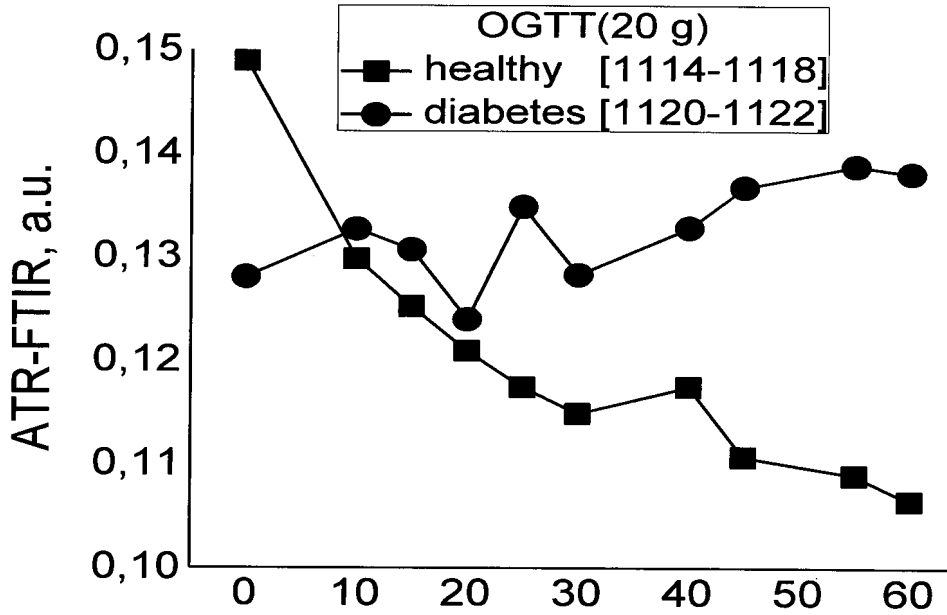

ATR-FTIR, a.u.
0,15
0,14
0,13
0,12
0,11
0,10
0
10
20
30
40
50
60
time, min
OGTT(20 g)
healthy [1114-1118]
diabetes [1120-1122]

Fig. 7B

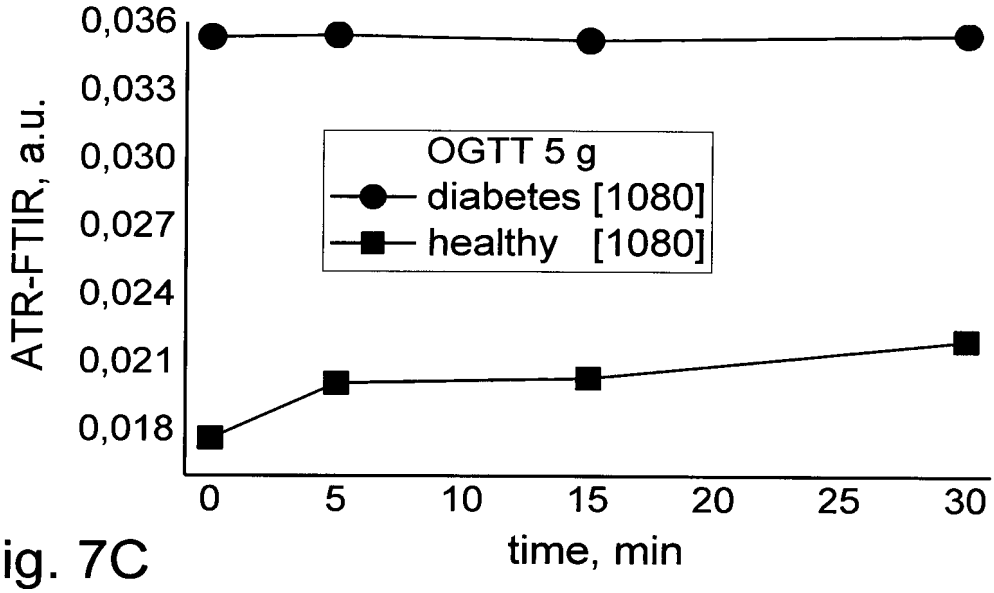

0,036
0,033
0,030
0,027
0,024
0,021
0,018
ATR-FTIR, a.u.
OGTT 5 g
diabetes [1080]
healthy [1080]
0
5
10
15
20
25
30
time, min

