

2) Today, you are using the lithium acetate method to transform yeast. Comment on each of the key ingredients of your transformation mixture and their purpose:

Lithium acetate:

Polyethylene glycol (PEG):

Salmon sperm DNA:

3) You wish to use the 7.003 mTn3 transposon plasmid library to perform a mutagenesis screen in yeast to isolate mutants that are defective for synthesis of the amino acid tryptophan. You have the following six strains available below to use for your library transformation. Which strain is the best one to use? Explain why each of the other strains is not ideal.

Strain #1: *MATa leu2 lys2 trp1 tyr1 ura3*

Strain #2: *MAT α his3 his4 lys7 ura3*

Strain #3: *MATa ade1 his4 leu1 tyr2 ura4*

Strain #4: *MAT α leu2*

Strain #5: *MATa/MAT α his3/his3 leu2/leu2 lys2/lys2 tyr1/tyr1*

Strain #6: *MAT α ade1 arg4 his3 leu2 ura3*

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