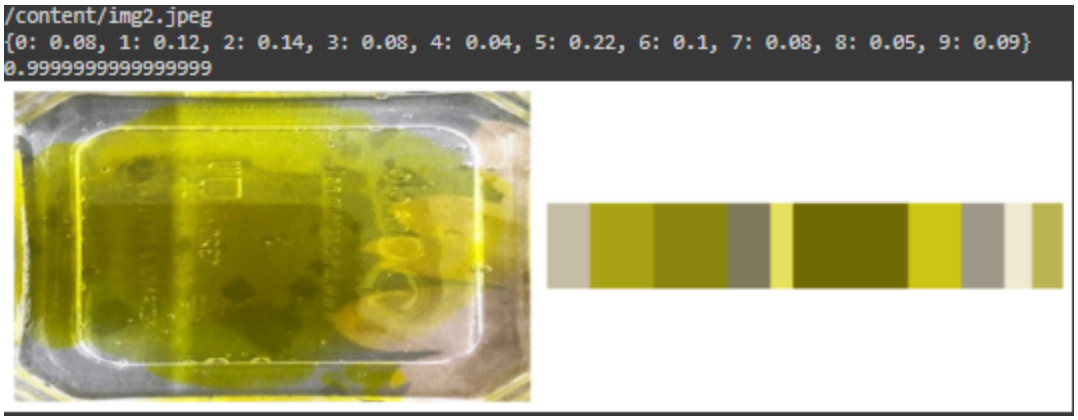
Q4. Here are the images which were taken and the pixels were digitally analyzed by image processing in python.

t=10s

```
/content/img1.jpeg
{0: 0.12, 1: 0.1, 2: 0.08, 3: 0.09, 4: 0.14, 5: 0.06, 6: 0.04, 7: 0.15, 8: 0.13, 9: 0.1}
1.01
```

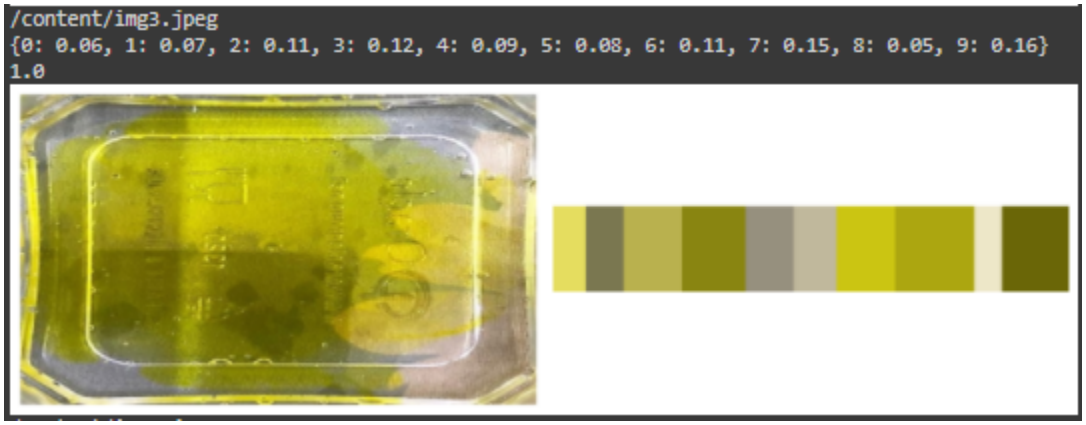
t=30s

```
/content/img2.jpeg
{0: 0.08, 1: 0.12, 2: 0.14, 3: 0.08, 4: 0.04, 5: 0.22, 6: 0.1, 7: 0.08, 8: 0.05, 9: 0.09}
0.9999999999999999
```



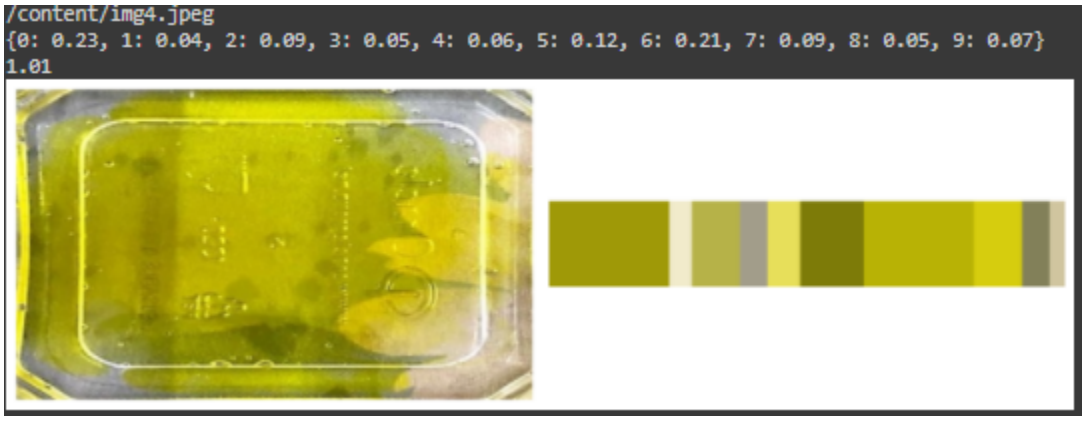
t=45s

```
/content/img3.jpeg
{0: 0.06, 1: 0.07, 2: 0.11, 3: 0.12, 4: 0.09, 5: 0.08, 6: 0.11, 7: 0.15, 8: 0.05, 9: 0.16}
1.0
```



