

How to get rid of DMF from the organic layer

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- Personal trick: remove all traces. Works well even with polar and coordinating compounds.
 - ✓ Last wash of the usual work-up with LiCl (5%) solution 1 to 3 times.
LiCl will make the aqueous phase more polar and DMF will transfer more easily.
 - ✓ Use Et₂O (if possible) instead of EtOAc.
Et₂O is less polar, DMF will be less soluble in it.
- Found online: remove most of DMF.
 - ✓ Azeotrope strategy: add toluene (or pentane/hexane/heptane) and evaporate (several times could be needed).
 - ✓ Evaporate with high flow of N₂.
 - ✓ If no coordinating products (i.e., amides, amines, carbamates...) last wash of the work-up with CuSO₄ sat. solution.
CuSO₄ will coordinate DMF.
 - ✓ Ice-cold brine solution wash.

- Works well for di/tri peptides synthesis

- ✓ Quench with NaHCO_3

- ✓ Extract with EtOAc

- ✓ Wash with citric acid (10%)

Will eliminate tetramethylurea

- ✓ Wash with LiCl (5%) (DMF)

Will eliminate DMF

- Otherwise, amide bond coupling with EDC is a bit less effective but the purification is easier (just water wash is needed)

