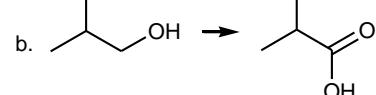
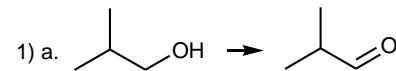
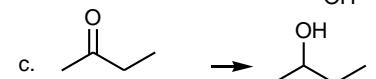


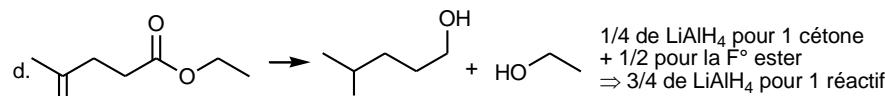
Exercice 1 :



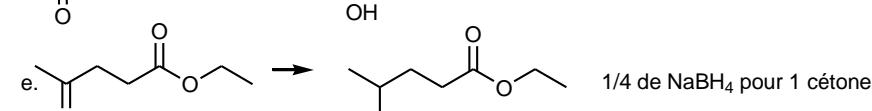
pour s'arrêter à l'aldéhyde, il faut :
 - placer MnO_4^- en défaut
 - distiller l'aldéhyde formé au fur et à mesure



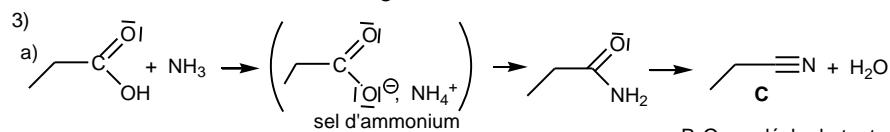
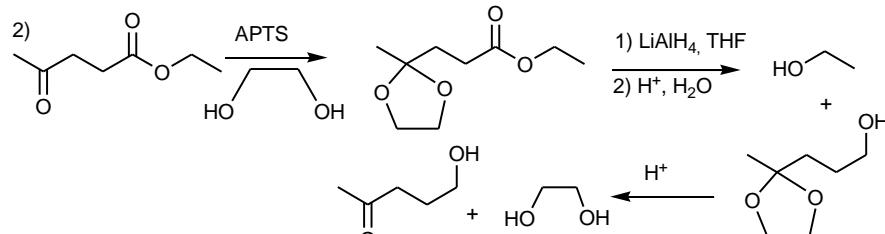
1/4 de LiAlH_4 pour 1 cétone



1/4 de LiAlH_4 pour 1 cétone
 + 1/2 pour la F° ester
 \Rightarrow 3/4 de LiAlH_4 pour 1 réactif



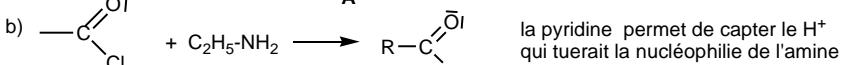
1/4 de NaBH_4 pour 1 cétone



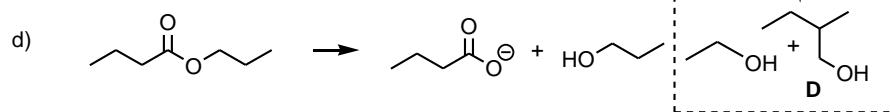
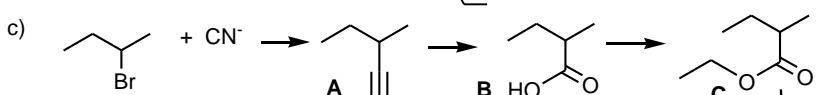
sel d'ammonium

A B C

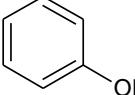
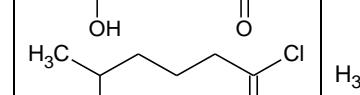
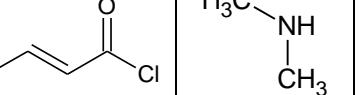
P_4O_{10} = déshydratant



