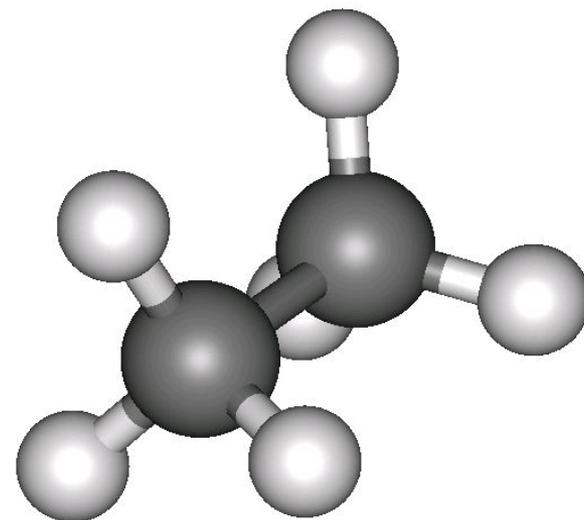
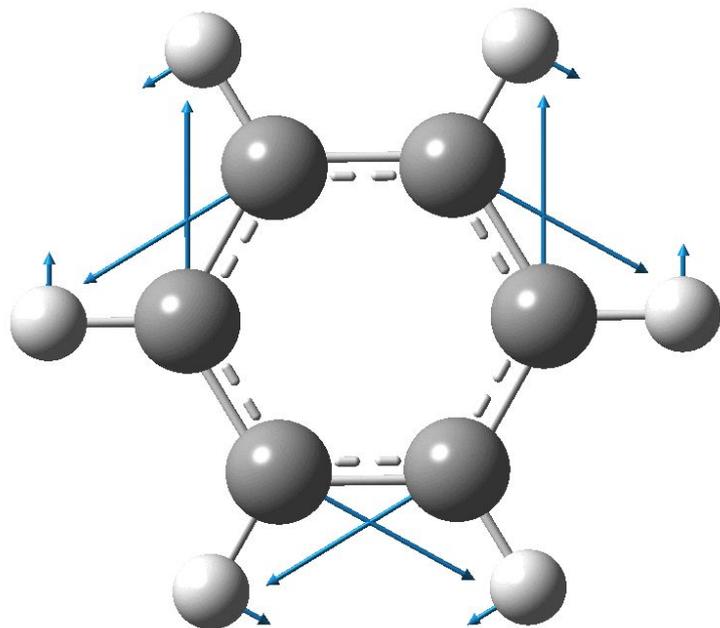
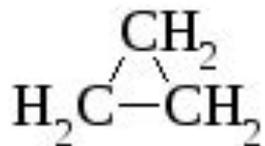


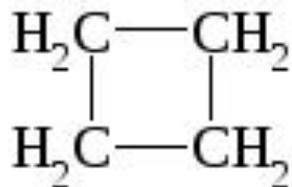
Реакции неполного окисления в органике



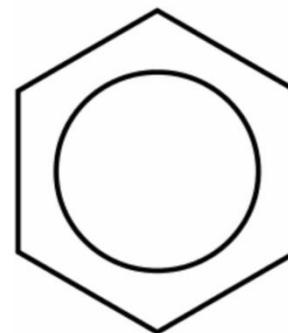
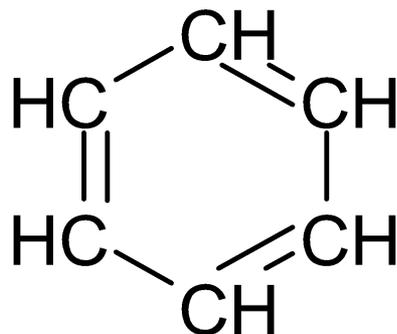
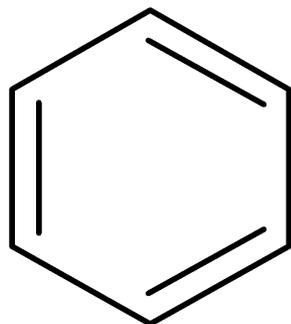
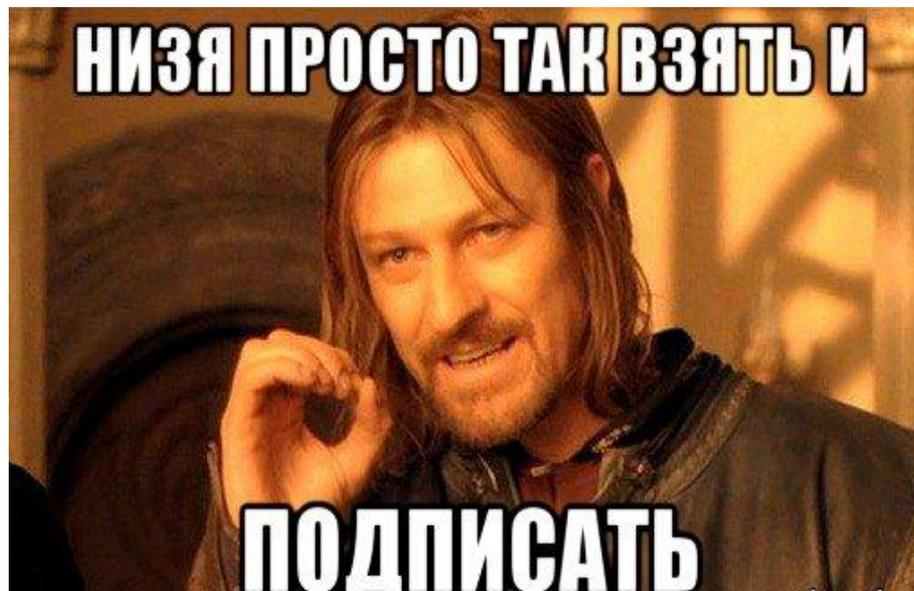
Структурные (не молекулярные, кроме...)



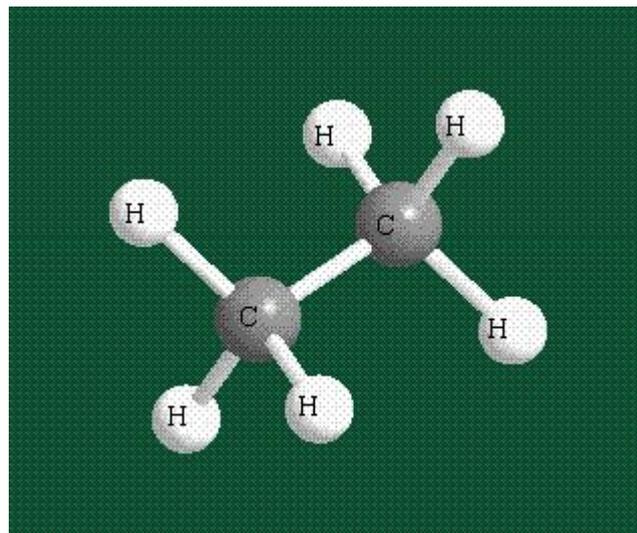
циклопропан



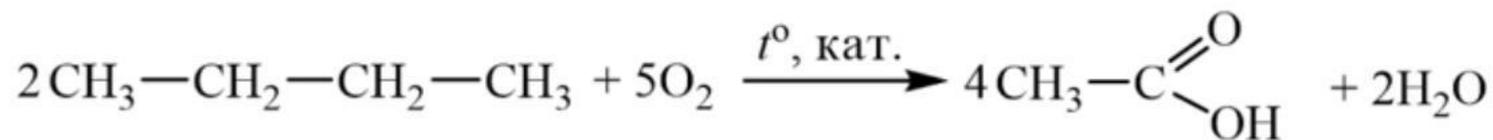
циклобутан



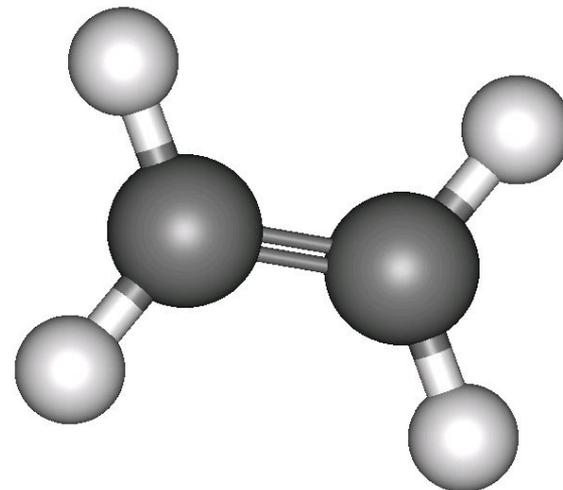
Алканы



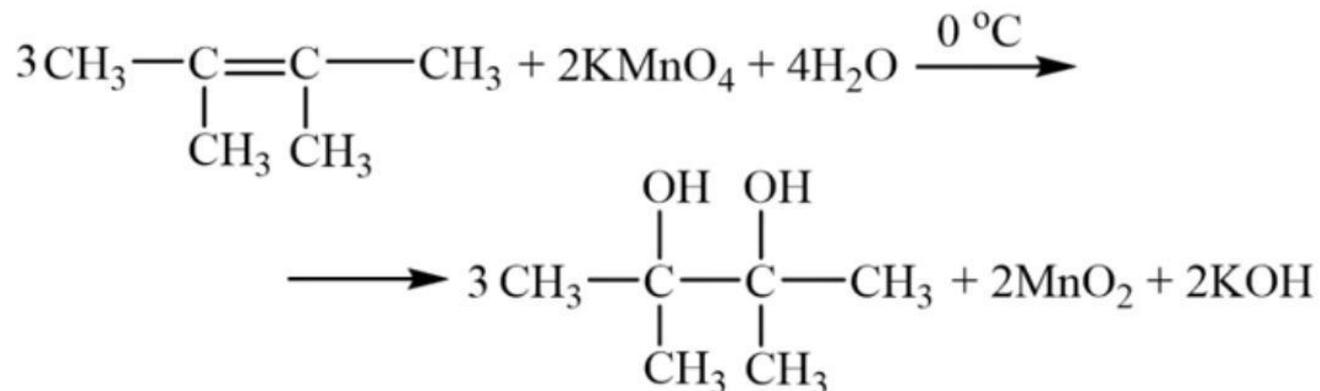
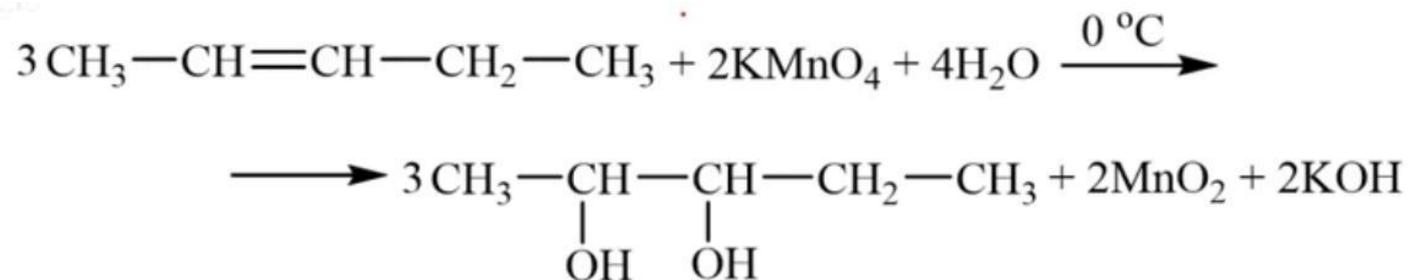
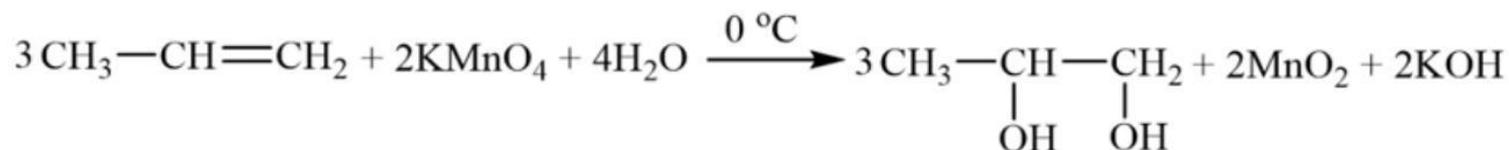
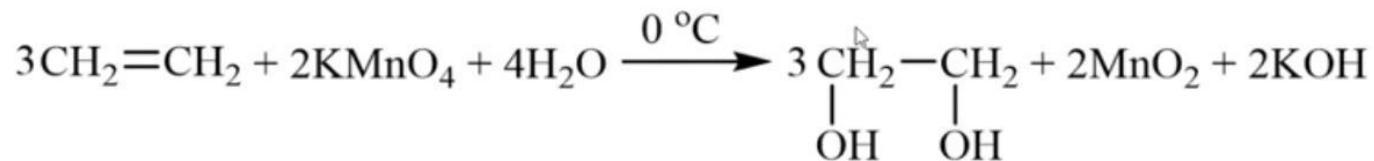
Не
обесцвечивают!
Не окисляются!
(каталитическое
окисление бутана,