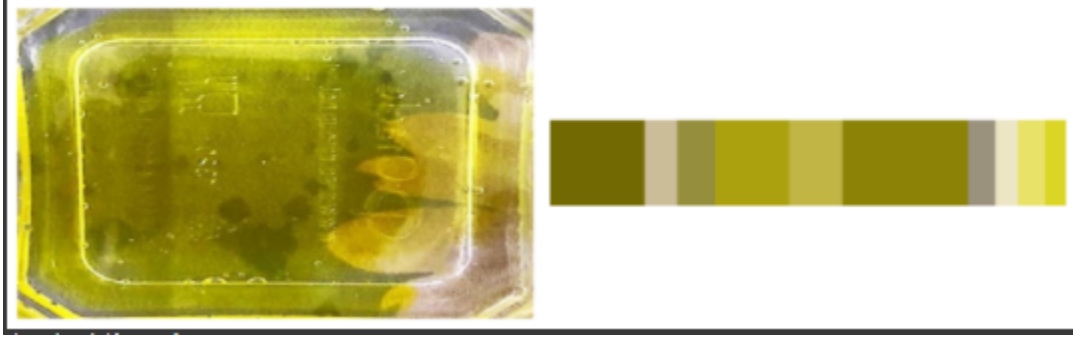
t=60s

```
/content/img4.jpeg
{0: 0.23, 1: 0.04, 2: 0.09, 3: 0.05, 4: 0.06, 5: 0.12, 6: 0.21, 7: 0.09, 8: 0.05, 9: 0.07}
1.01
```



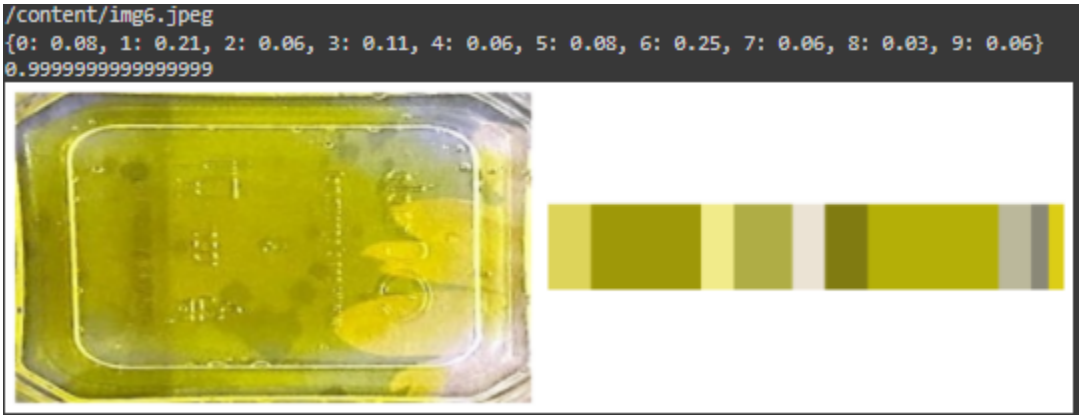
t=90s

```
/content/img5.jpeg
{0: 0.18, 1: 0.06, 2: 0.07, 3: 0.14, 4: 0.1, 5: 0.24, 6: 0.05, 7: 0.04, 8: 0.05, 9: 0.06}
0.99
```



t=120s

```
/content/img6.jpeg
{0: 0.08, 1: 0.21, 2: 0.06, 3: 0.11, 4: 0.06, 5: 0.08, 6: 0.25, 7: 0.06, 8: 0.03, 9: 0.06}
0.9999999999999999
```

