Analysis of the the highest hourly stock “high” per company on Dec 1st, 2020

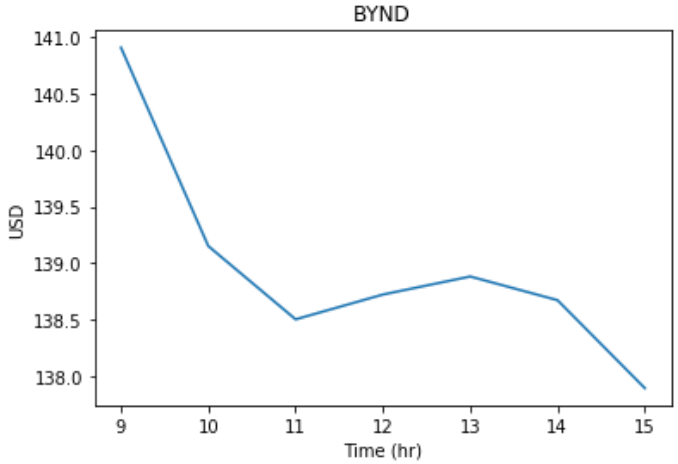
In [1]:

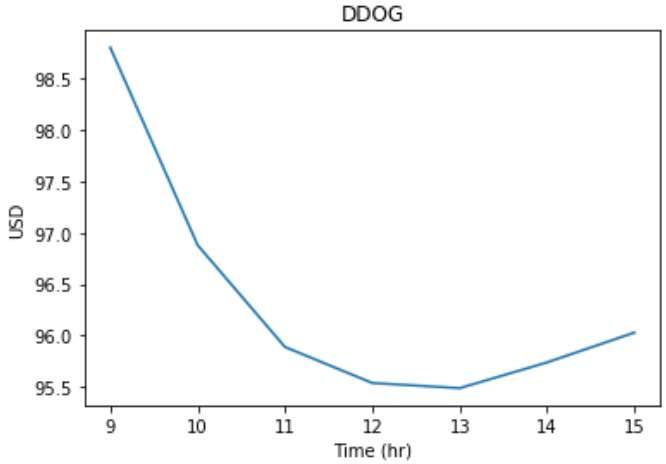
```
import pandas as pd
import matplotlib.pyplot as plt
import seaborn as sns

df = pd.read_csv('results.csv')
```

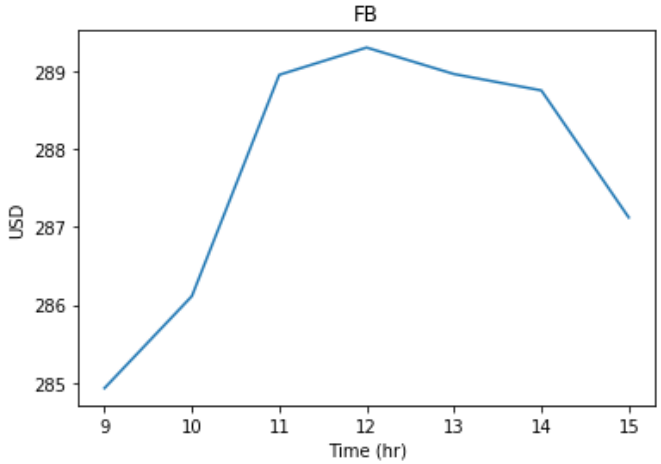
Hourly High Trends for Each Stock

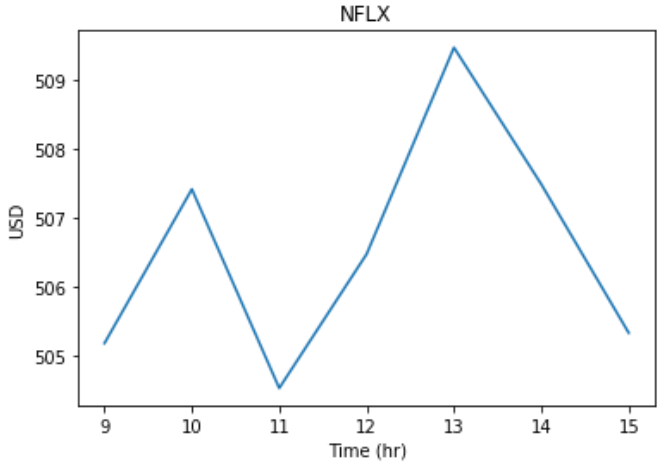
In [2]:

