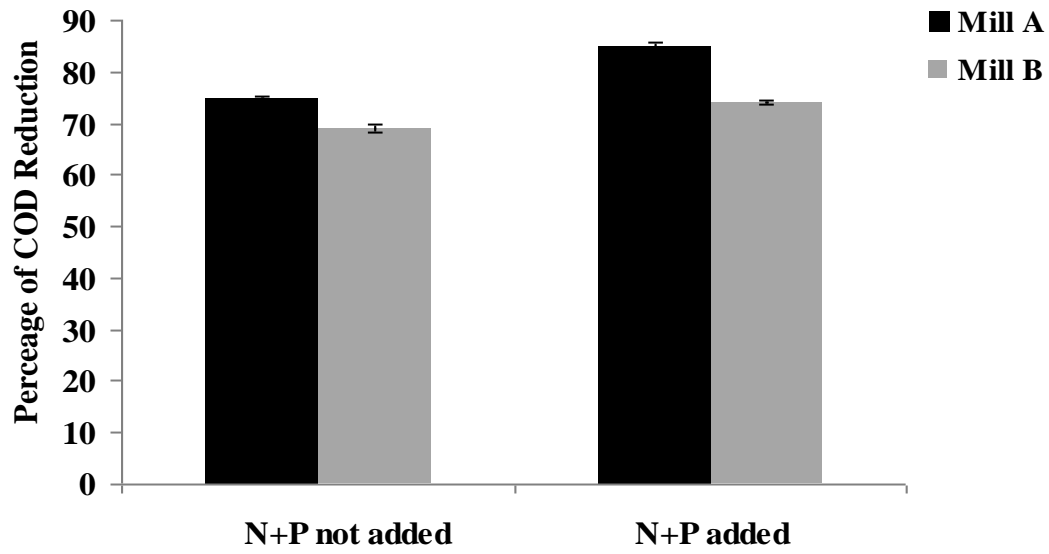
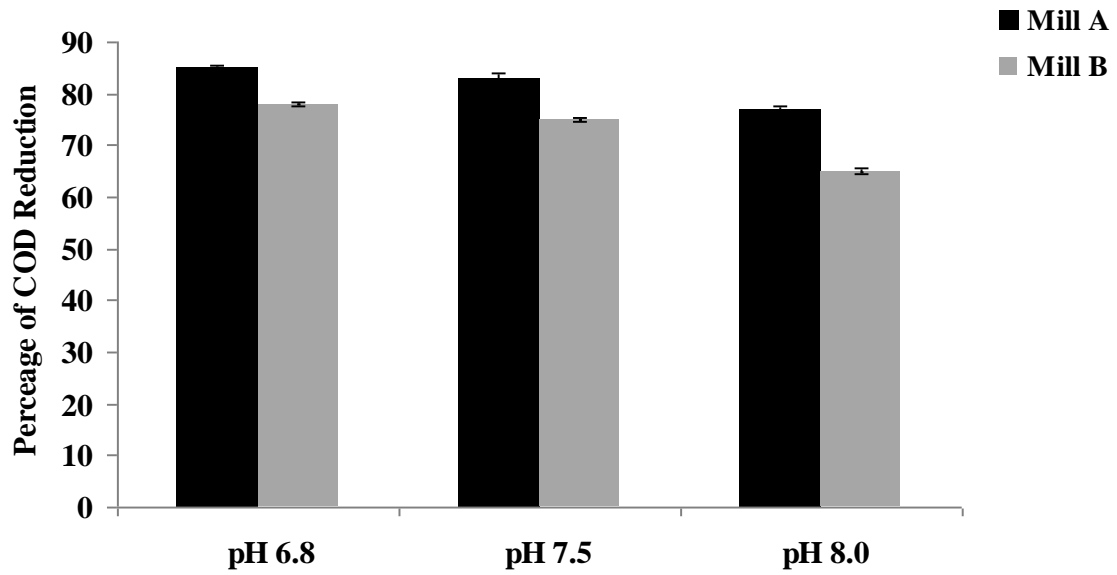