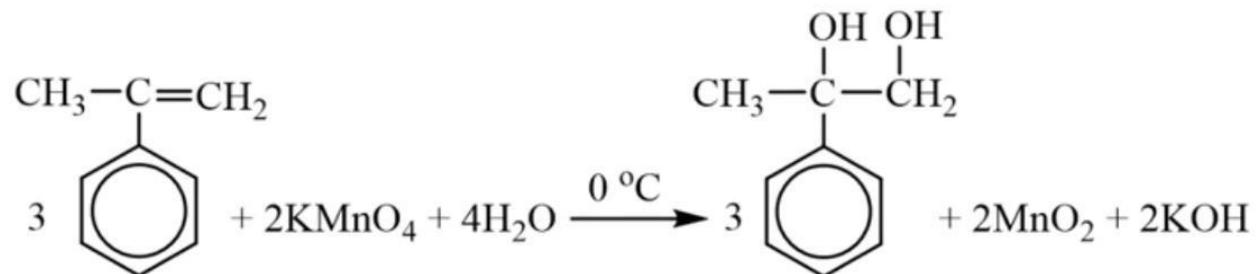
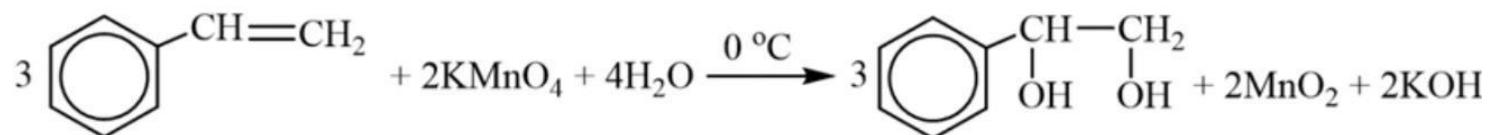
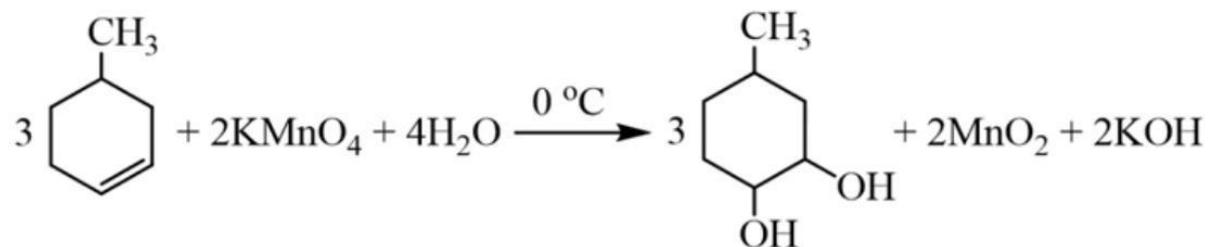
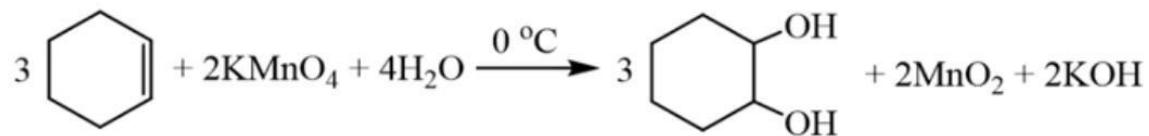


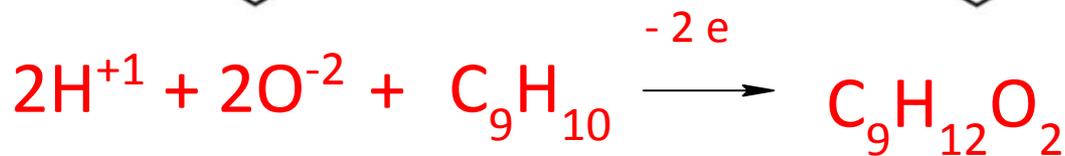
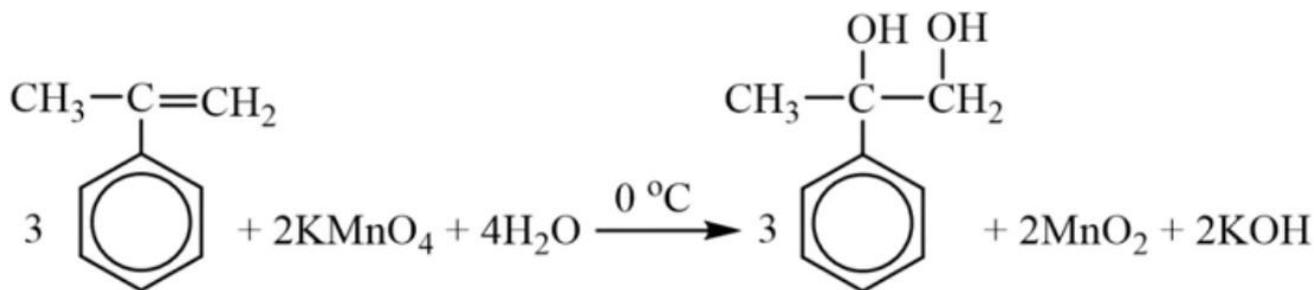
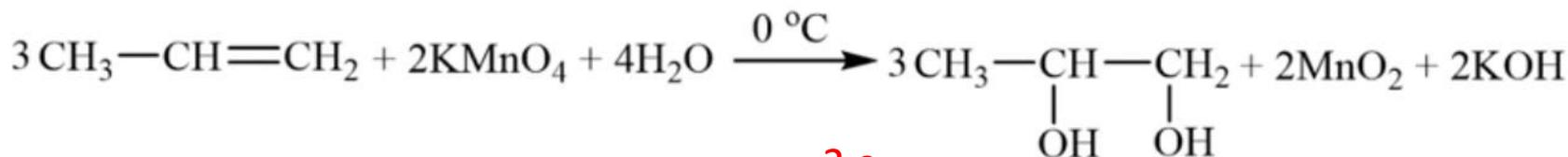
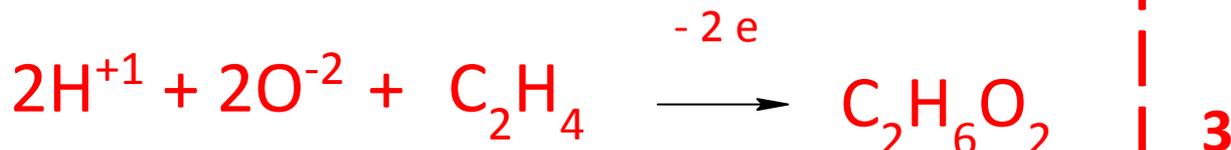
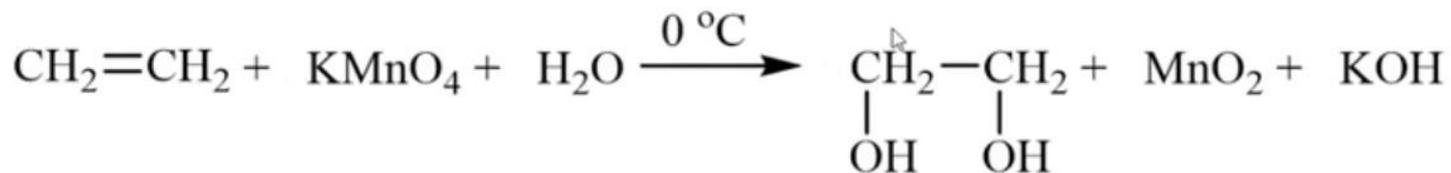
Алкены

