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Design and Properties of Natural Rosin-Based Phosphoester Functional Surfactants

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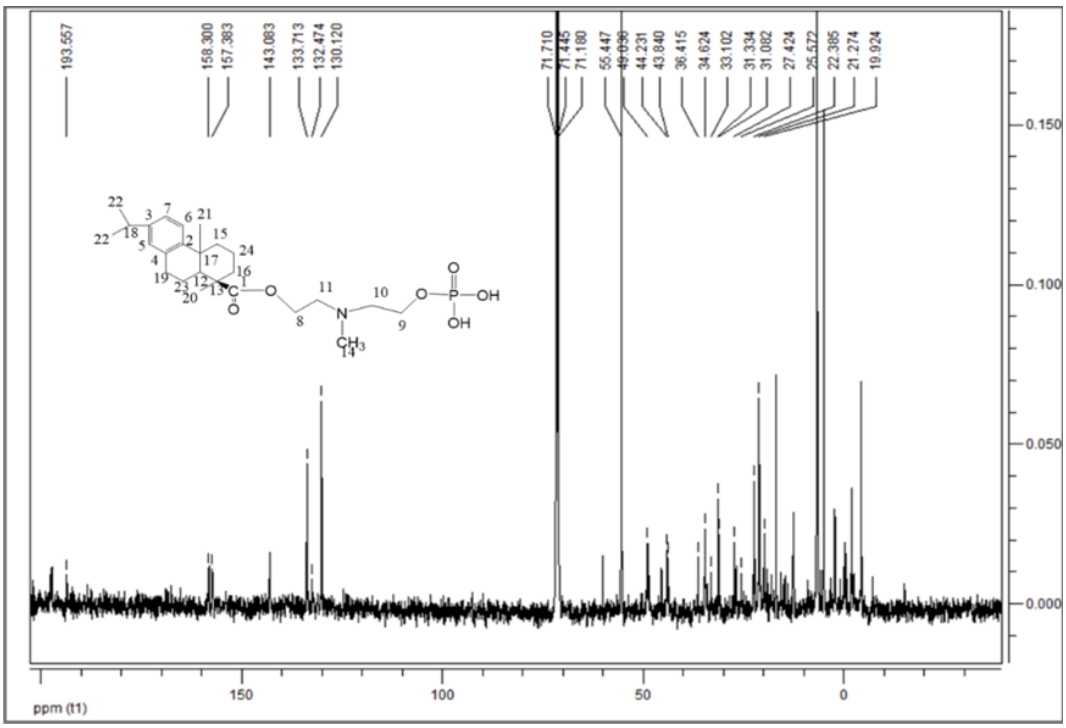


Figure S1. ^{13}C NMR of DPM.

