



## Refinement of spent diethylene glycol

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### ABSTRACT

The aim of these experiments was to verify our suggested purification process of the spent diethylene glycol solution acquired from the drying of natural gas. Diethylene glycol is commonly polluted by degradation products and/or other chemical types during the drying process. Continuous pollution compromises the glycol desiccation ability, increases energy demands on its dehydration in the distillation process and finally results in the replacement of exhausted glycol. Our suggested purification process is based on the dilution with demineralized water, coagulation with organic flocculants, precipitation at higher pH with caustic soda, active carbon treatment, microfiltration and electro dialysis desalination.

*Keywords:* Diethylene glycol; Electrodialysis; Purification

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