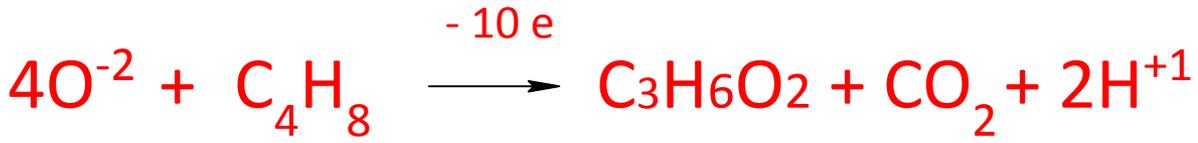
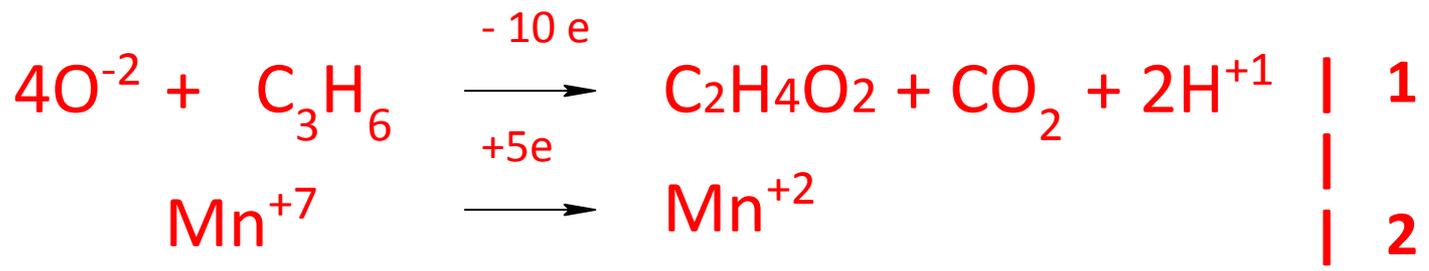
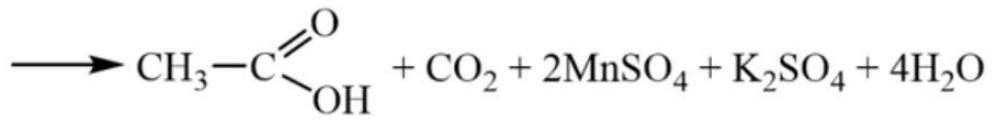
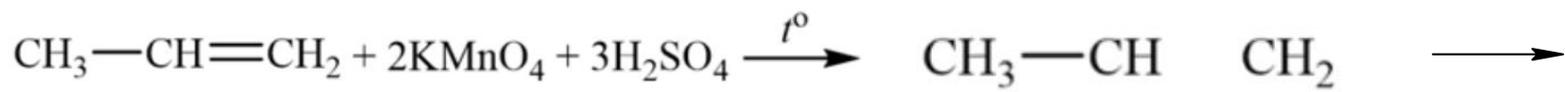
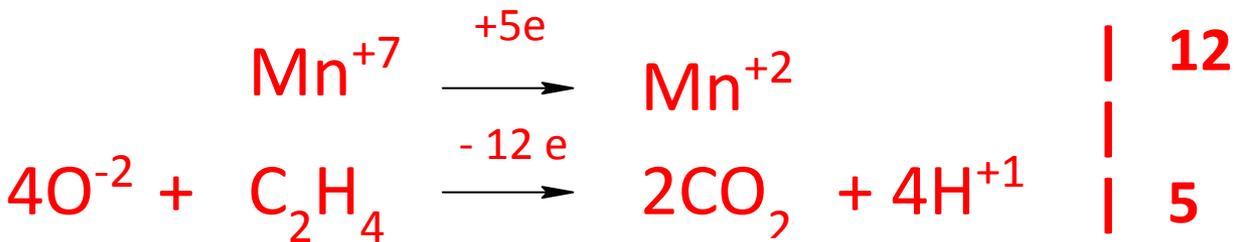


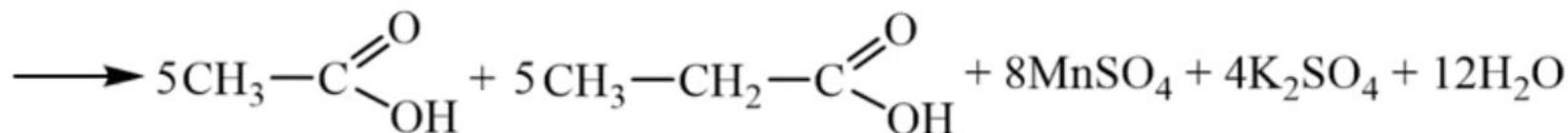
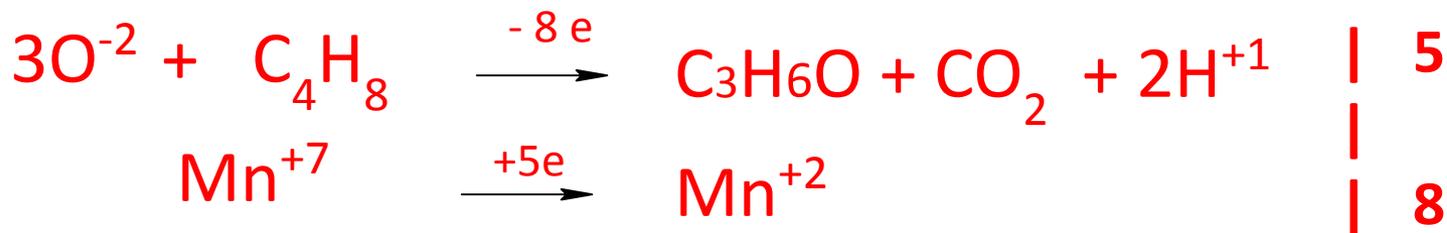
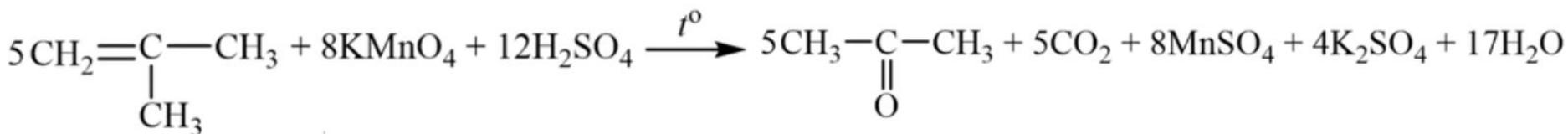
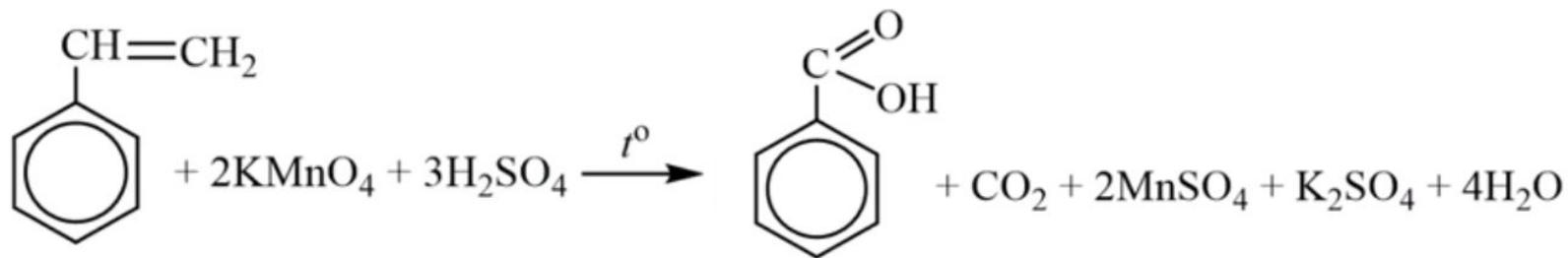
- Мягкое окисление –
(KMnO₄ в нейтральной среде)
- Жесткое окисление –
(KMnO₄ / K₂Cr₂O₇ в
кислой/щелочной)

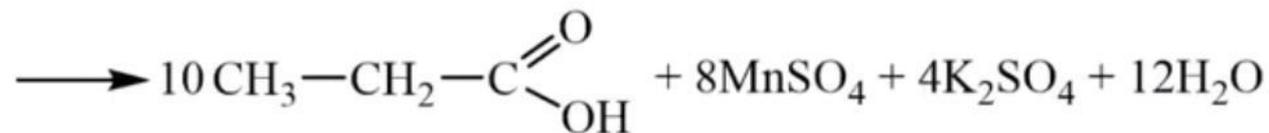
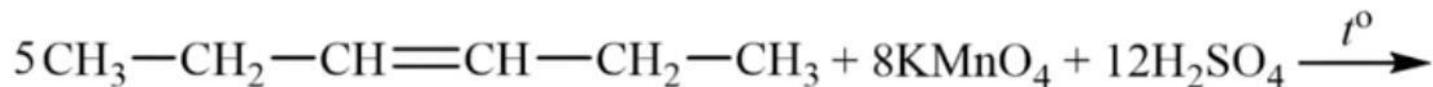
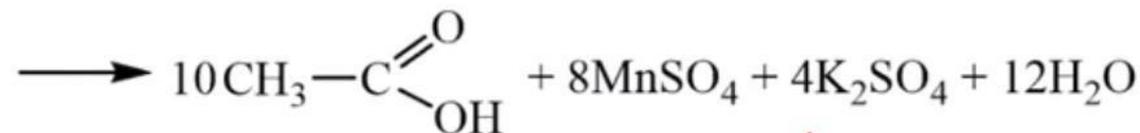
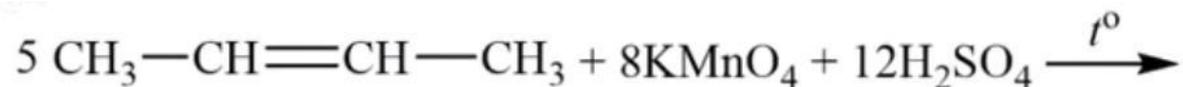


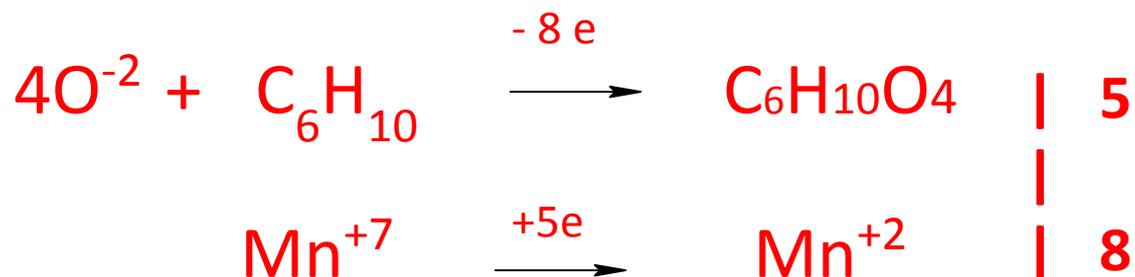
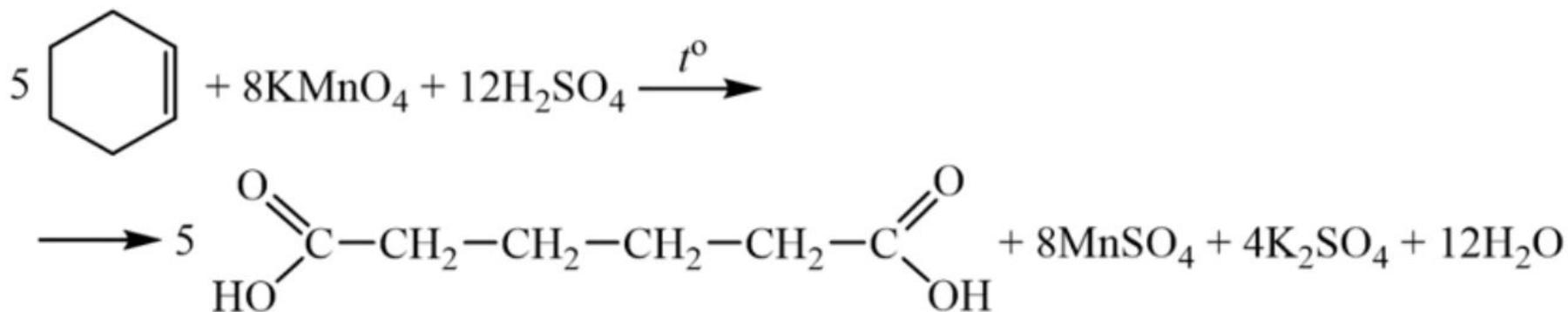
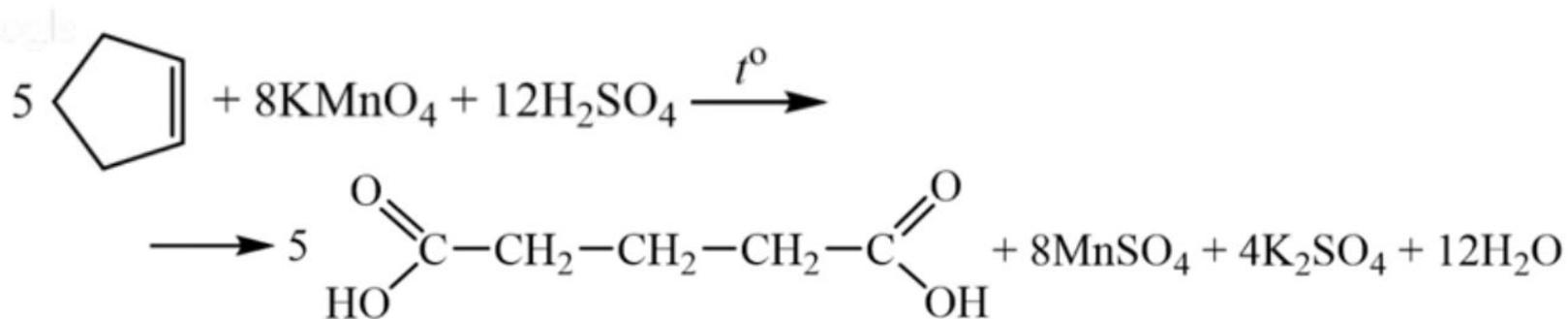