Fig. 7C

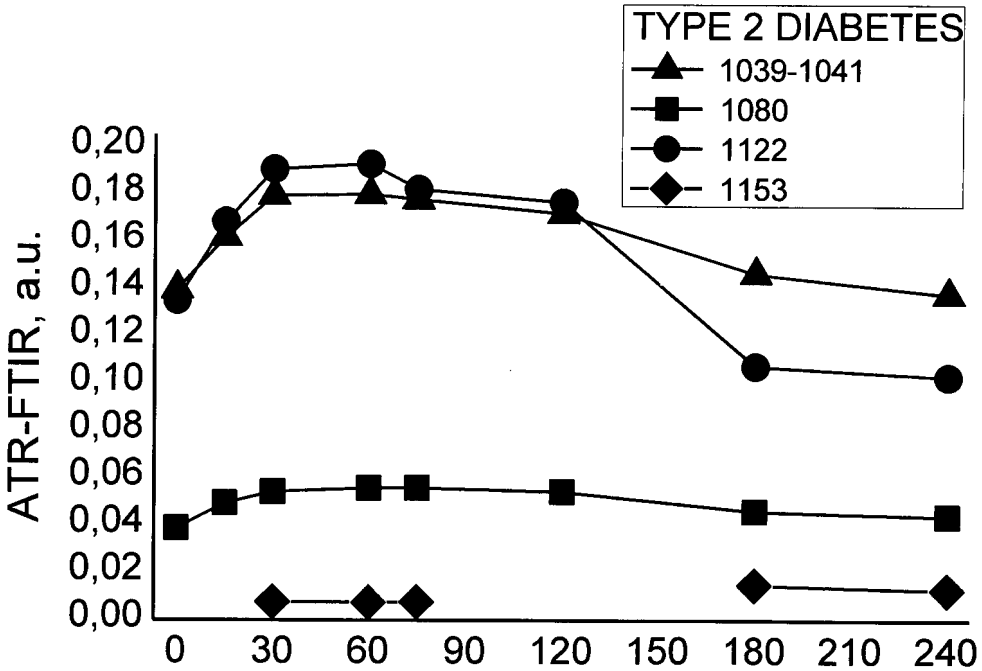

TYPE 2 DIABETES
1039-1041
1080
1122
1153
0,20
0,18
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0,02
0,00
ATR-FTIR, a.u.
0
30
60
90
120
150
180
210
240
time, min

Fig. 8A

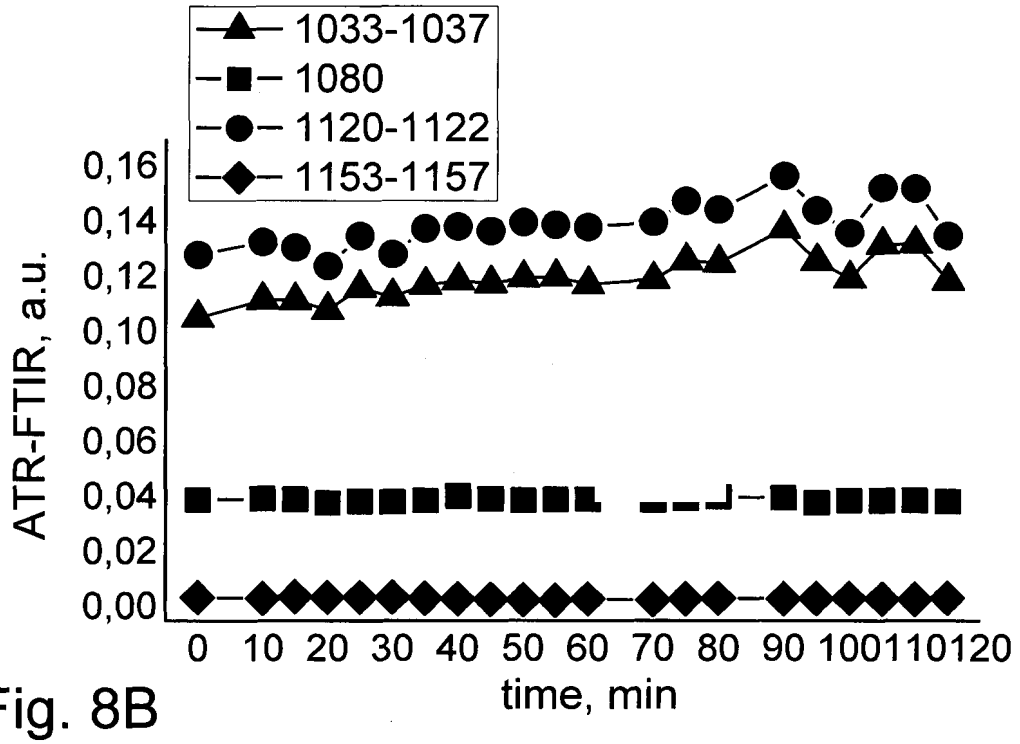

1033-1037
1080
1120-1122
1153-1157
ATR-FTIR, a.u.
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0,02
0,00
0 10 20 30 40 50 60 70 80 90 100110120
time, min