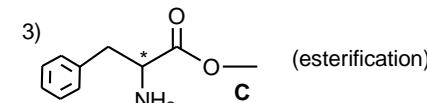
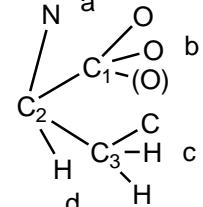
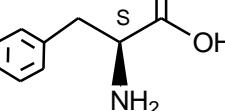
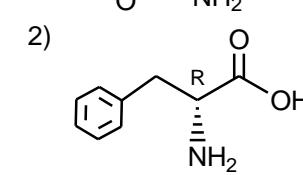
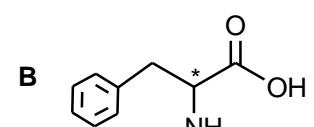
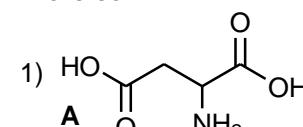
la pyridine permet de capter le H^+
 qui tuerait la nucléophilie de l'amine



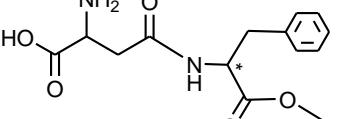
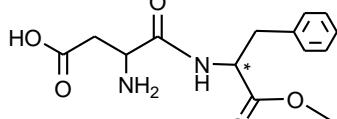
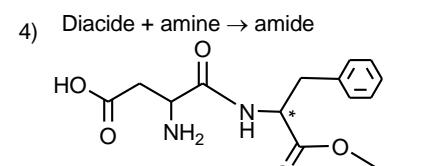
4)

A	B	C	D
			

Exercice 2 :

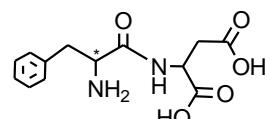
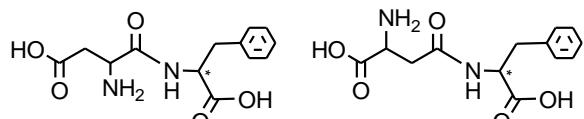


(esterification)



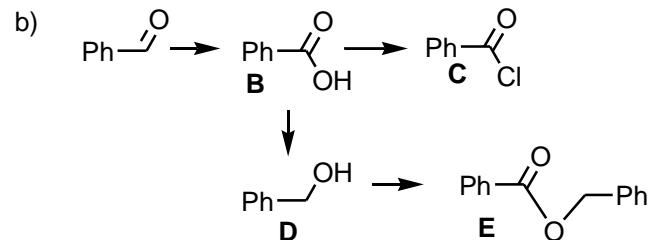
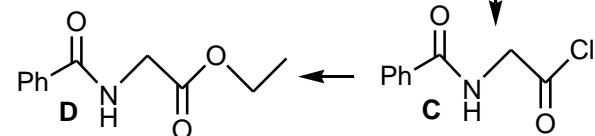
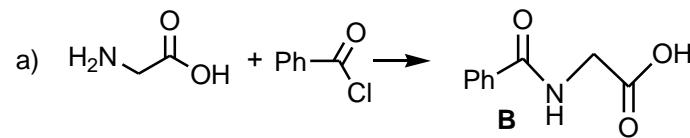
5) A est un composé trifonctionnel et B est bifonctionnel

L'action de A sur B conduit à 3 amides



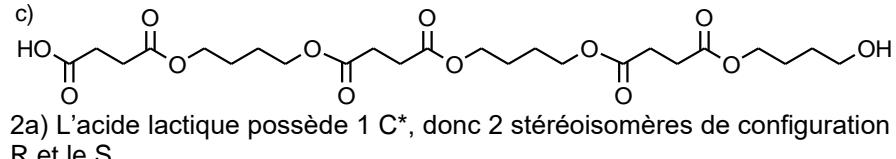
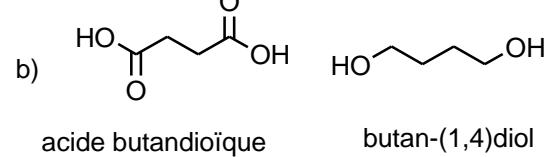
Ensuite l'estérification de ces 3 amides conduit à 6 monoesters différents car chaque amide possède 2 fonctions acides. On a donc un mélange de 6 composés, alors qu'avec la séquence précédente seuls 2 produits sont formés. L'étape B \rightarrow C, permet de « protéger » une fonction acide.