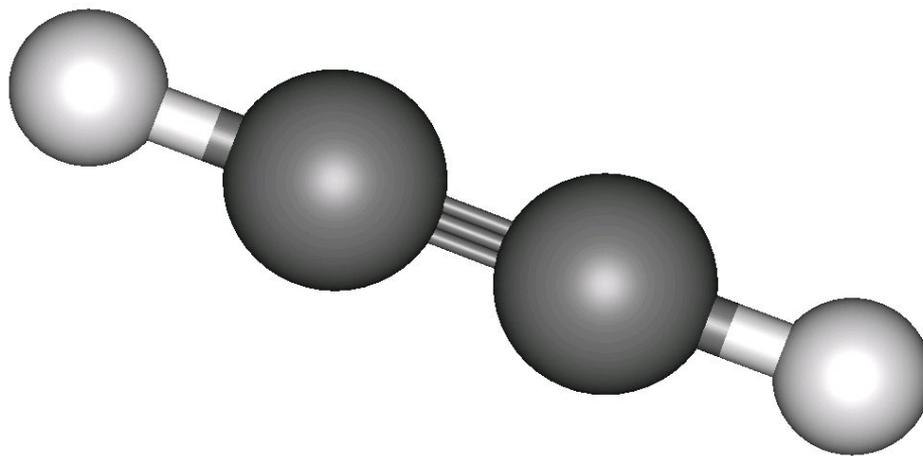




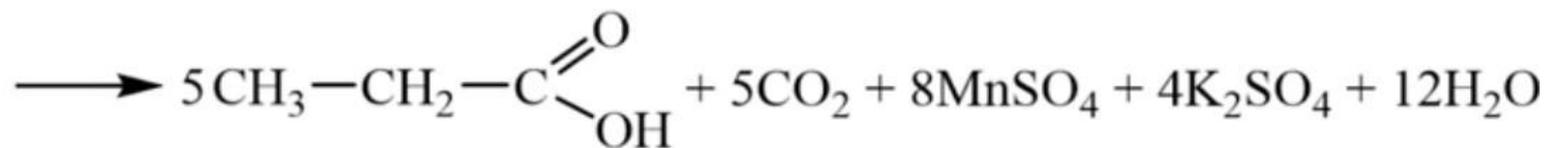
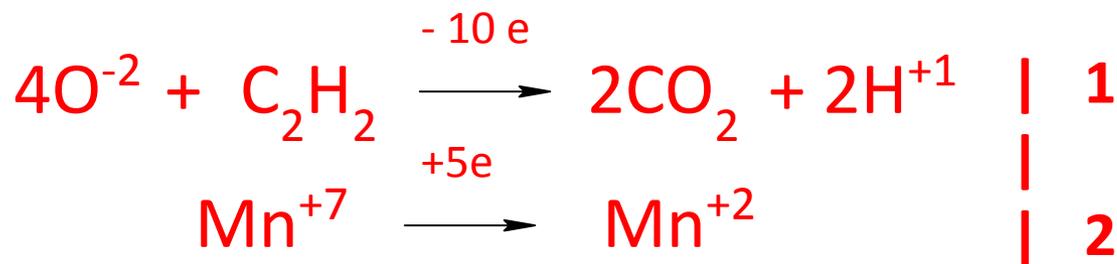
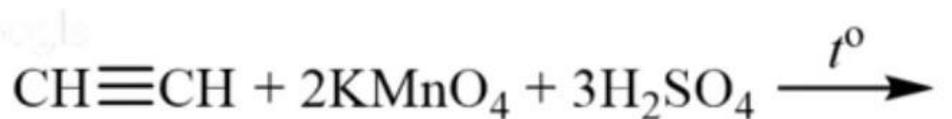
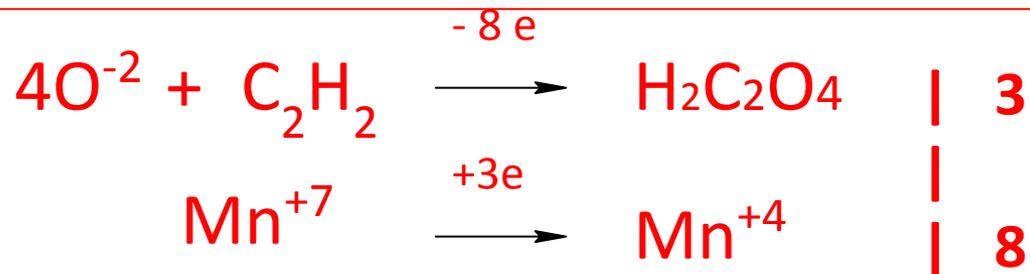
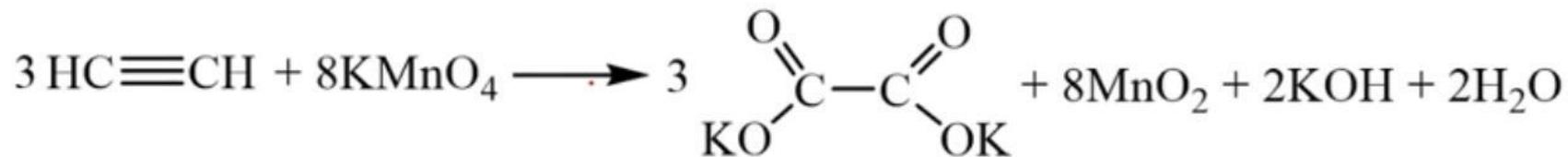


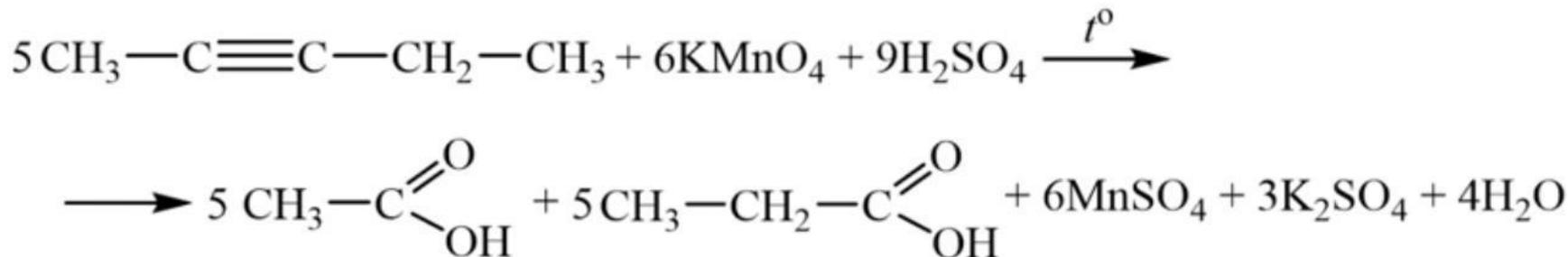
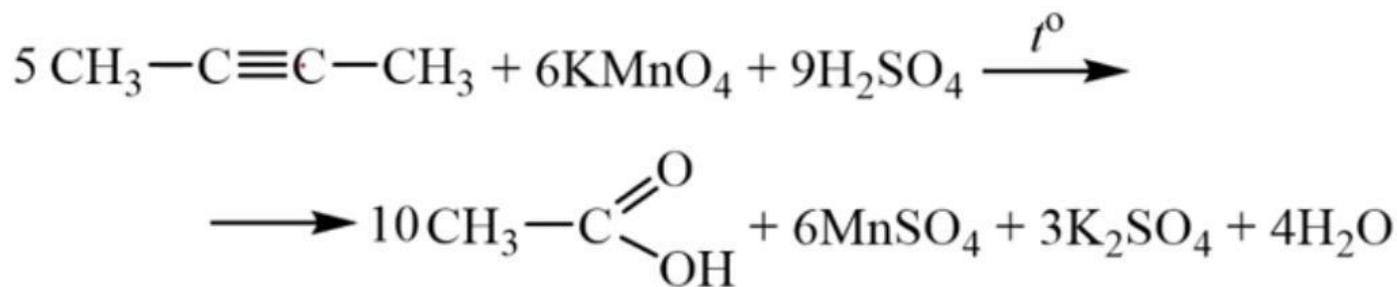


Алкины



- Мягкое окисление ацетилена –
(KMnO_4 в нейтральной среде)
- Жесткое окисление –
(KMnO_4 / $\text{K}_2\text{Cr}_2\text{O}_7$ в
кислой/щелочной)