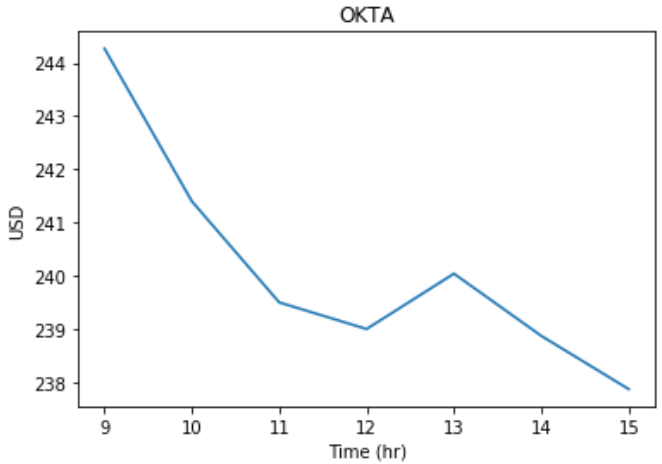
```
def stockplot(stockname):
    dfstock = df[df['name'] == stockname]
    plt.plot(dfstock['hours'], dfstock['highest'])
    plt.title(str(stockname))
    plt.xlabel('Time (hr)')
    plt.ylabel('USD')
    plt.show()

for i in df['name'].unique():
    stockplot(i)
```

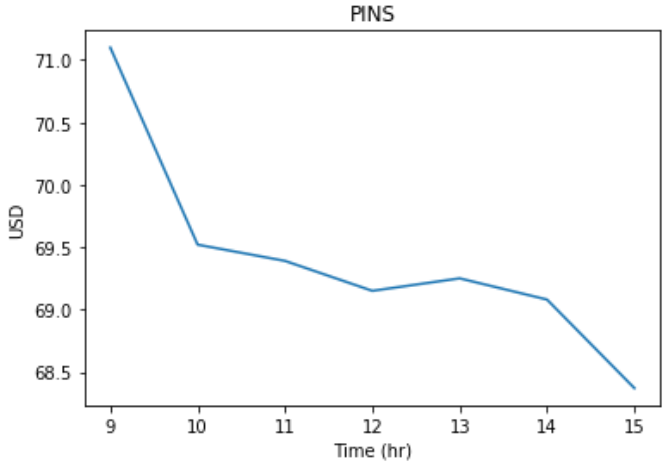

BYND
141.0
140.5
140.0
139.5
139.0
138.5
138.0
USD
9
10
11
12
13
14
15
Time (hr)

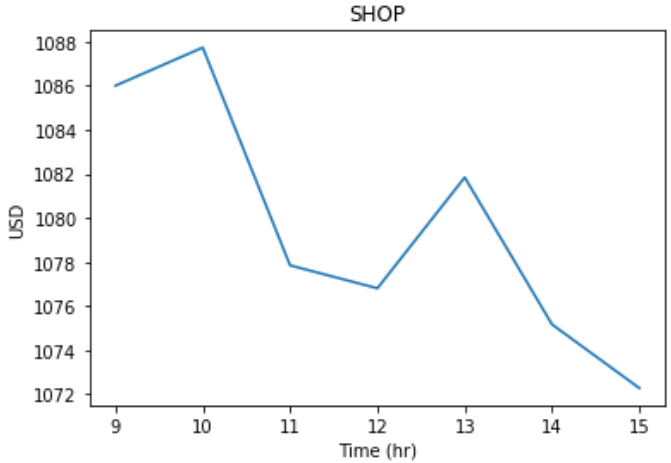

DDOG
98.5
98.0
97.5
97.0
96.5
96.0
95.5
USD
9
10
11
12
13
14
15
Time (hr)