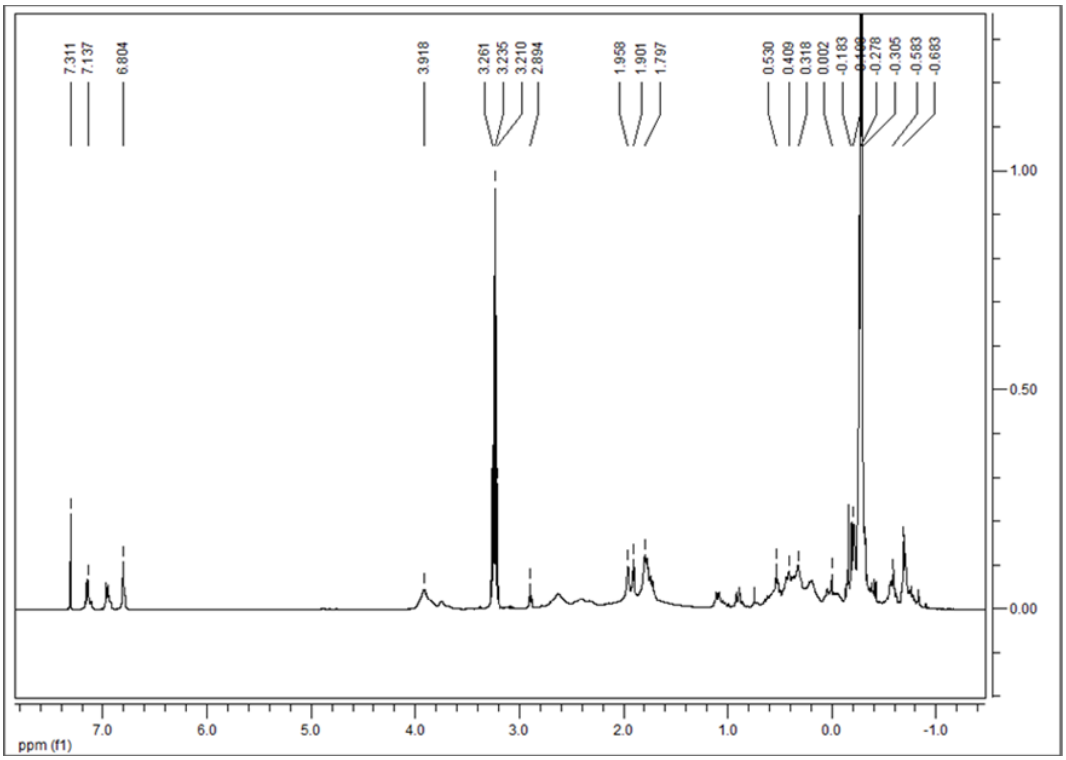


Figure S2. ^{1}H NMR of DPM.

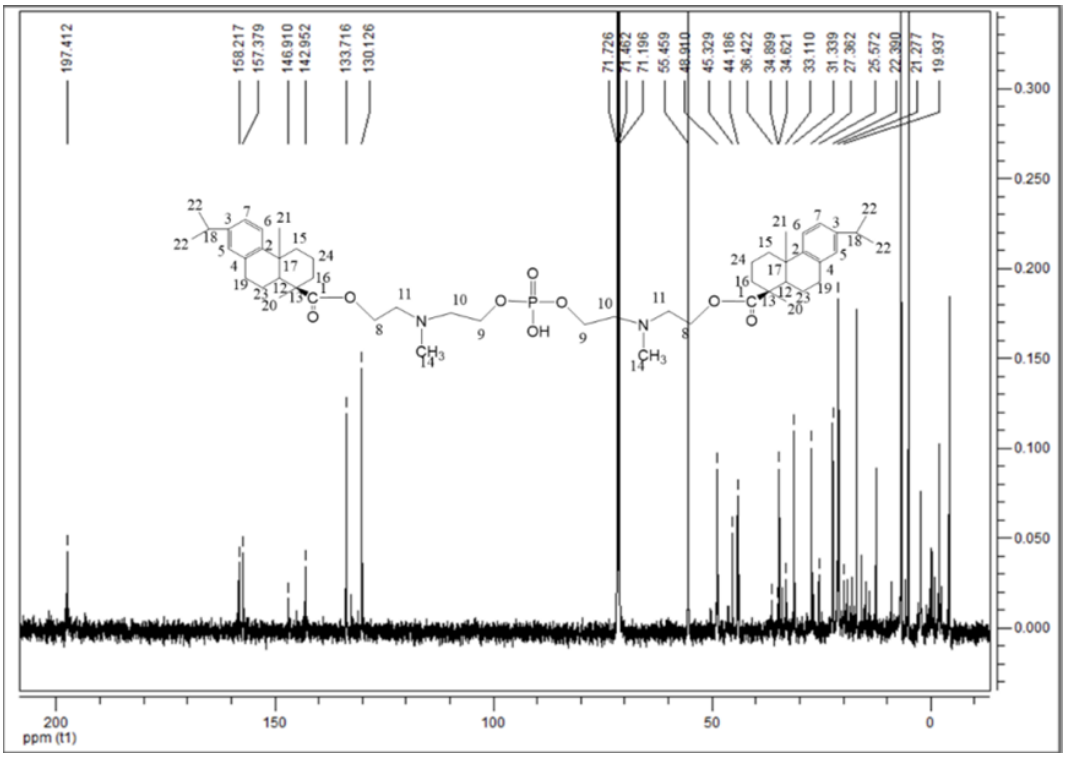


Figure S3. ^{13}C NMR of DPD.