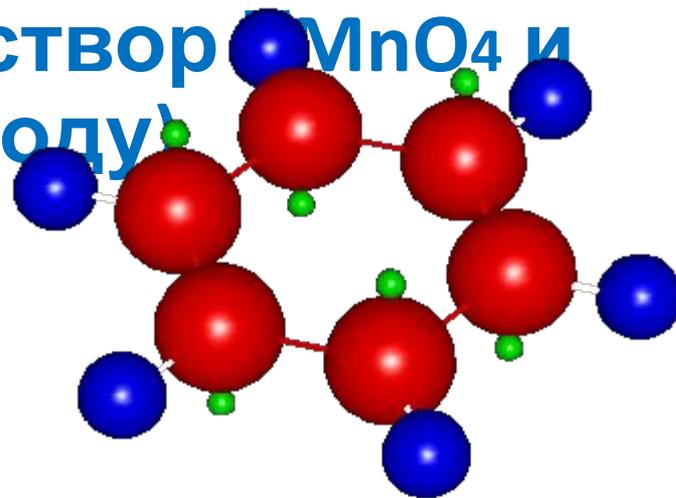


Арены - бензол

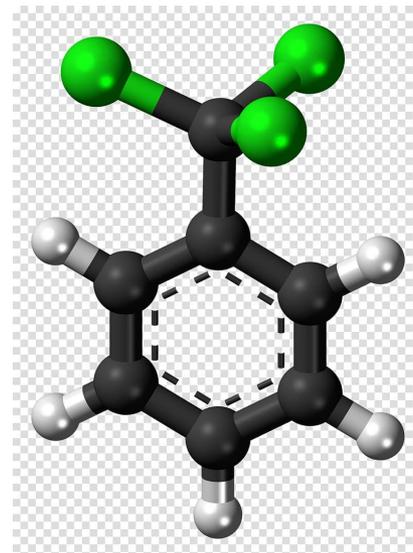


Бензол устойчив к действию
окислителей

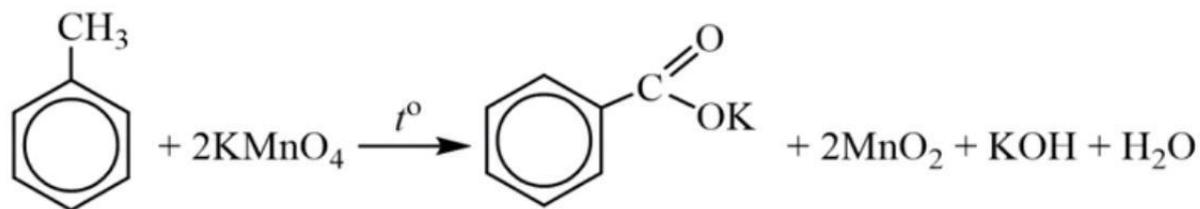
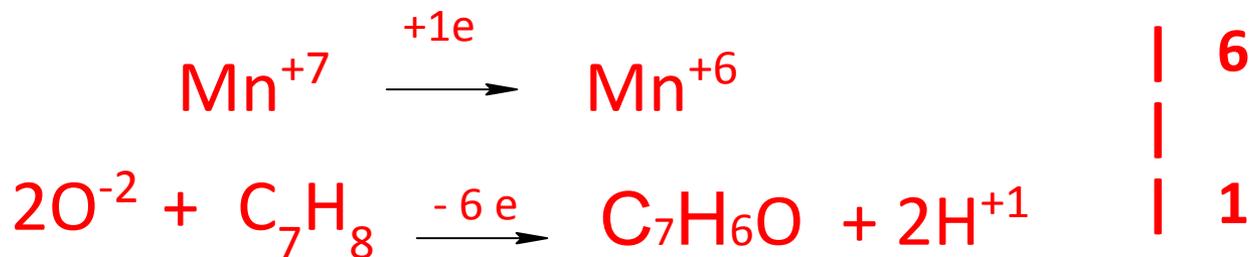
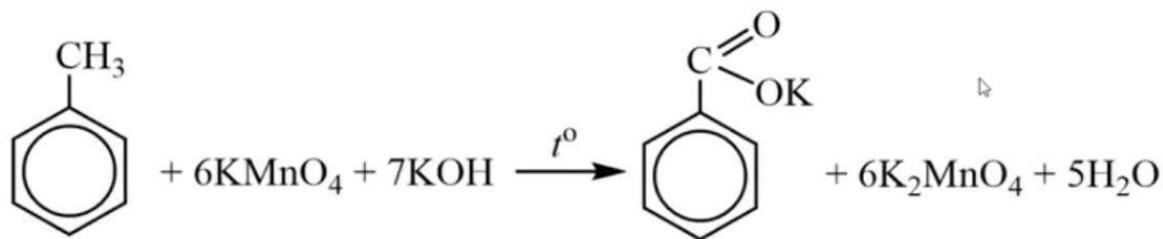
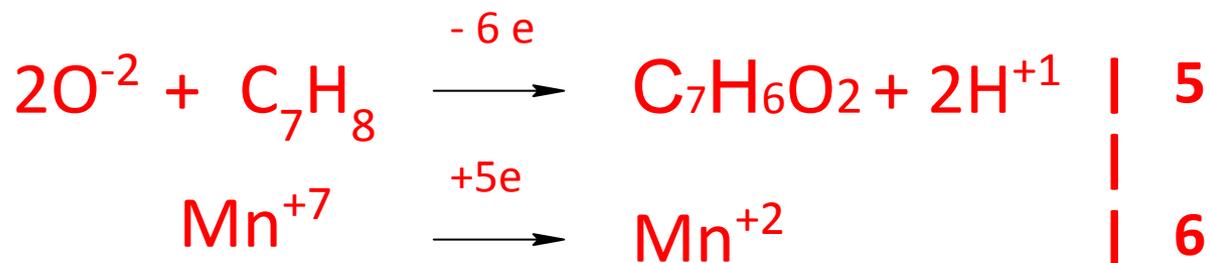
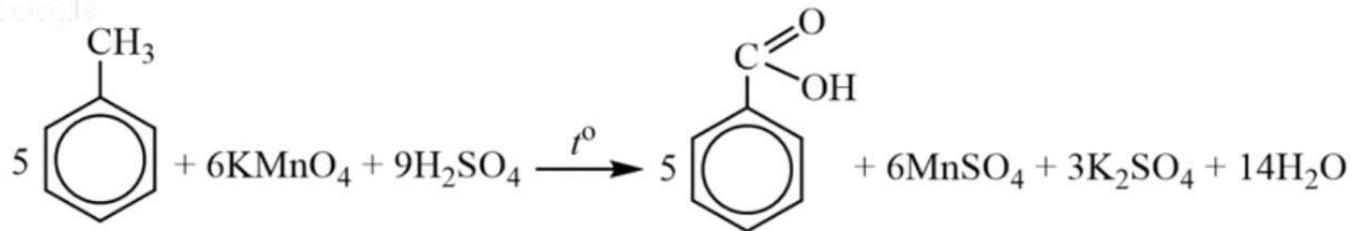
(не обесцвечивает раствор MnO_4 и
бромную воду)

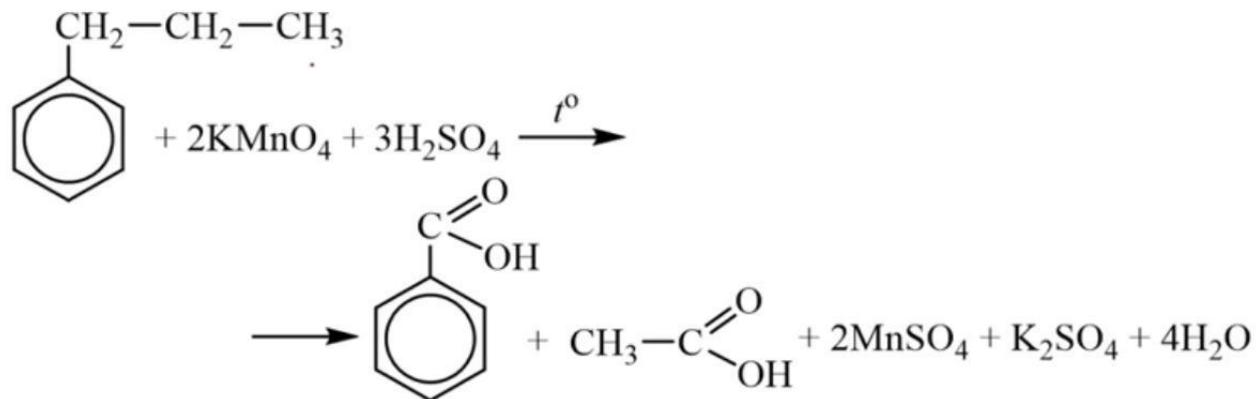
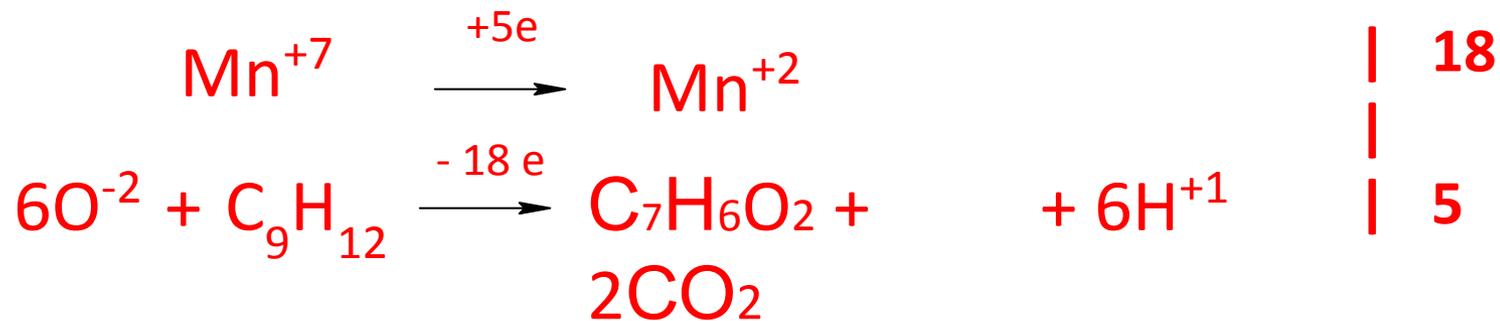
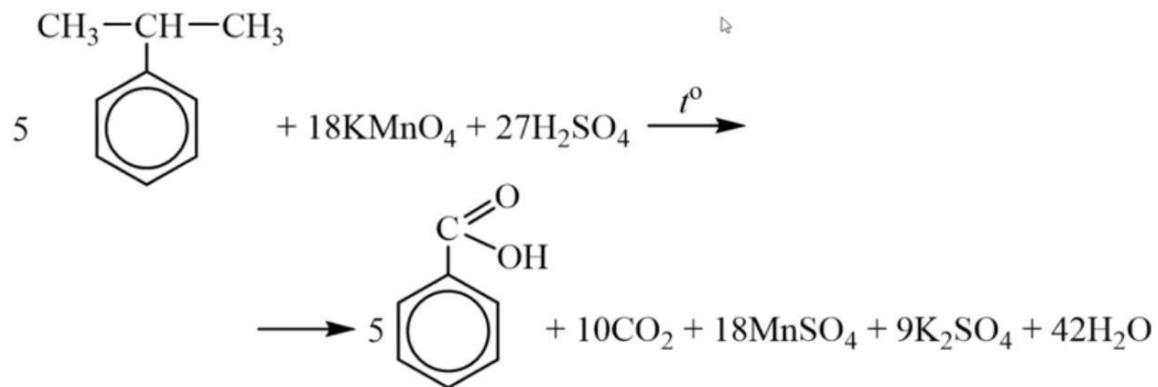


