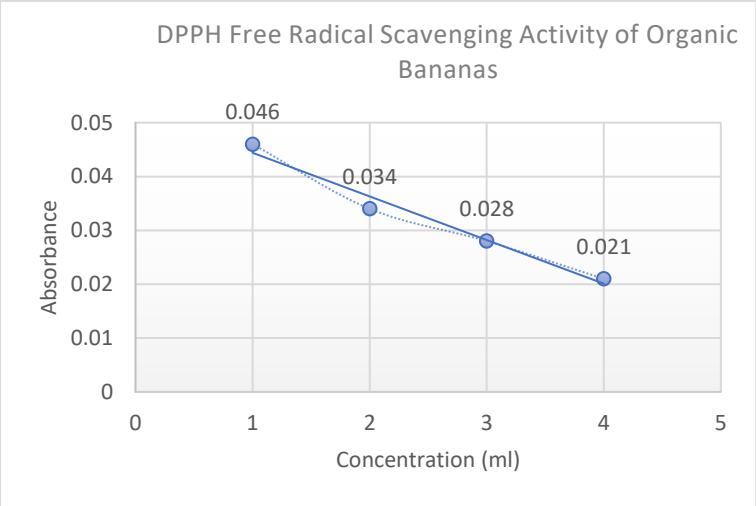
3.4 DPPH Free Radical Scavenging Activity via Spectrophotometer

Both organic and non-organic banana samples were tested for antioxidant activity using the DPPH (2,2-diphenyl-1-picrylhydrazyl) assay. Using a spectrophotometer, absorbance was measured at various levels to evaluate each sample's capacity to scavenge free radicals DPPH.

Table 10: Absorbance Values for DPPH Free Radical Scavenging Activity of Organic and Non-Organic Banana Samples

Concentration (ml)	Sample A (Organic)	Sample B (Non-Organic)
1 ml	0.044	0.046
2 ml	0.037	0.034
3 ml	0.031	0.028
4 ml	0.021	0.021

Graph 3.4: DPPH Free Radical Scavenging Activity of Organic Banana (Sample A) at Different Concentrations



As the sample volume increases, the absorbance values show a reduction with increasing concentration, suggesting an improved DPPH free radical scavenging activity. At 4 ml (0.020), the absorbance was the lowest, indicating higher antioxidant action at this dosage.