



ChemTech

## International Journal of ChemTech Research

CODEN (USA): IJCRGG, ISSN: 0974-4290, ISSN(Online):2455-9555  
Vol.10 No.6, pp 1014-1023, 2017

### Membrane Filtration from sludge as an Alternative Method for Wastewater Treatment

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**Abstract :** The study highlighted the ability of modified sewage sludge ash from wastewater based membranes were prepared by blending cellulose acetate (CA) with sewage sludge ash by dry-wet phase inversion method in various compositions of CA \SSA (100/0, 90/10, 80/20 and 50/50 % wt) and the effects of organic additives concentration as poly ethylene glycol (PEG600) in the casting solution range from (0-10) % wt, results in more added of PEG600 increase pore of membrane, using DMF as solvent. The membranes were characterized in terms of water content, XRD analysis and mechanical strength of blend membrane, evaluate solute rejection of nickel ions from wastewater. Best results were obtained for CA\SSA blend membranes at 50/50 wt%. Determination of membrane rejection was performed by reduction of water turbidity, the concentration of COD, BOD, TSS, and TDS from effluent wastewater from Abo-Rawash plant as case study before and after passing through the membrane.

**Keywords :** Blend membrane, Cellulose acetate\Sewage sludge as (CA\SSA), Nickel ions, and Phase inversion method.

Rasha A. SaryEl-deen *et al* /International Journal of ChemTech Research, 2017,10(6): 1014-1023.

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