Fig. 8B

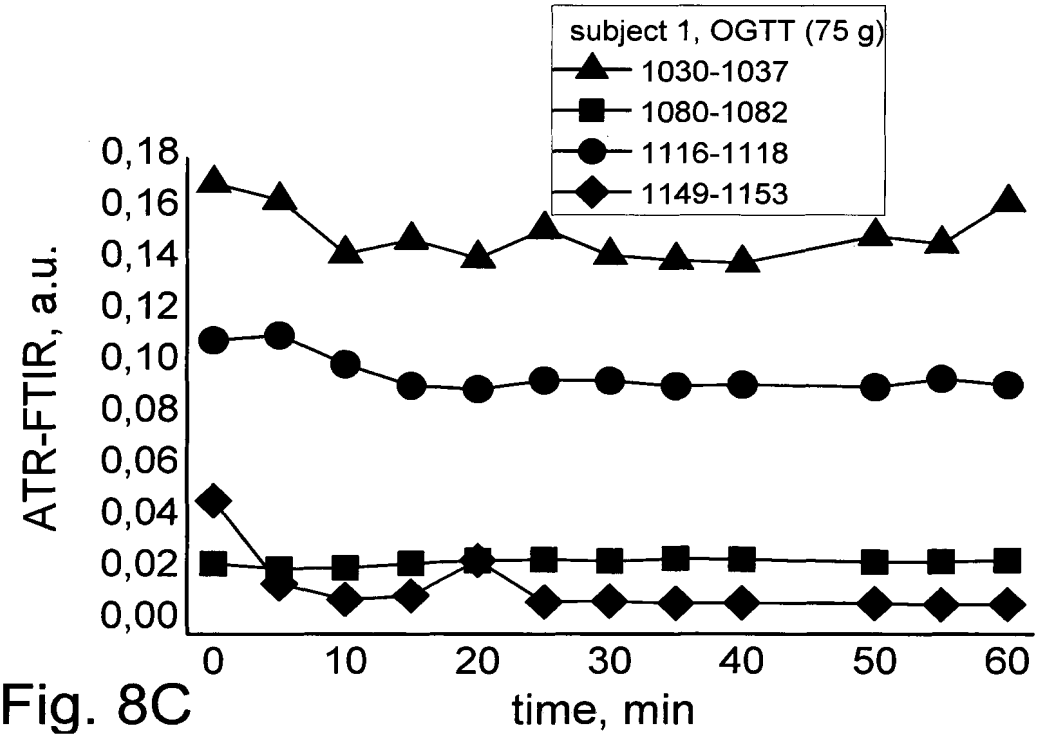

subject 1, OGTT (75 g)
1030-1037
1080-1082
1116-1118
1149-1153
ATR-FTIR, a.u.
0,18
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0,02
0,00
0 10 20 30 40 50 60
time, min

Fig. 8C

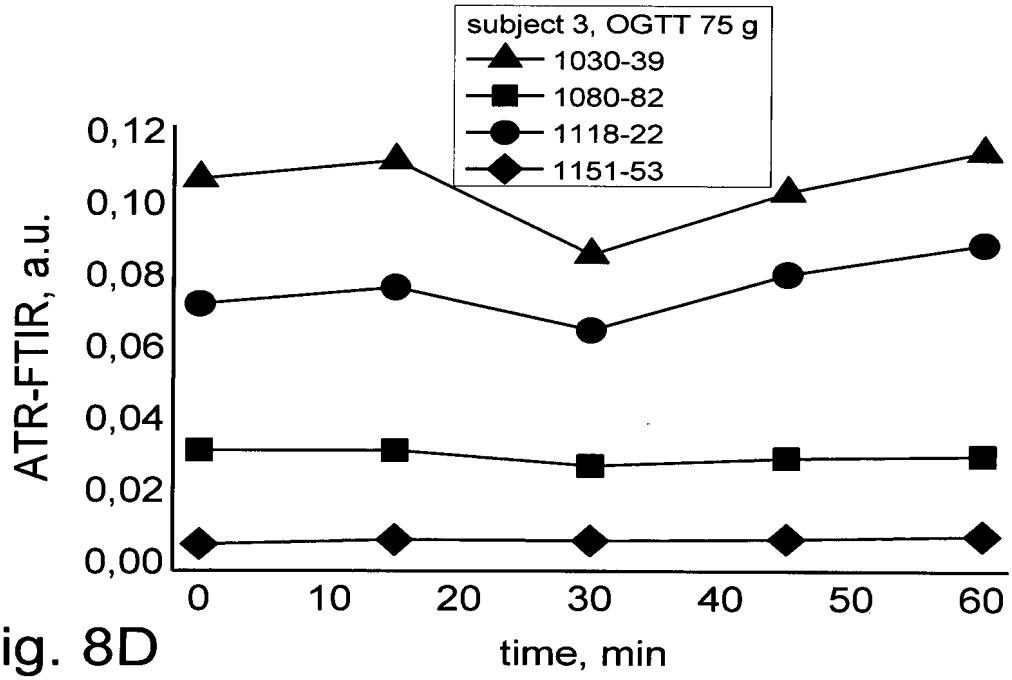

subject 3, OGTT 75 g
1030-39
1080-82
1118-22
1151-53
ATR-FTIR, a.u.
0,12
0,10
0,08
0,06
0,04
0,02
0,00
0
10
20
30
40
50
60
time, min

Fig. 8D

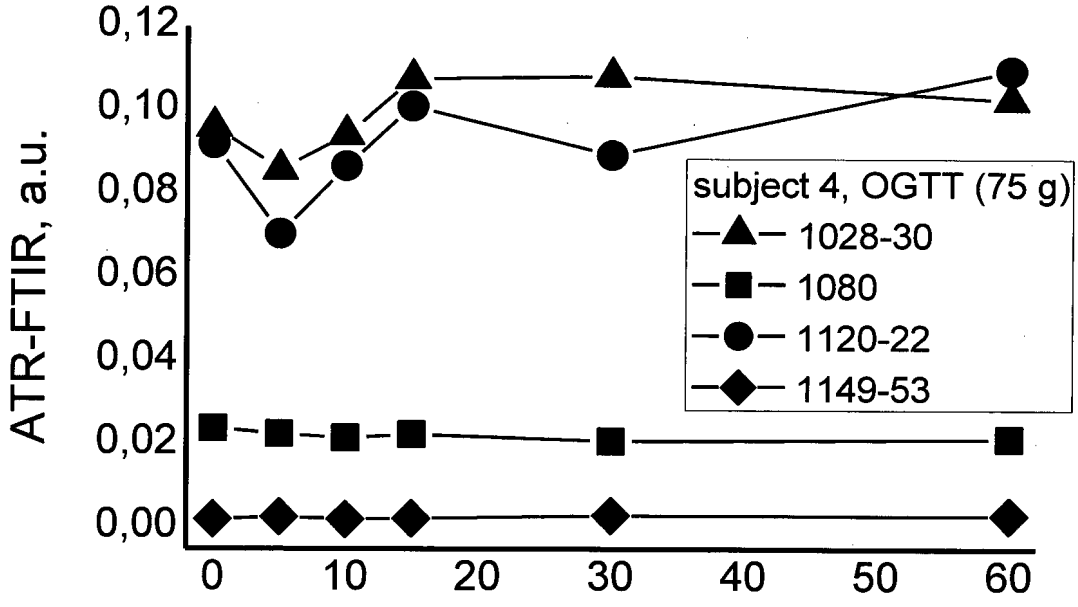

subject 4, OGTT (75 g)
1028-30
1080
1120-22
1149-53
ATR-FTIR, a.u.
0,12
0,10
0,08
0,06
0,04
0,02
0,00
0
10
20
30
40
50
60
time, min

