synthesis of some surface active agents from some crudeoils

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SummaryThis research aimed to synthesise some surface active agentes from some crude oils .dodecyl benzene sulphonic acid is one of the most popular and cheap crude material which used in synyhesis of a large number of surface active agents .so, this compound is used for synthesis of some surface active agent contnaing sulphonamide groupwhich have biological acyive propartes Nonionic surface active agents•Acid chloride of dodecyl benzene sulphonic acid reacted with diamine organic compounds as (1,2 ethylene diamine. 1,4 tetra methylene diamine. 1.6 hexamethylene diamine. 1,8 octamethylene diamine) to give the sulphonamide compounds (2-5)then the ethylene oxide (5,7.and 9) is add in the presence. of KOH at 140c to give nonionic surface active compoundes (6-9) the chemical structure of these compoundes are confermide by spectroscopic tools.The prepared compounds are evaluated by measuring surface propartes.the measurmentes revals the folloing facts:1.The values of surface and interfacial tension increase d by increasing the number of ethoxy group2.All compounds .the cloud points higher than 100c.3.All compounds show decreasing in wetting where good wetting time are recorded with a low ethylene oxide4.Foaming height decrease with increasing the number of ethoxy group5.Emulsifying properties increase with decreasing number of ethoxy group.•The biodegradability of these compounds is measured by Surface tension methods and gives a resonable results.Summary•The biological activity of all compounds screaned against +ve Gram and -ye Gram bacterial and fungi, are equal to and some times greater than those of reference drugs used . Cationic surfaces -active agents:Cationic surfactants are prepared as the following;•Reaction of epi chlorohydrine with tertiary amine (triethylamine-triethanolamine-and pyridine) to give cationic compounds containing oxirane ring•Addition of these cationic compounds to the sulphonamide compounds which they are prepared previously, to give cationic surface active agent containing sulphonamid group, the chemical structure of cationic surface active agent were confirmed by spectroscopic tools.•The surface properties are measured and reveals the following facts;1-The value of surface and interfacial tension increase with increase of methylene group in diamine chain.2-The lcraft point of all compounds are less than zero .3-The wetting time increases with increases of methylene group in diamine chain.4-Foaming height decreases with increase of methylene group in diamine chain.5-Emulsion stability increase with increase of methylene group diamine chain. 6-Critical micelle concentration (CMC) values show fall with increase of methylene

group in diamine chain.•The biodegredability of these compounds is measured by Surface tension methods and gives a resonable results.•The biological activity of all compounds are screaned against +ve Gram and -ve Gram bacterial and fungi are equal to and some times greater than those of reference drugs used.II