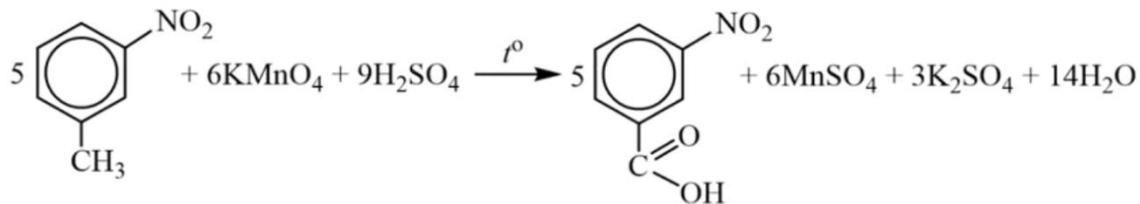
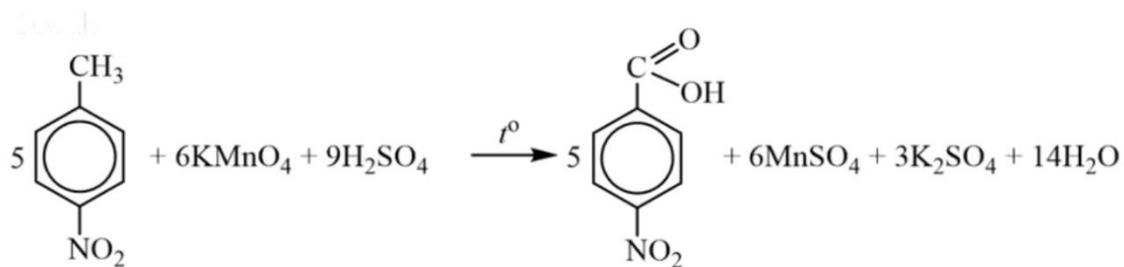
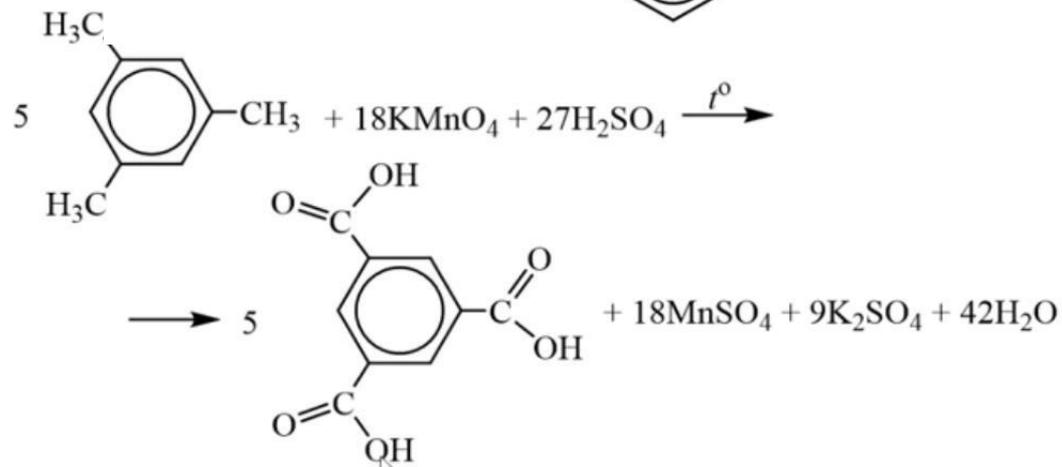
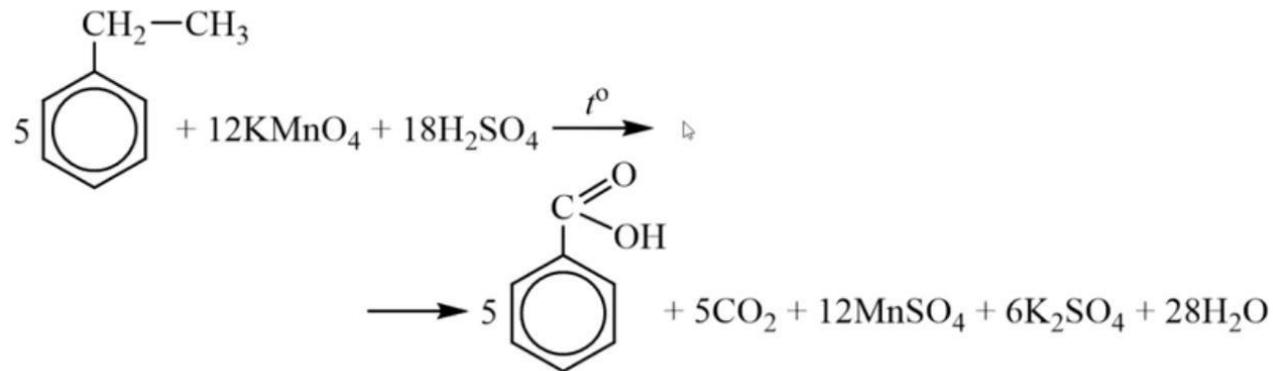
Арены – гомологи бензола



Окисляются в бензойную кислоту
(по α – атому углерода)







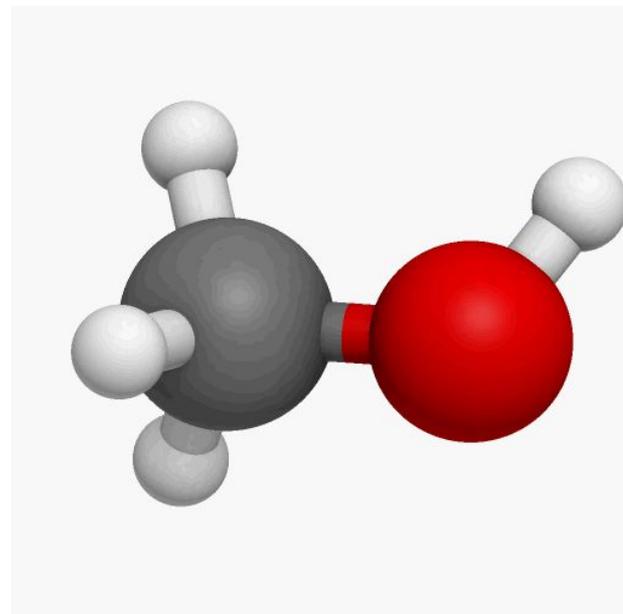
Спирты

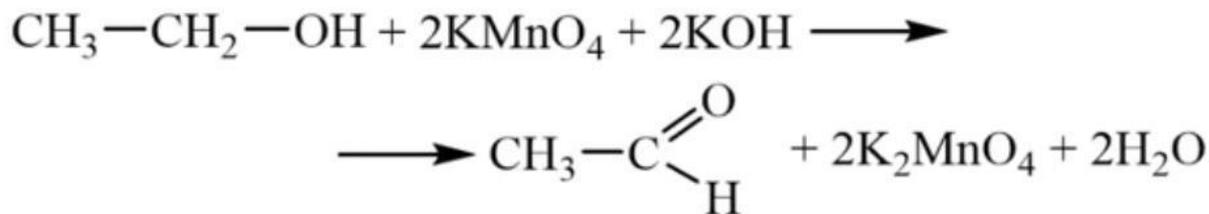
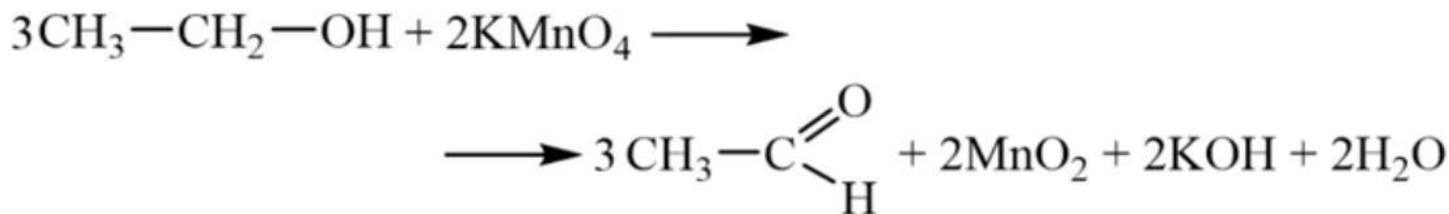
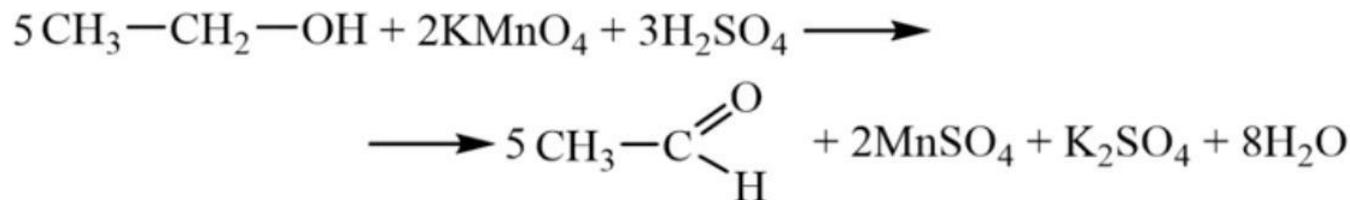
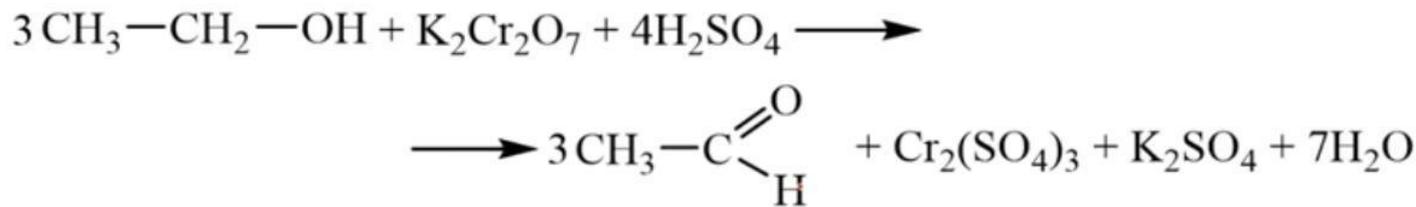
Первичные окисляются до
альдегидов/карбоновых
кислот

