

# Nano Particle (Ion Exchange Resin-MPTF): Preparation And Physicochemical Properties

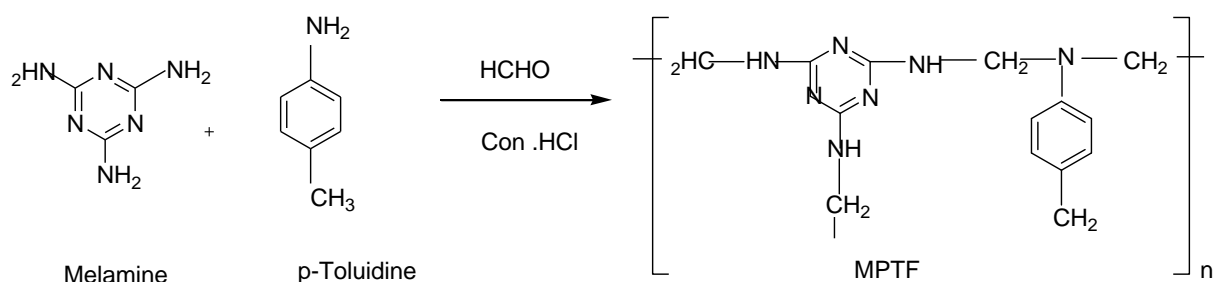
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## ABSTRACT:

Ion exchangers are either cation exchangers that exchange positively charged ions (cations) or anion exchangers that exchange negatively charged ions (anions). There are also amphoteric exchangers that are able to exchange both cations and anions simultaneously.

In the preparation of MPTF, p-toluidine was reacted with formaldehyde and melamine. For the synthesis of MPTF hydrochloric acid was used as a catalyst. These resins were characterized by elemental analysis. Synthesized nano particle shows ion exchange capability. Ion exchange resin also showed reusability and stability at an elevated temperature.



**Keywords:** Ion-exchange, melamine, p-toluidine, formaldehyde, thermal stability