

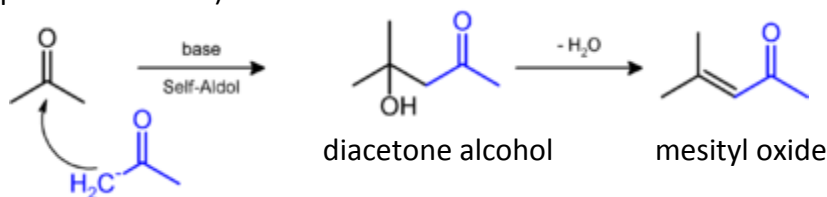
Answer on Question #44182 - Chemistry - Organic Chemistry

Question:

I mixed up KOH and acetone and the reaction that occurred was an aldol condensation, at the beginning there wasn't any color, but after 24h there is this yellow color that appeared and it gets yellower after few days, could you please explain to me what causes the yellow color to appear?

Answer:

The aldol condensation of acetone gives diacetone alcohol (or 4-hydroxy-4-methyl-pentan-2-one), which is colorless. But this compound readily dehydrates when stored to give mesityl oxide (or 4-methylpent-3-en-2-one):



Mesityl oxide is capable of polymerization by its double bond, so, probably the polymerization causes the yellow color appearance.