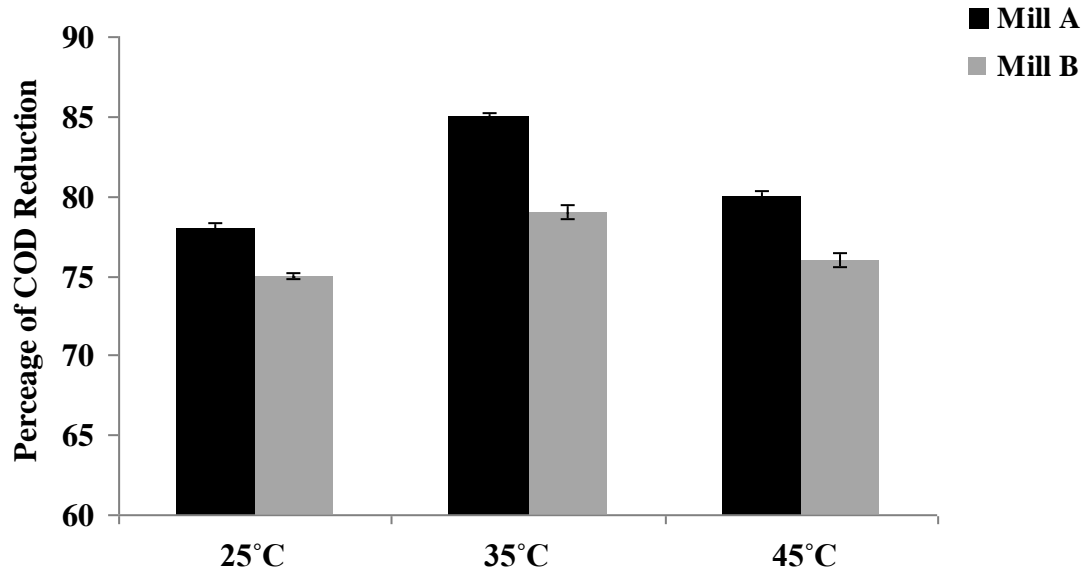
**a) Trace Elements**



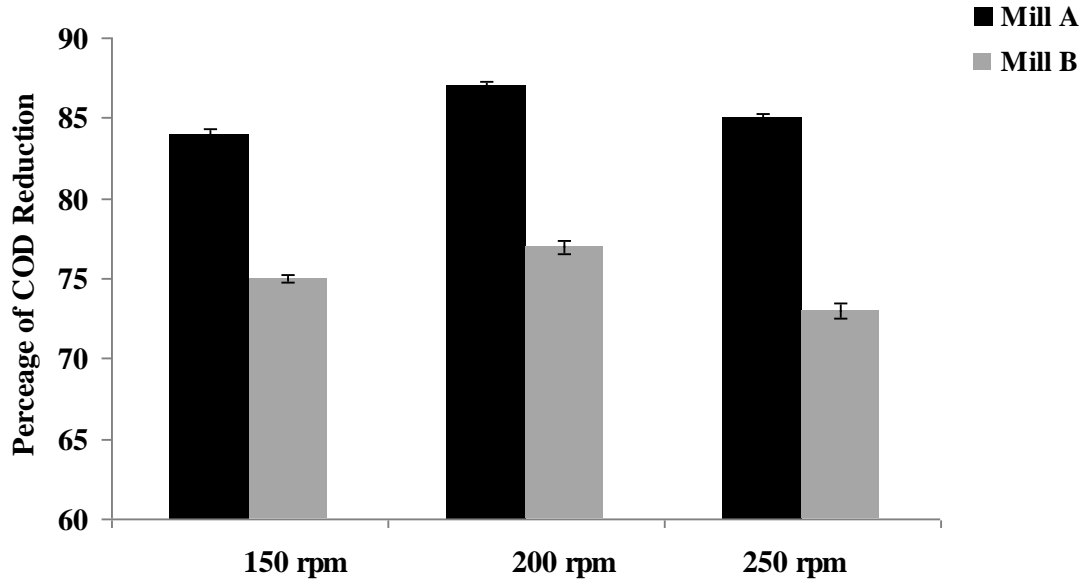
**b) pH**



c) Temperature

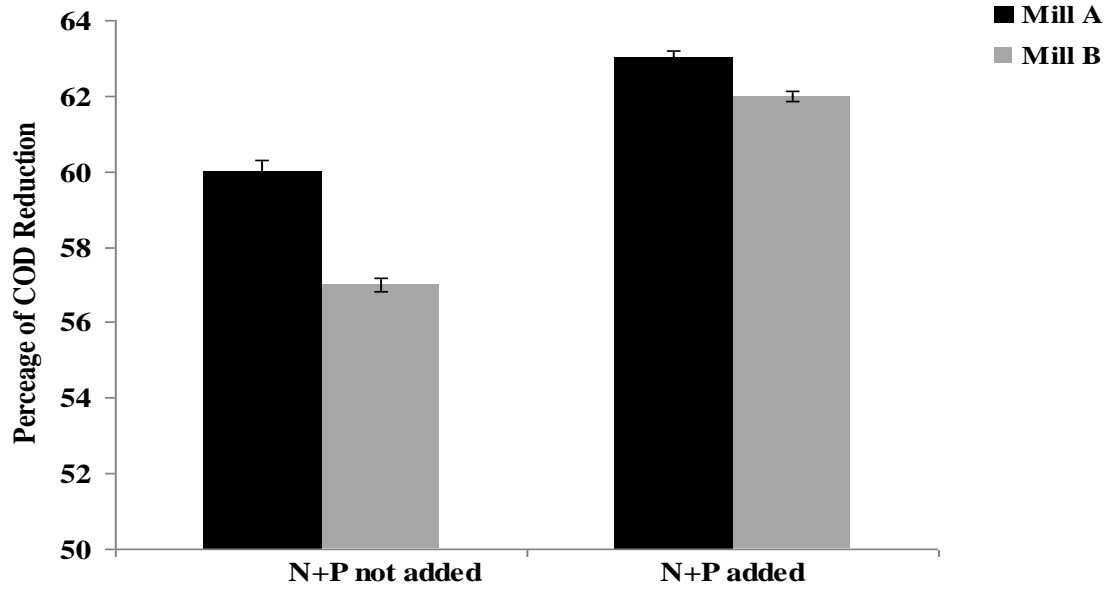


d) Agitation

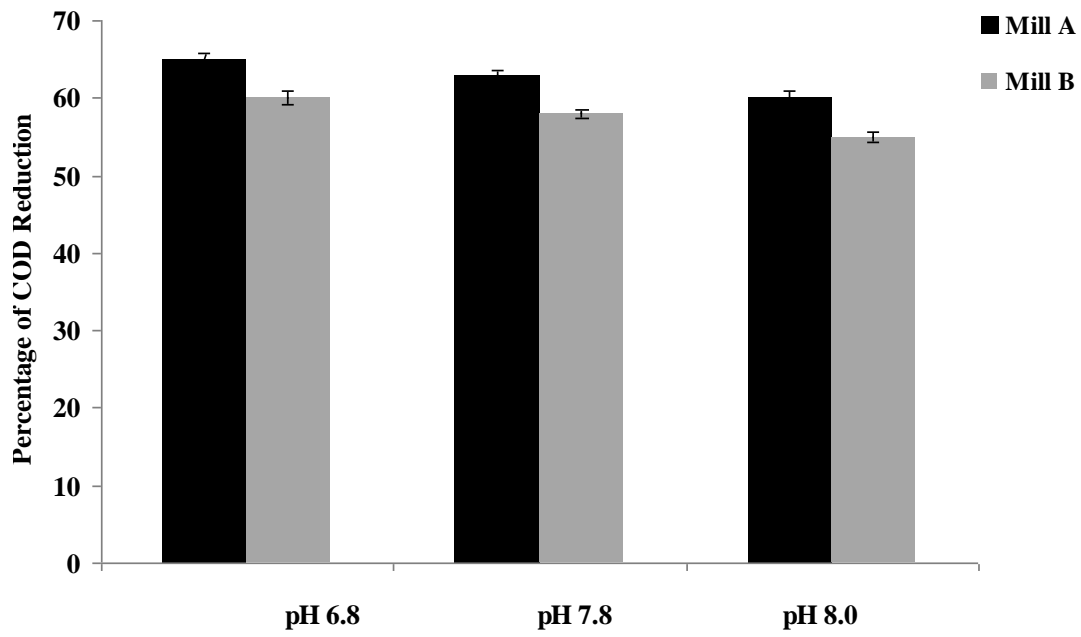


**Supplementary figure 1 (a-d)** Optimization of conditions (trace elements, pH, temperature & agitation) for reducing the COD load as per control (back water 100%) 1500 mg/l (Mill A) & 1855 mg/l (Mill B). After every cycle of 20hrs. 80ml of the treated wastewater was removed with untreated 80ml of wastewater.