Exercice 3 :

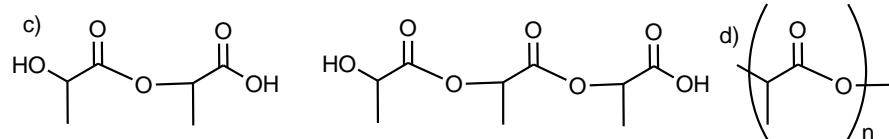


Exercice 4 :

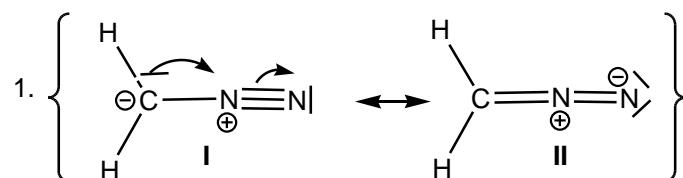
1)a) Fonction ester.



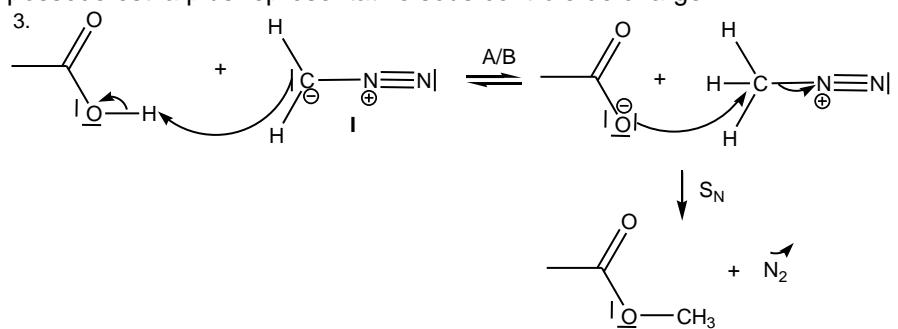
b) L'acide lactique possède 1 fonction alcool et une fonction AC. Ces 2 fonctions sont mises en jeu dans l'estérification formant donc une fonction ester.



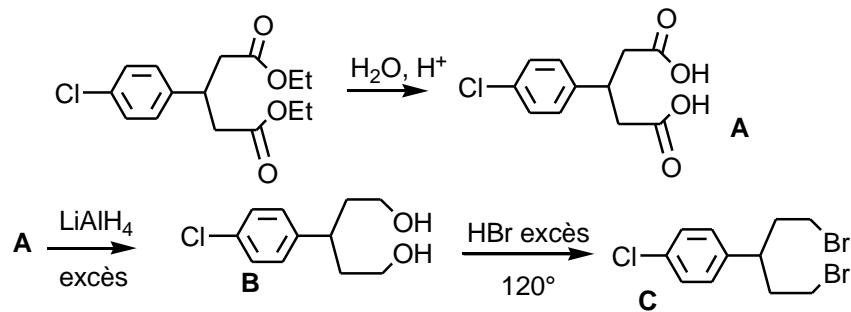
Exercice 5 :