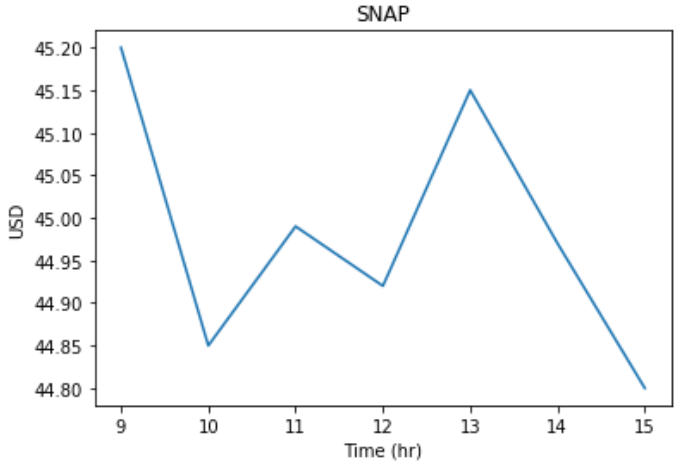

FB
289
288
287
286
285
USD
9
10
11
12
13
14
15
Time (hr)

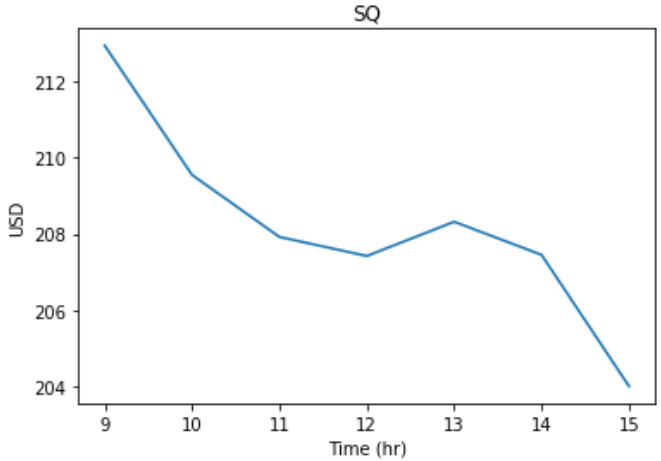

NFLX
509
508
507
506
505
USD
9
10
11
12
13
14
15
Time (hr)

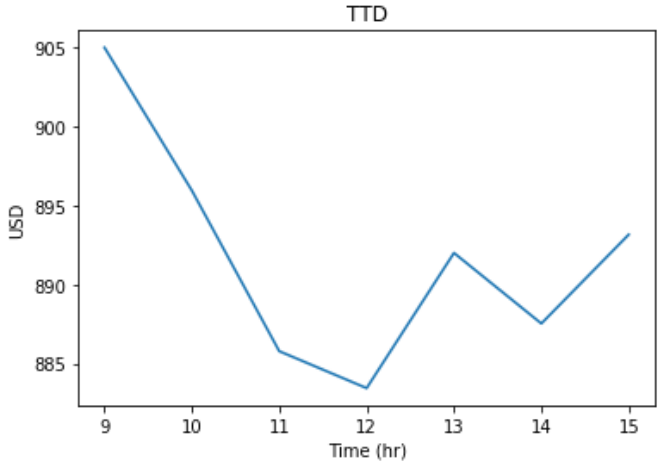

OKTA
244
243
242
241
240
239
238
USD
9
10
11
12
13
14
15
Time (hr)


PINS
71.0
70.5
70.0
69.5
69.0
68.5
USD
9
10
11
12
13
14
15
Time (hr)


SHOP
USD
Time (hr)
1088
1086
1084
1082
1080
1078
1076
1074
1072
9
10
11
12
13
14
15


SNAP
USD
Time (hr)
45.20
45.15
45.10
45.05
45.00
44.95
44.90
44.85
44.80
9
10
11
12
13
14
15





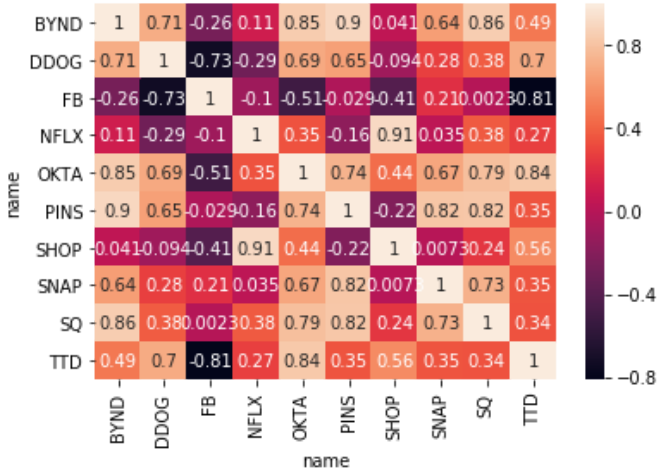
Correlation of Hourly High(percentage change) between Each Stock