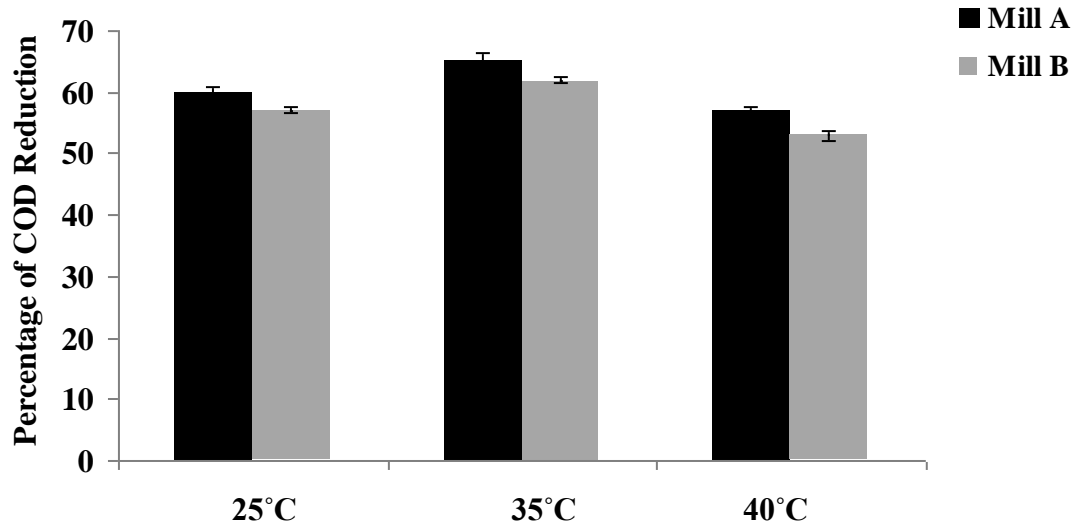
**a) Trace Elements**



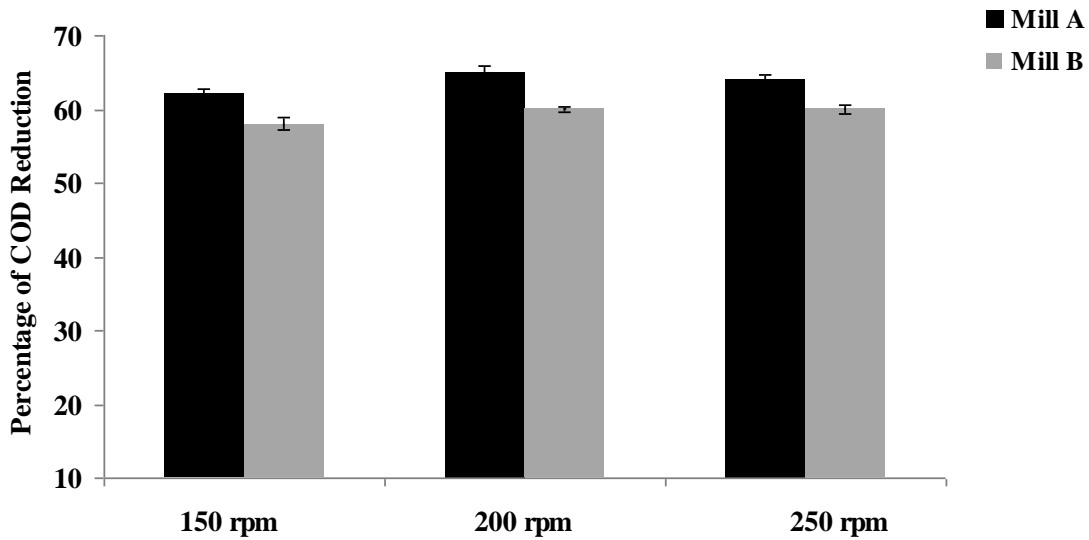
**b) pH**



**c) Temperature**



**d) Agitation**



**Supplementary figure 2 (a-d)** Optimization of conditions (trace elements, pH, temperature & agitation) for reducing the COD load as per control (back water: black liquor) 4050 mg/l (Mill A) & 4700 mg/l (Mill B). After every cycle of 20hrs. 80ml of the treated wastewater was removed with untreated 80ml of wastewater.