Fig. 8E

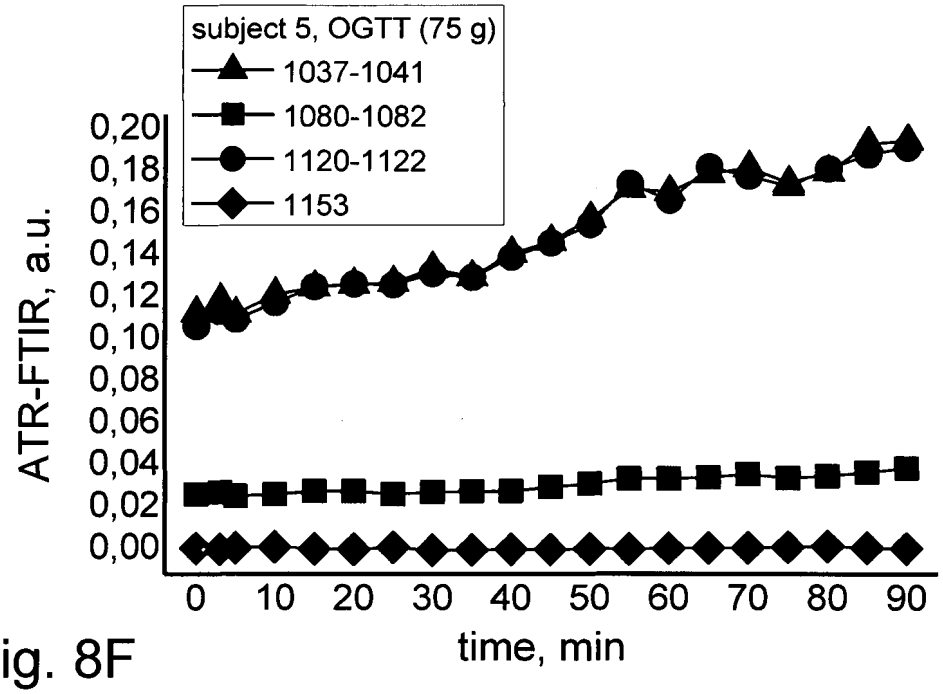

subject 5, OGTT (75 g)
1037-1041
1080-1082
1120-1122
1153
ATR-FTIR, a.u.
0,20
0,18
0,16
0,14
0,12
0,10
0,08
0,06
0,04
0,02
0,00
0 10 20 30 40 50 60 70 80 90
time, min

Fig. 8F

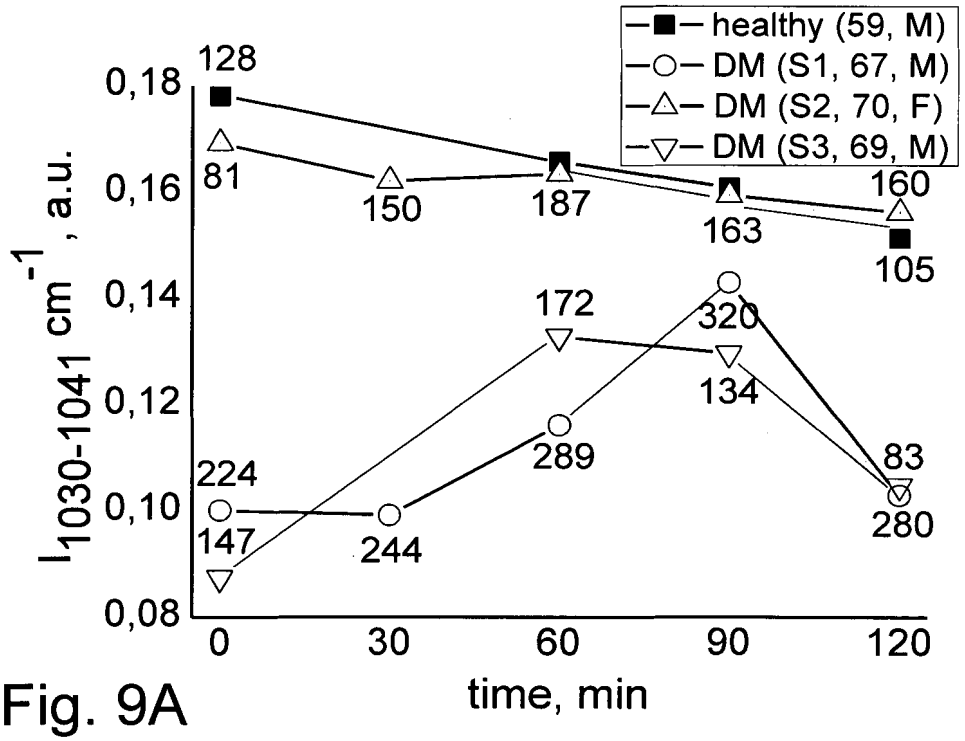

healthy (59, M)
DM (S1, 67, M)
DM (S2, 70, F)
DM (S3, 69, M)
$I_{1030-1041}$ cm^{-1}, a.u.
0,18
0,16
0,14
0,12
0,10
0,08
128
81
150
187
163
160
105
172
320
134
289
83
224
147
244
280
0 30 60 90 120
time, min

