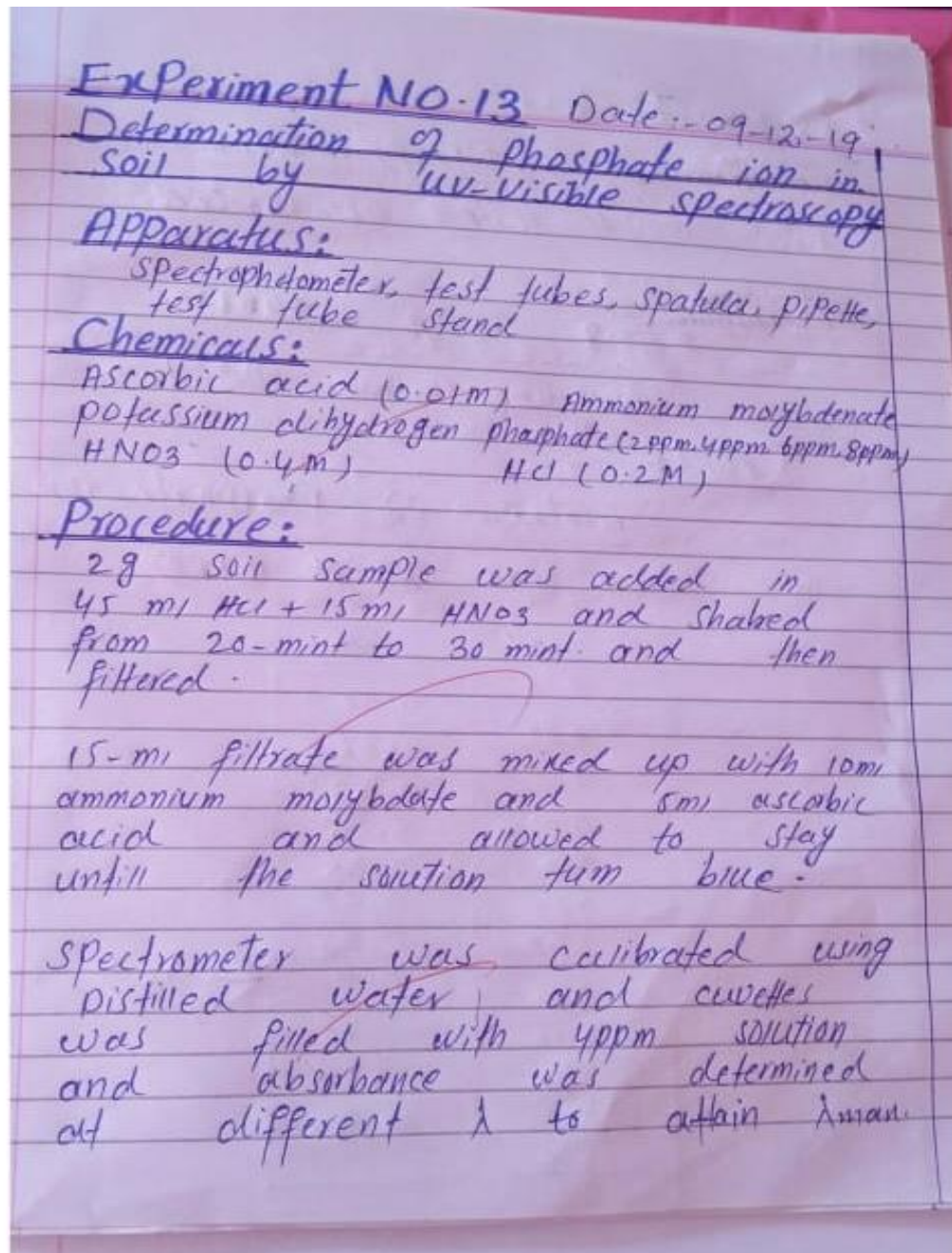


## Determination of phosphate ion in soil by UV-Visible Spectroscopy



$\lambda_{max}$  was fixed and absorbance of all solutions were determined at  $\lambda_{max}$  and calibration curve plotted.

Absorbance of soil solution was determined and concentration was determined by plotting the value of absorbance.

### Result:

Concentration of phosphate ion in sample was about 11ppm.

Experiment No. 13 Date: 09-12-2019  
Determination of phosphate ion in  
soil by UV-Visible Spectroscopy.

Observations and calculations:-

4 ppm

$\lambda_{max}$ (nm)	Absorbance (A)
410	0.21
420	0.24
430	0.26
440	0.27
450	0.29
460	0.31
470	0.32
480	0.33
490	0.34
500	0.35
510	0.36
520	0.37
530	0.38
540	0.40
550	0.36
560	0.33
580	0.29
600	0.28

$\lambda_{max} = 540 \text{ nm} \rightarrow$

2 ppm  
 $A = 0.2$

6 ppm  
 $A = 0.6$

8 ppm  
 $A = 0.8$

sample  
 $A = 1.1$

Result:-  
concentration of phosphate ion  
in sample was about 11 ppm.