In [3]:

```
df1 = df.drop_duplicates('highest')
df1 = df1.pivot(index='hours', columns='name', values='highest')

df2 = df1.pct_change()[1:]
sns.heatmap(df2.corr(), annot = True)
```

Out[3]:

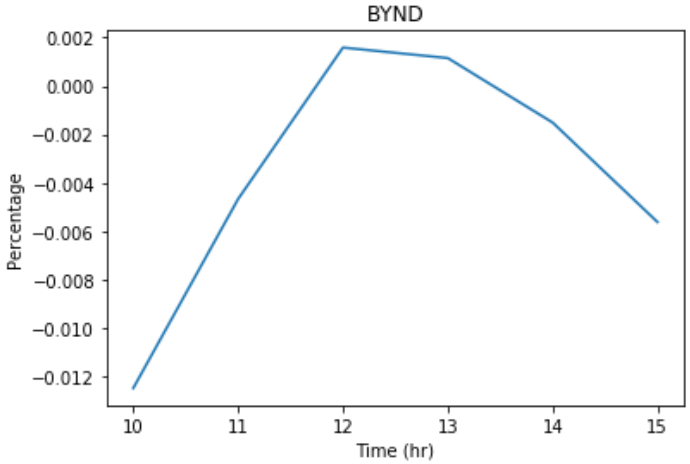
```
<matplotlib.axes._subplots.AxesSubplot at 0x1a1bb74198>
```

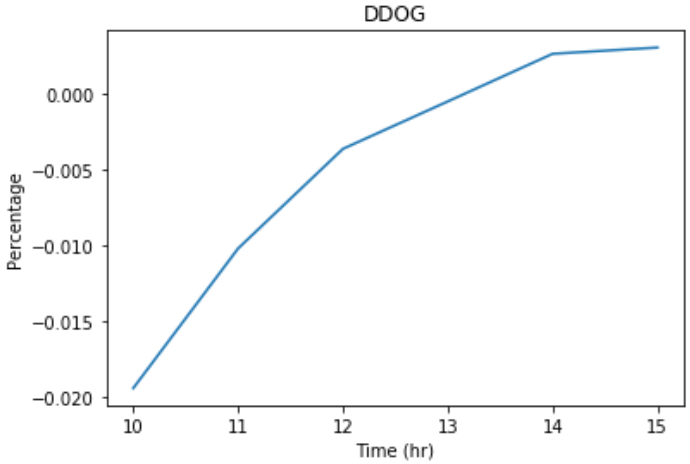


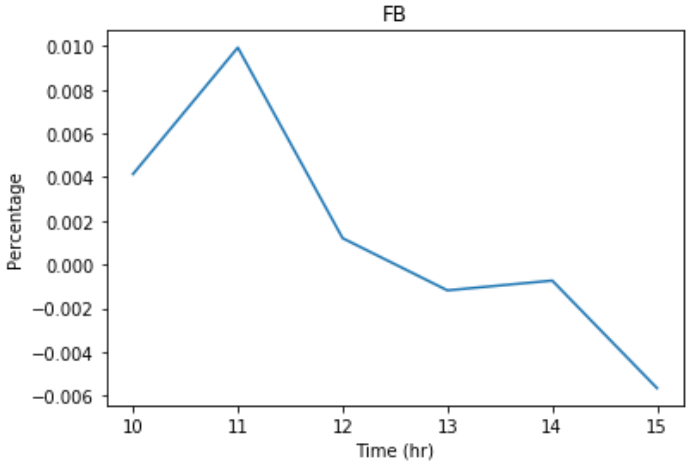
Volatility of Hourly High for Each Stock

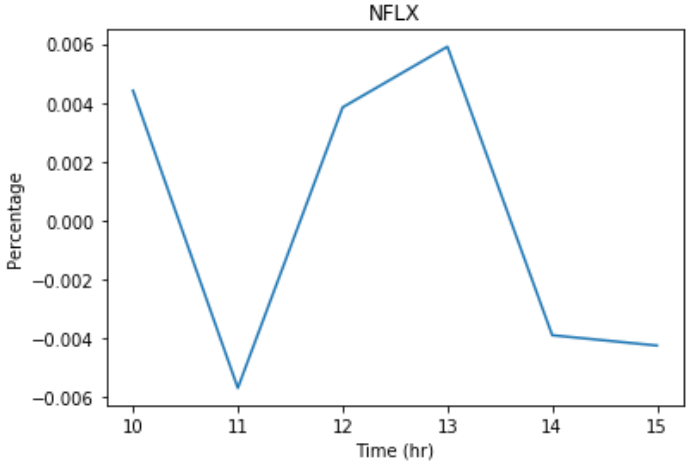
In [4]:

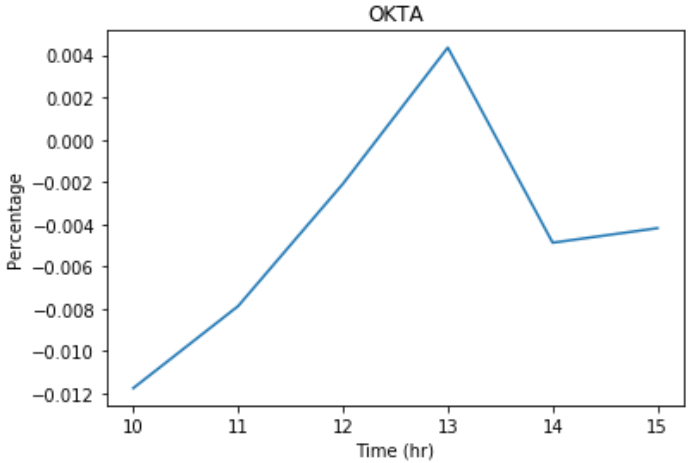
```
def stock_vol_plot(stockname):
    dfstockvol = df2[str(stockname)]
    plt.plot(df2.index, dfstockvol)
    plt.title(str(stockname))
    plt.xlabel('Time (hr)')
    plt.ylabel('Percentage')
    plt.show()

for i in df['name'].unique():
    stock_vol_plot(i)
```

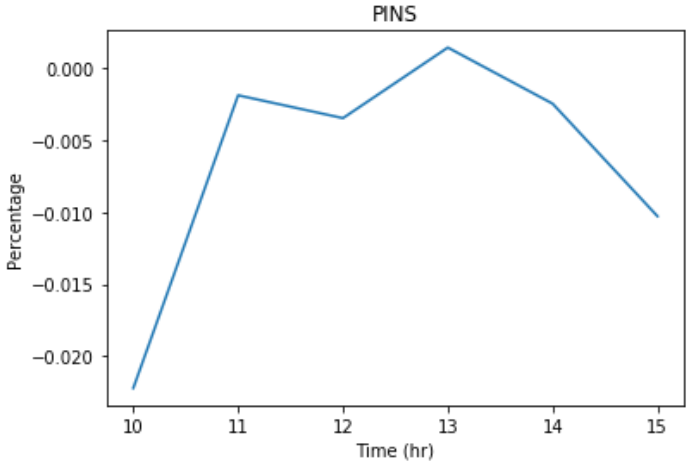

BYND
0.002
0.000
−0.002
−0.004
−0.006
−0.008
−0.010
−0.012
Percentage
10
11
12
13
14
15
Time (hr)

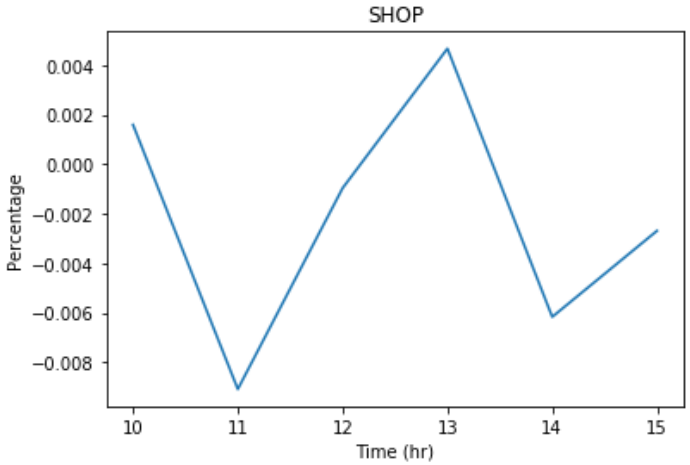

DDOG
0.000
−0.005
−0.010
−0.015
−0.020
Percentage
10
11
12
13
14
15
Time (hr)