Fig. 9A

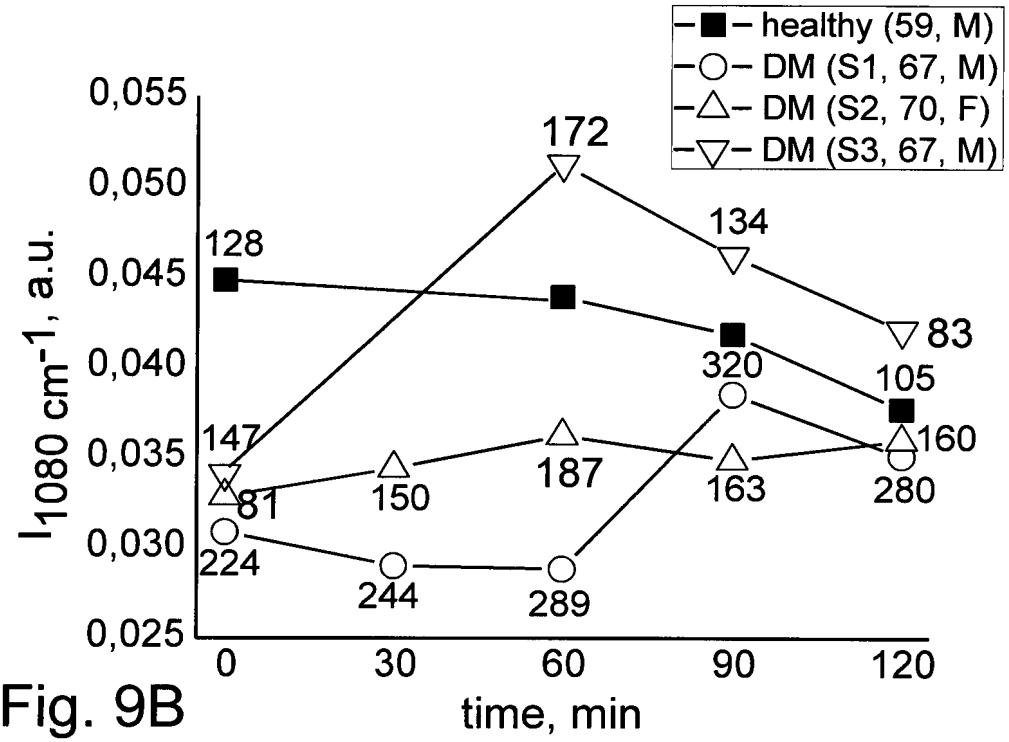

healthy (59, M)
DM (S1, 67, M)
DM (S2, 70, F)
DM (S3, 67, M)
I_{1080} cm^{-1}, a.u.
0,055
0,050
0,045
0,040
0,035
0,030
0,025
0
30
60
90
120
time, min
128
172
134
83
320
105
147
81
150
187
163
160
280
224
244
289

Fig. 9B

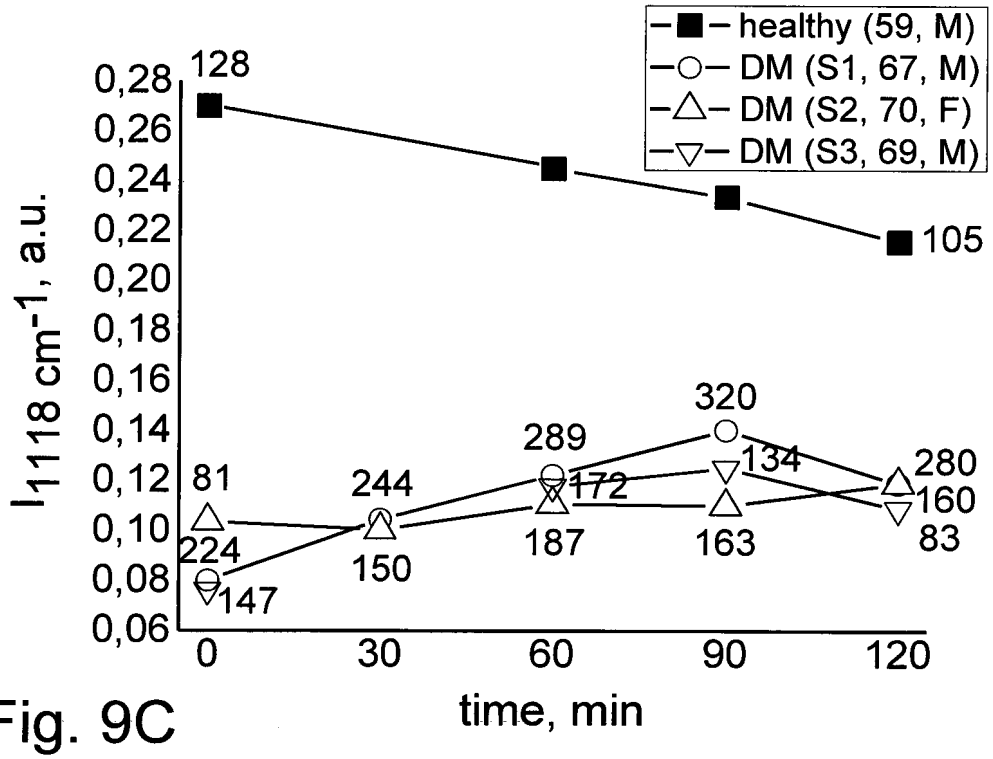

healthy (59, M)
DM (S1, 67, M)
DM (S2, 70, F)
DM (S3, 69, M)
I_{1118} cm^{-1}, a.u.
0,28
0,26
0,24
0,22
0,20
0,18
0,16
0,14
0,12
0,10
0,08
0,06
0
30
60
90
120
time, min
128
105
320
289
134
280
81
244
172
160
224
150
187
163
83
147