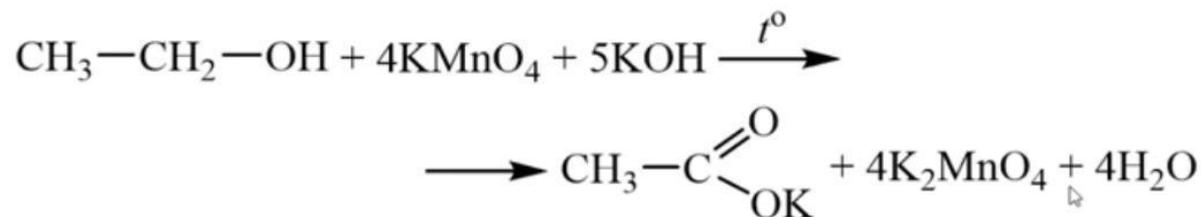
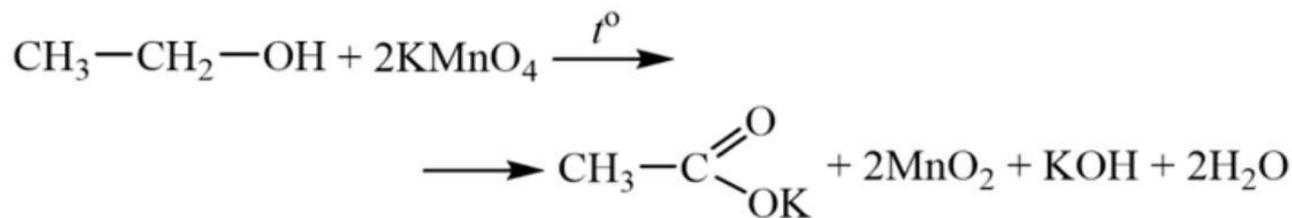
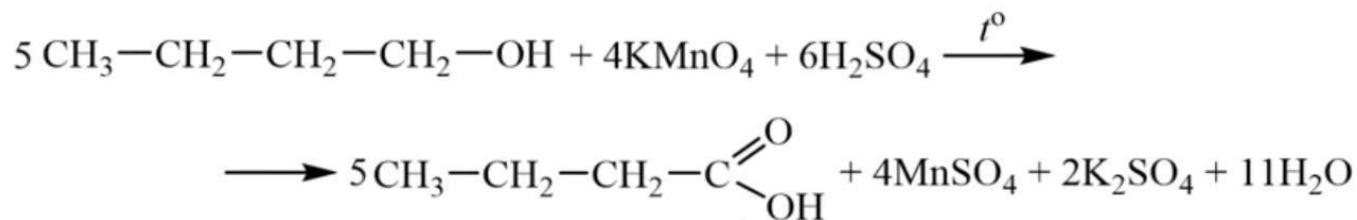
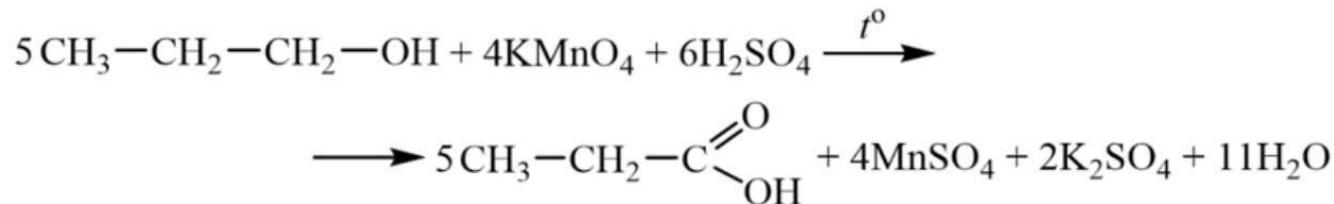
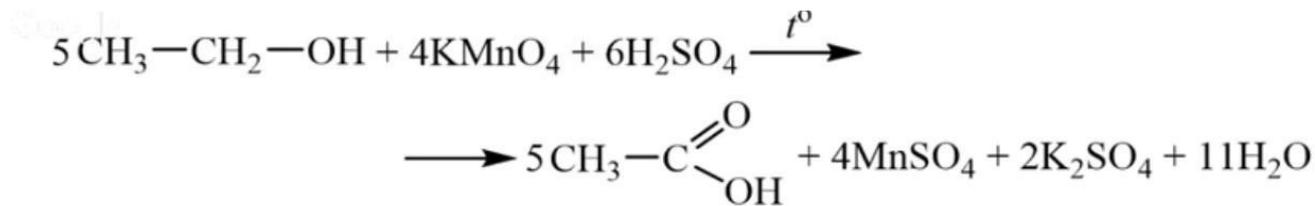
(CH_3OH – до CO_2)

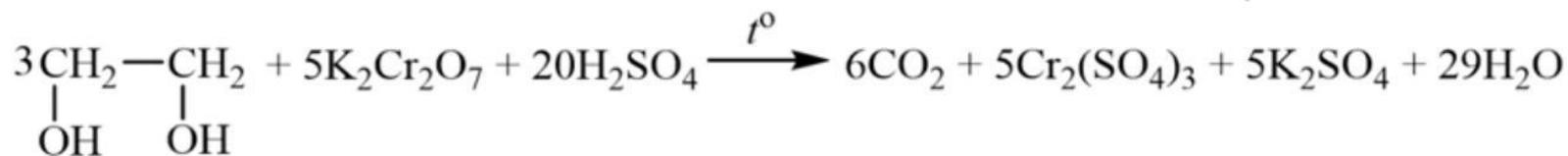
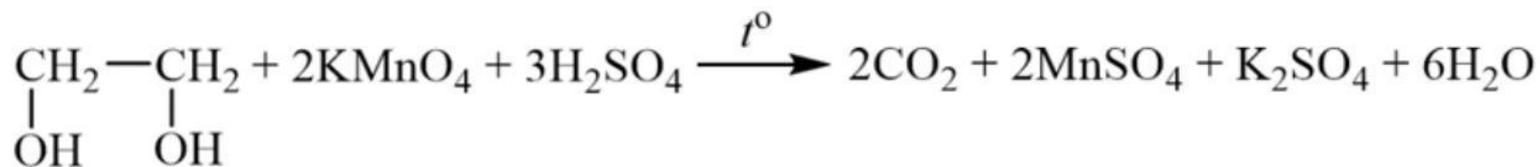
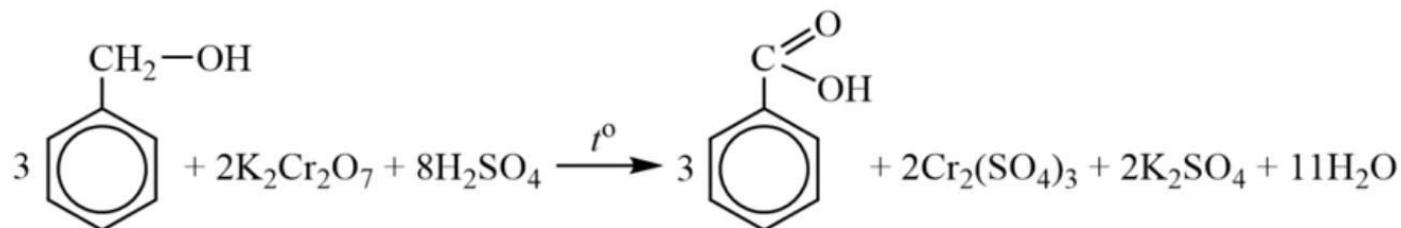
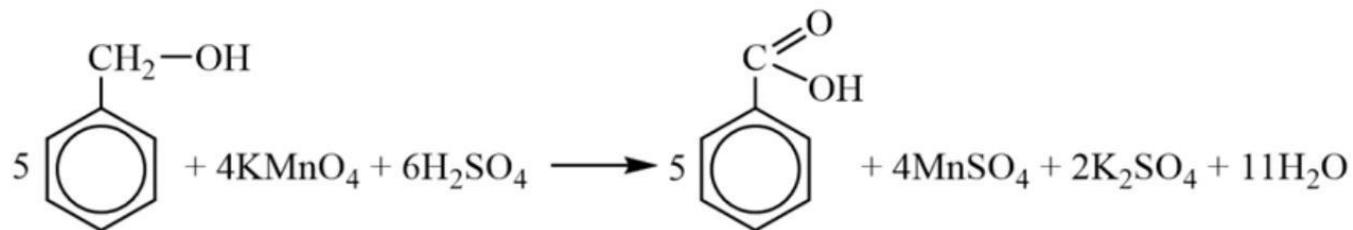
Вторичные – до кетонов

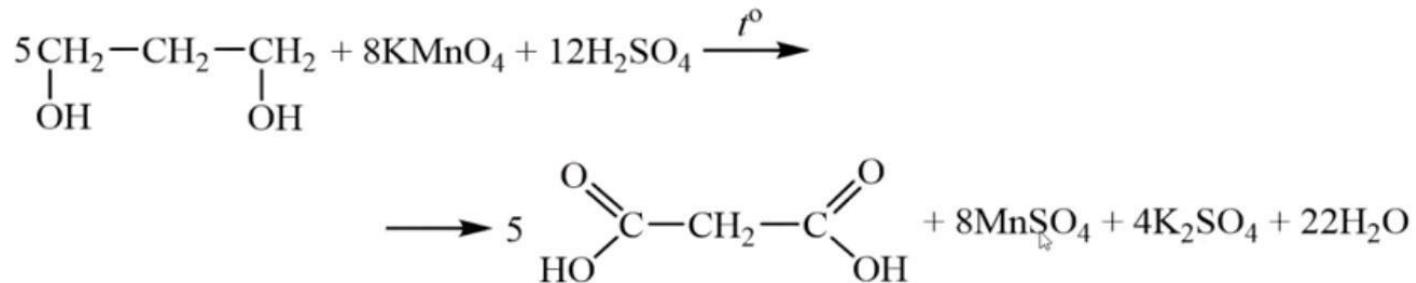
Третичные – не окисляются



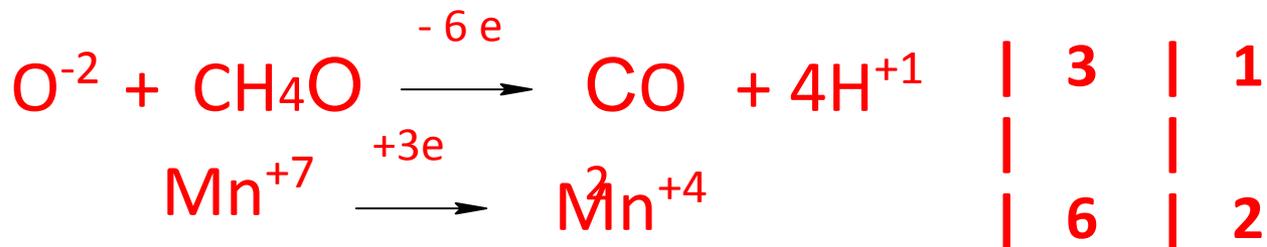
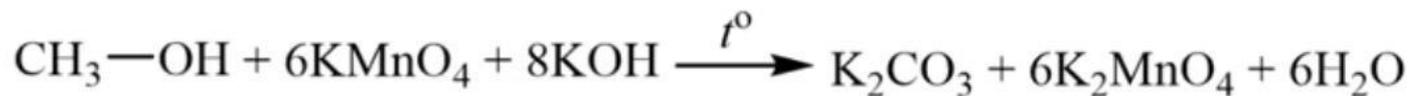
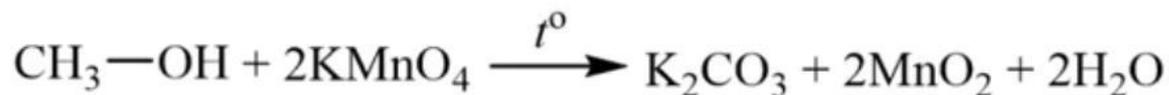