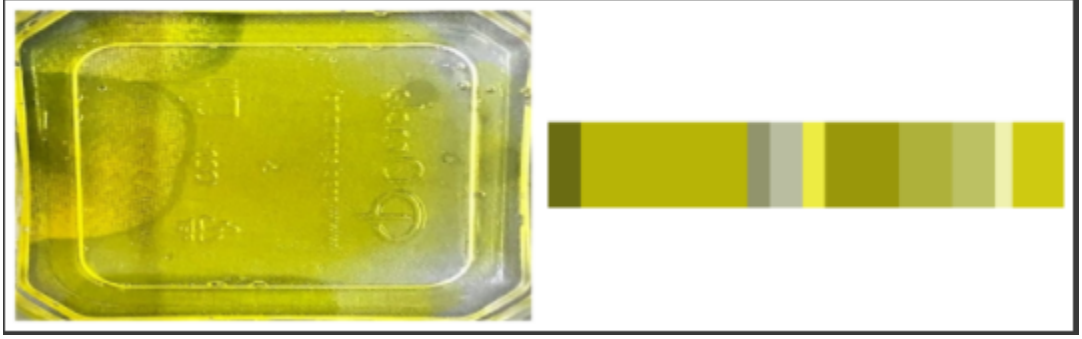


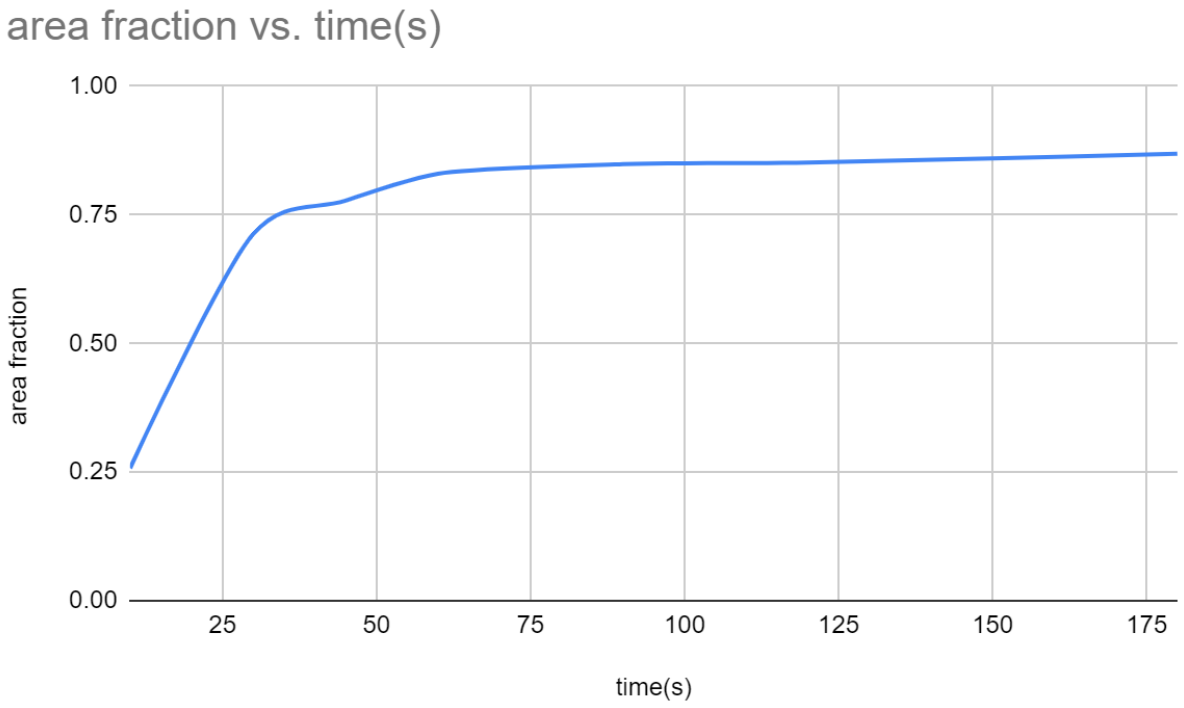
t=150s

```
/content/img7.jpeg
{0: 0.04, 1: 0.05, 2: 0.05, 3: 0.08, 4: 0.28, 5: 0.04, 6: 0.07, 7: 0.22, 8: 0.1, 9: 0.07}
1.0
```

t=180s

```
/content/img8.jpeg
{0: 0.06, 1: 0.32, 2: 0.04, 3: 0.06, 4: 0.04, 5: 0.14, 6: 0.1, 7: 0.08, 8: 0.03, 9: 0.13}
1.0
```



Observations:

time(s)	area fraction	slope
10	0.2574257426	0.02277227723
30	0.7128712871	0.004327099377
45	0.7777777778	0.003481481481
60	0.83	0.0006161616162
90	0.8484848485	0.0001028204613
120	0.8515694623	0.0002810179226
150	0.86	0.0002895622896
180	0.8686868687