Fig. 9C

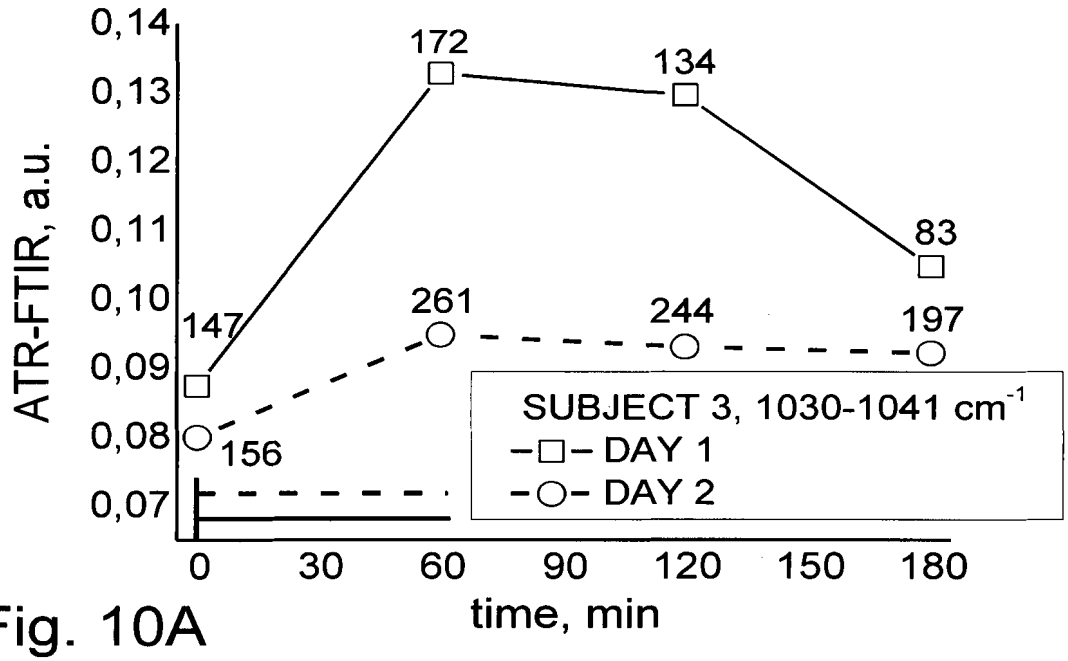


Fig. 10A

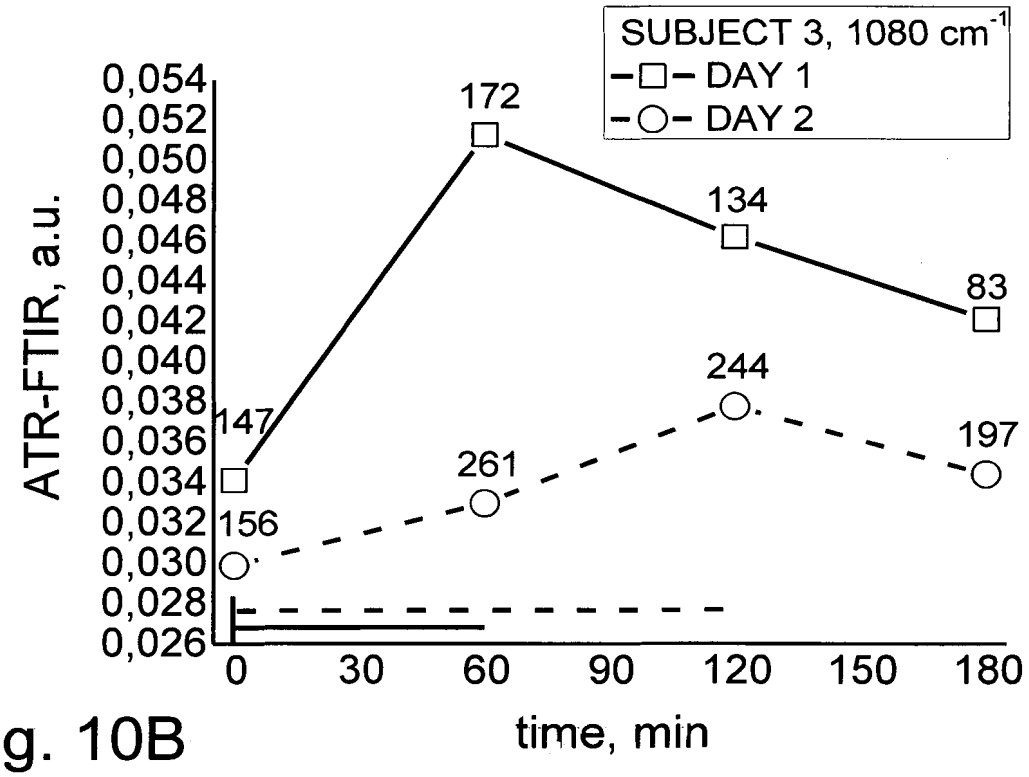


Fig. 10B

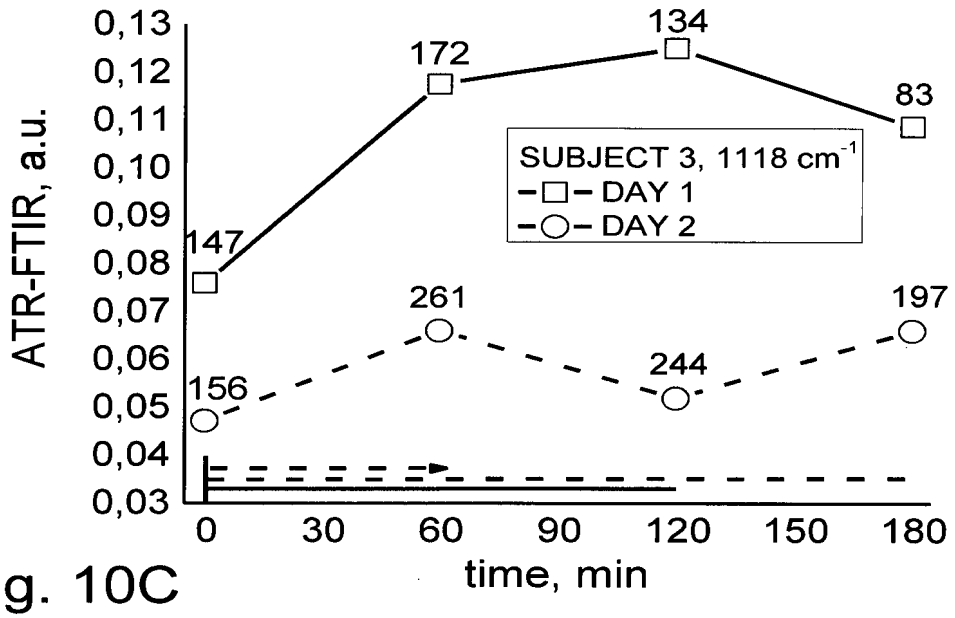


Fig. 10C