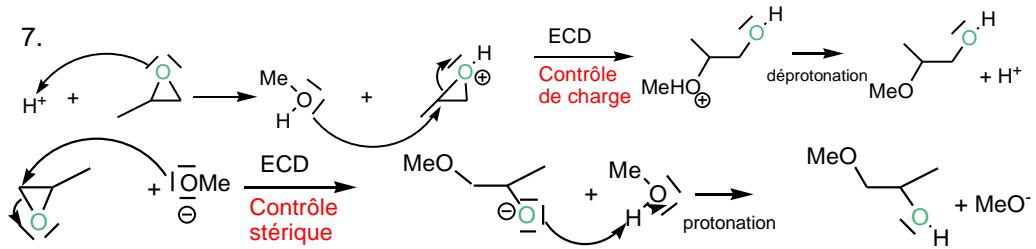
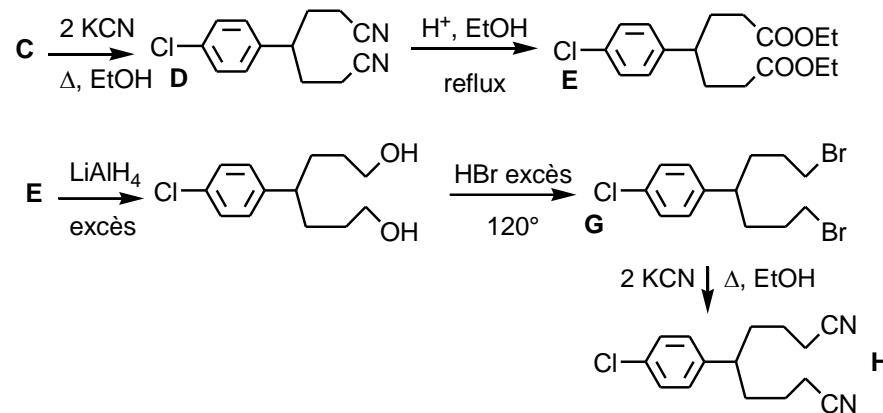
2. D'après les 2 formes mésomères, le C et le N terminal sont basiques.
D'après la répartition des charges c'est le C qui est le plus δ - \Rightarrow La forme I possède est la plus représentative sous contrôle de charge.



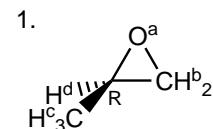
Exercice 6 :



TD Chap O-4 correction



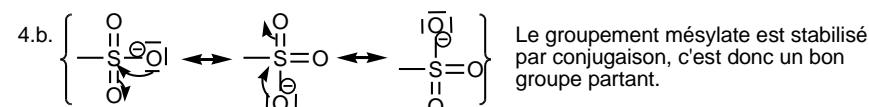
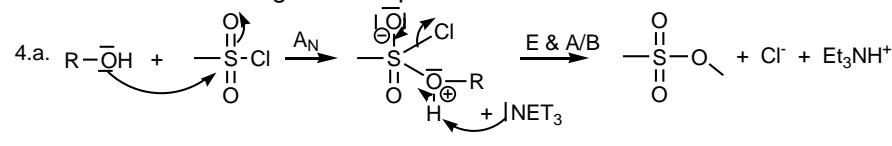
Exercice 7 :



2.

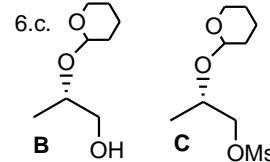
	nbr H couplés	multiplet	I
H ^b	1 H ^d	doublet	2
H ^c	1 H ^d	doublet	3
H ^c	2 H ^b +3 H ^c	triplet de quadruplet	1

3. Pour former un époxyde, on peut utiliser un peracide sur un alcène. On obtient alors un mélange racémique.



6.a. estérfication : cf. cours pour Cop et méca

6.b. cf poly fonctions de protection



La protection de la fonction alcool est nécessaire car LiAlH₄ réagit violemment avec les H acides. De plus cela évite de mésyler les 2 fonctions alcools

6.d. 1) H⁺, H₂O pour déprotéger l'alcool puis 2) NaH pour former l'alcoolate et favoriser la réaction de Williamson.