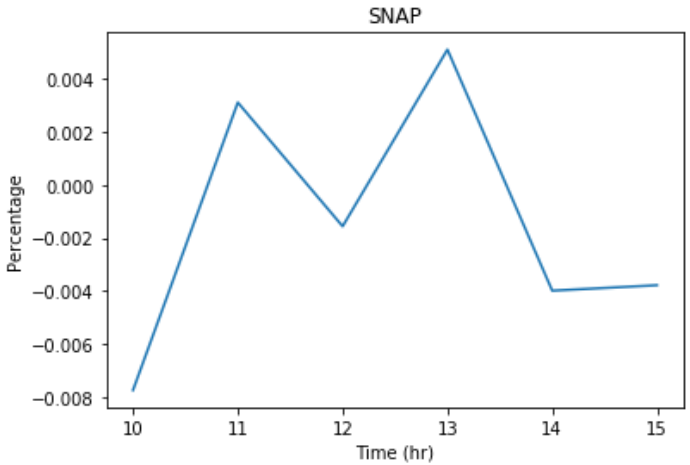

FB
0.010
0.008
0.006
0.004
0.002
0.000
−0.002
−0.004
−0.006
Percentage
10
11
12
13
14
15
Time (hr)

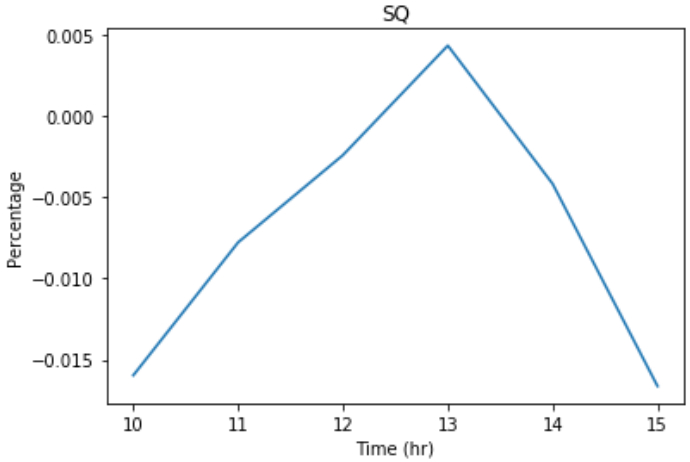

NFLX
0.006
0.004
0.002
0.000
−0.002
−0.004
−0.006
Percentage
10
11
12
13
14
15
Time (hr)

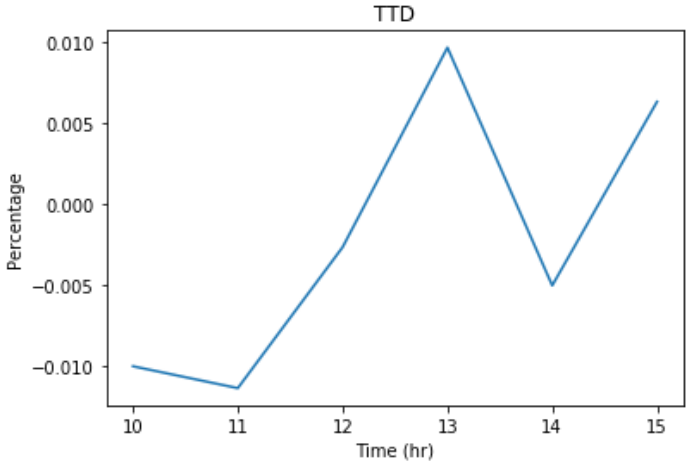

OKTA
0.004
0.002
0.000
−0.002
−0.004
−0.006
−0.008
−0.010
−0.012
Percentage
10
11
12
13
14
15
Time (hr)


PINS
0.000
−0.005
−0.010
−0.015
−0.020
Percentage
10
11
12
13
14
15
Time (hr)


SHOP
0.004
0.002
0.000
−0.002
−0.004
−0.006
−0.008
Percentage
10
11
12
13
14
15
Time (hr)


SNAP
0.004
0.002
0.000
−0.002
−0.004
−0.006
−0.008
Percentage
10
11
12
13
14
15
Time (hr)


SQ
0.005
0.000
−0.005
−0.010
−0.015
Percentage
10
11
12
13
14
15
Time (hr)


TTD
0.010
0.005
0.000
−0.005
−0.010
Percentage
10
11
12
13
14
15
Time (hr)