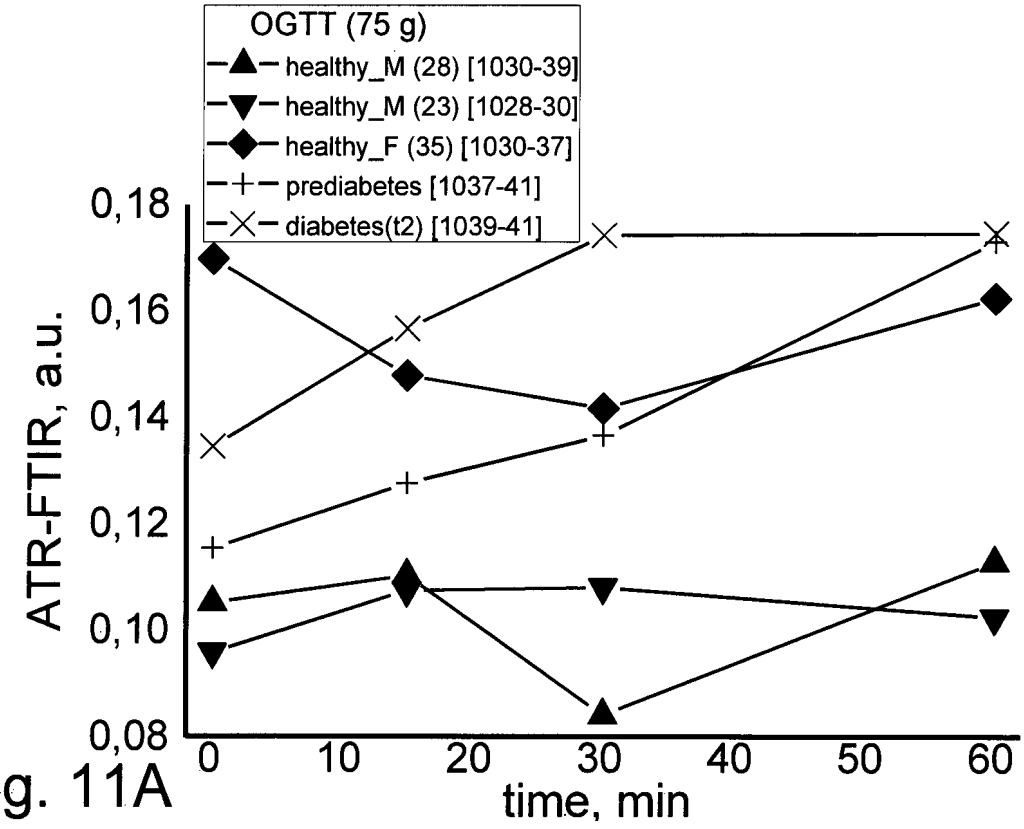


Fig. 11A

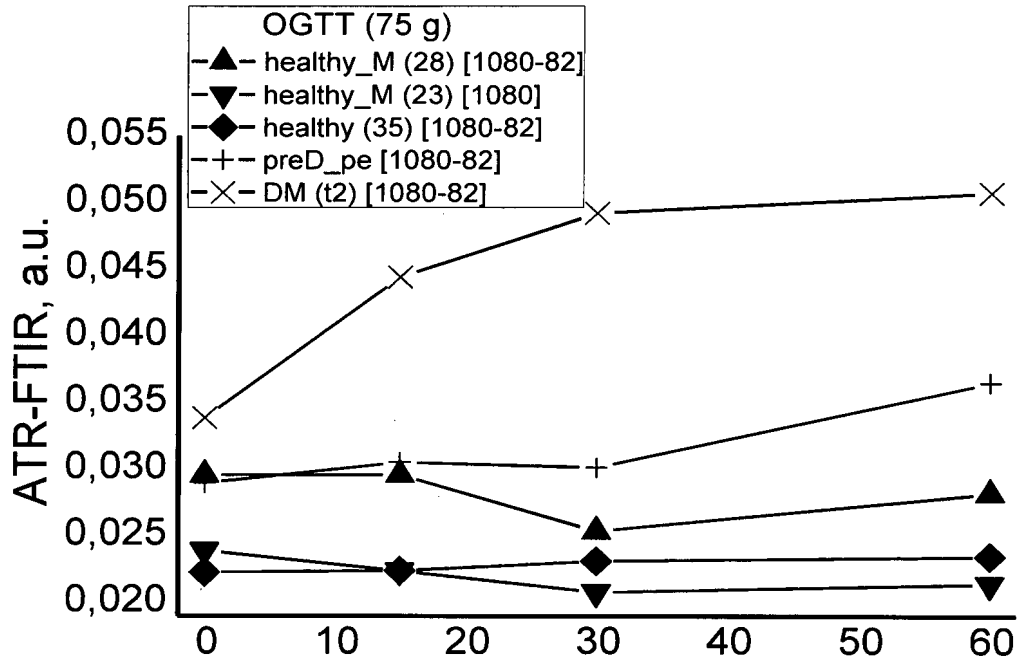


Fig. 11B

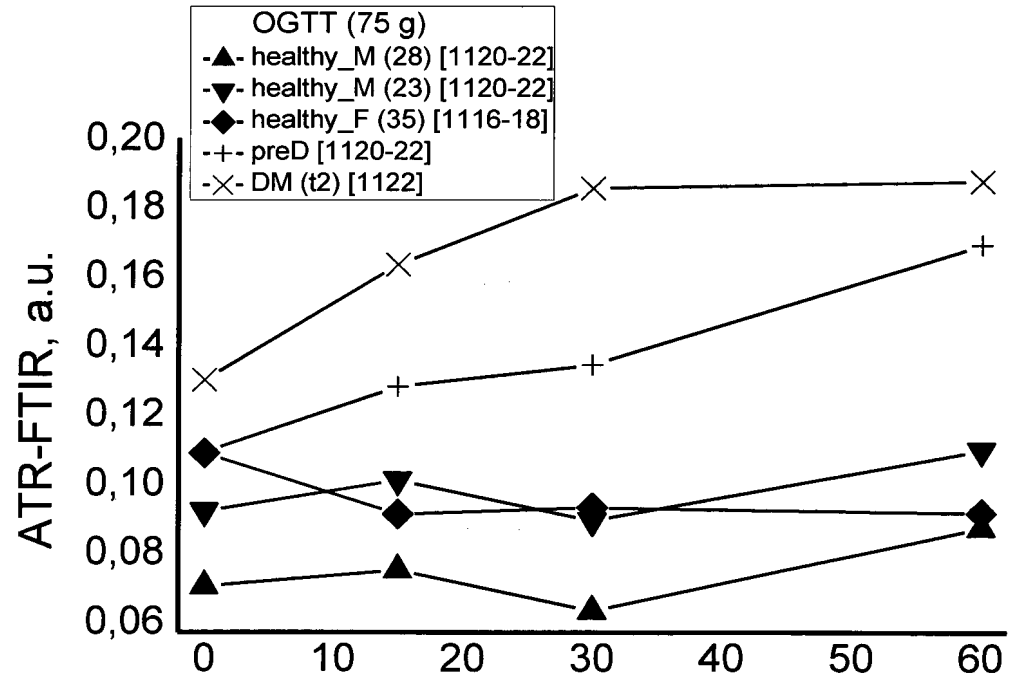


Fig. 11C

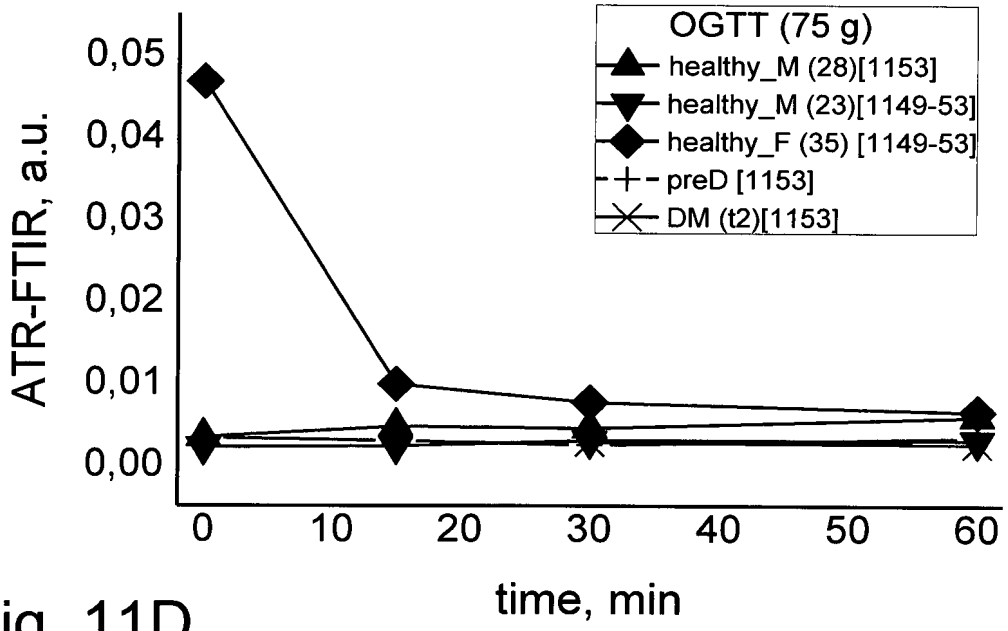

OGTT (75 g)
healthy_M (28)[1153]
healthy_M (23)[1149-53]
healthy_F (35) [1149-53]
preD [1153]
DM (t2)[1153]
ATR-FTIR, a.u.
0,05
0,04
0,03
0,02
0,01
0,00
0
10
20
30
40
50
60
time, min

Fig. 11D