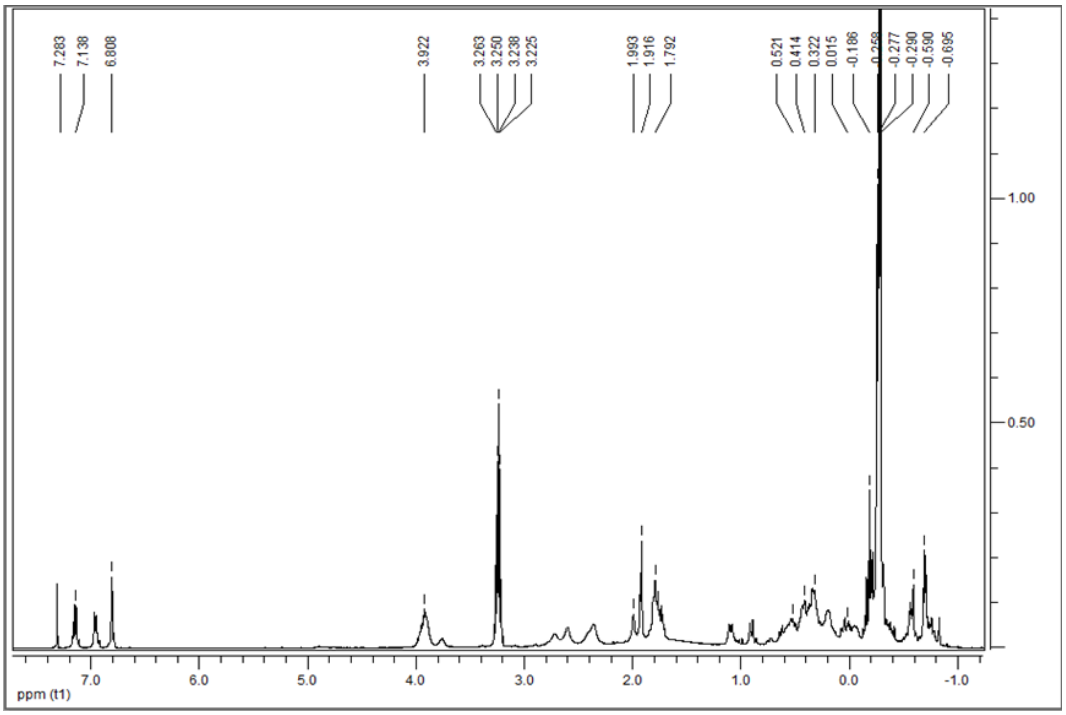


Figure S4. ^{1}H NMR of DPD.

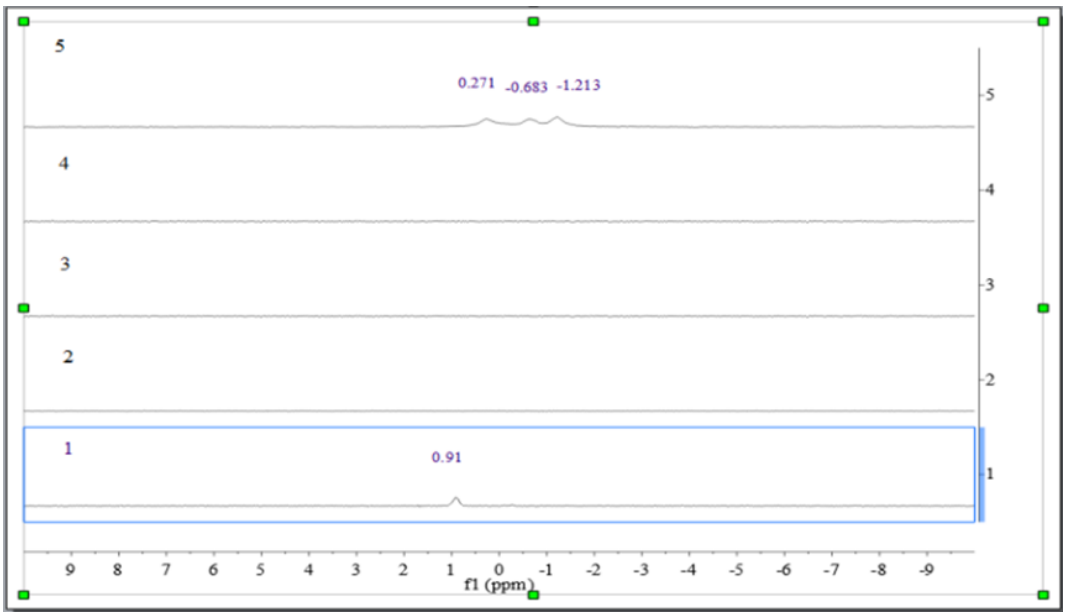


Figure S5. ^{31}P NMR of all samples.

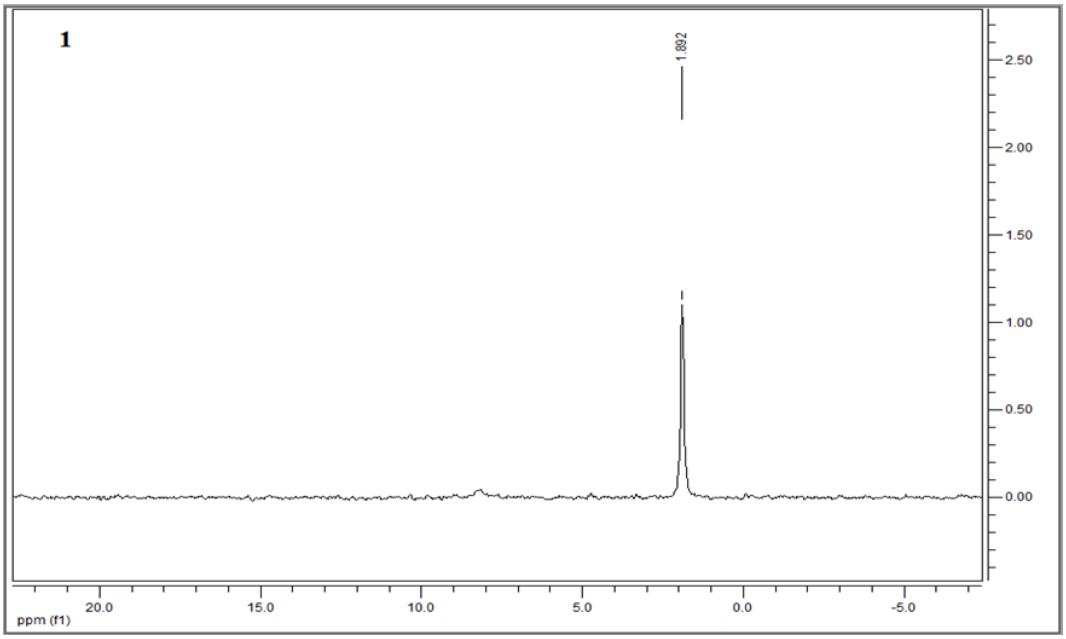


Figure S6. ^{31}P NMR of sample 1 at alkaline condition.

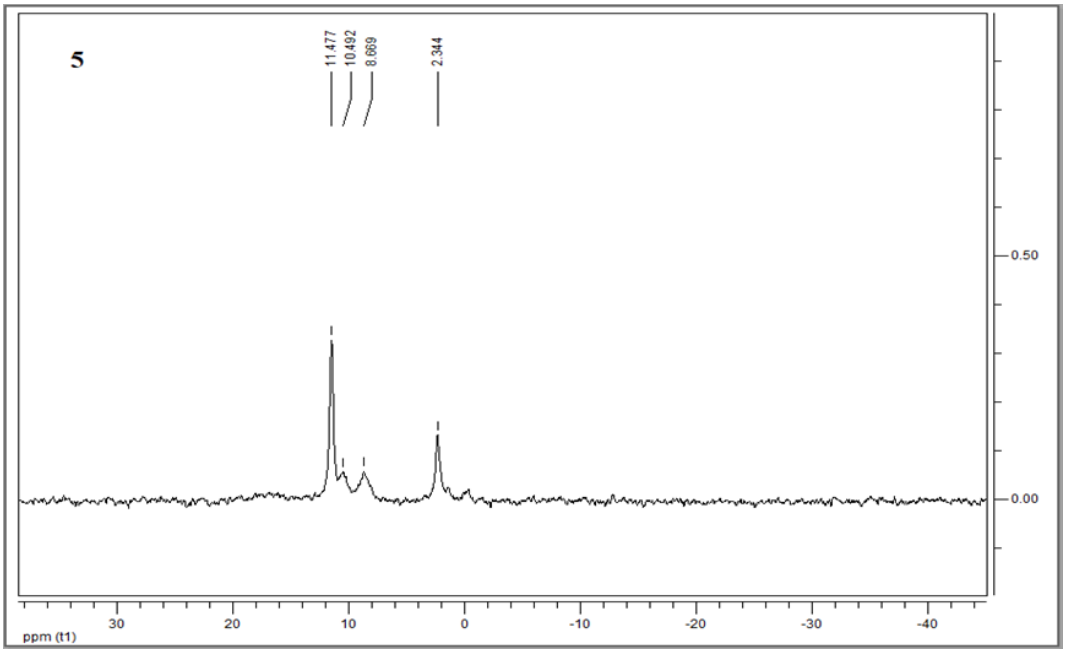


Figure S7. ^{31}P NMR of sample 5 at alkaline condition.