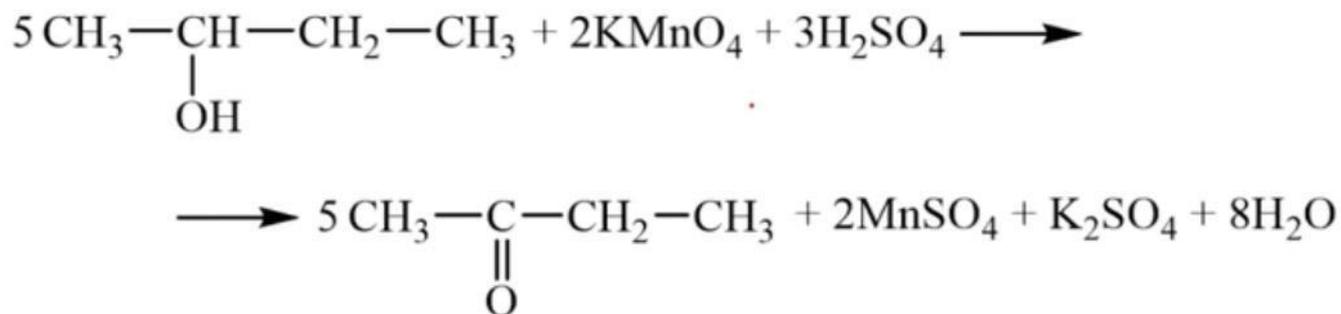
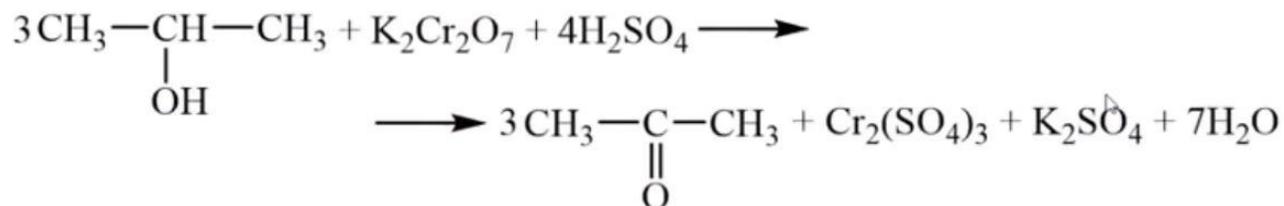
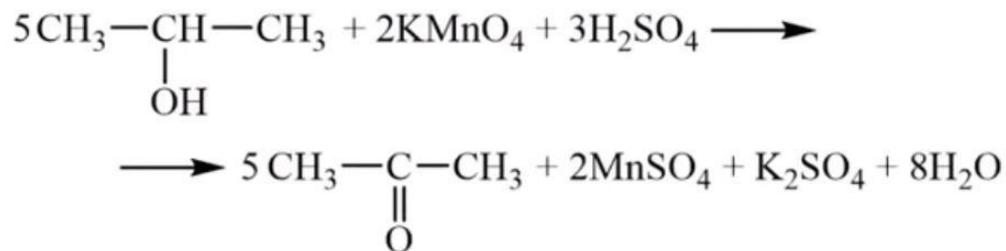


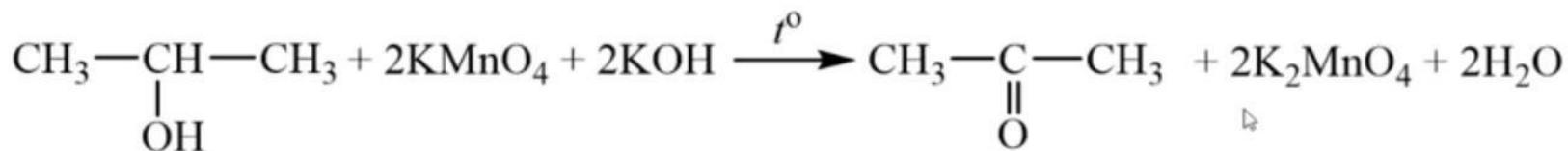
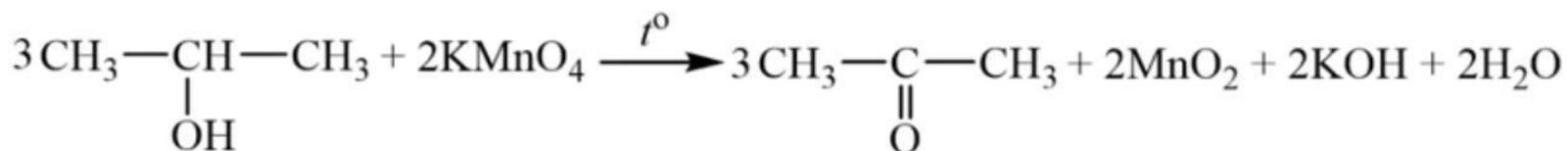
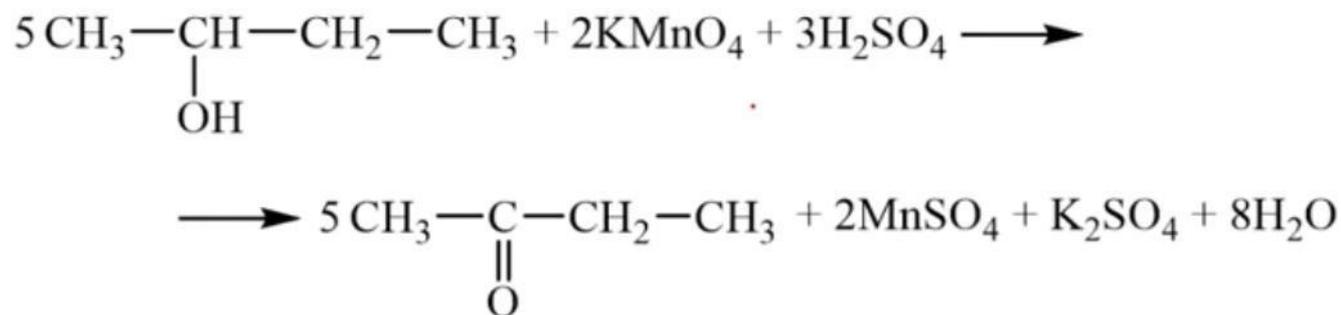




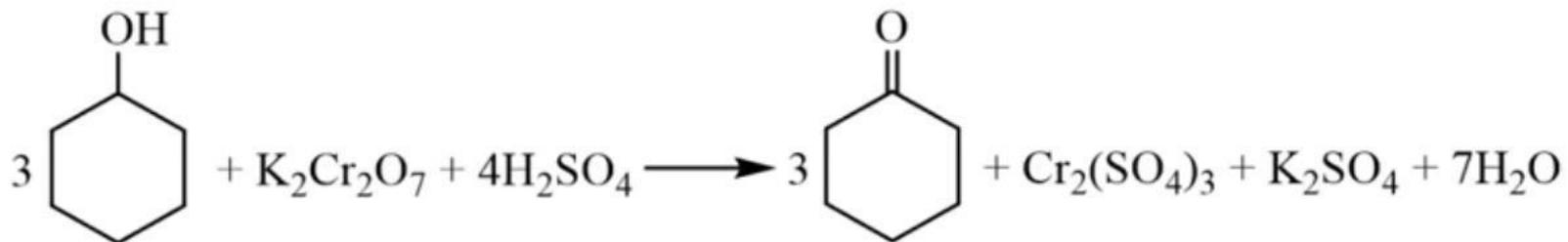
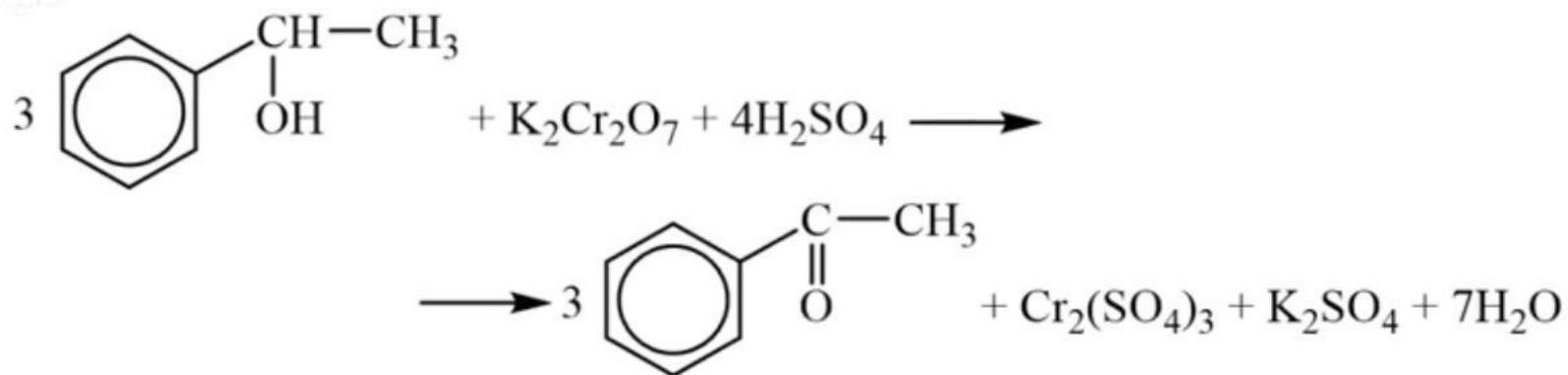
Метанол окисляется до



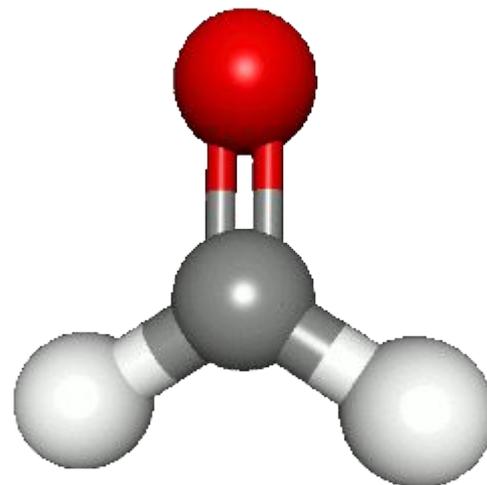




10/02/19

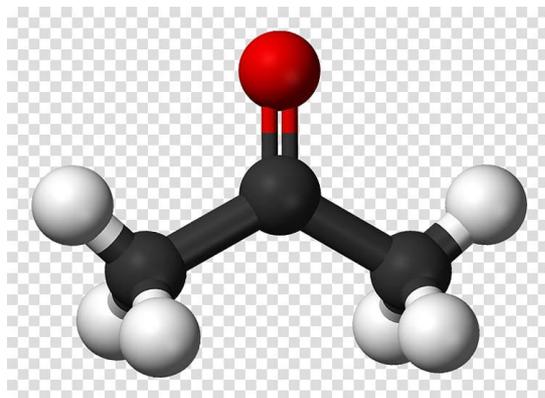


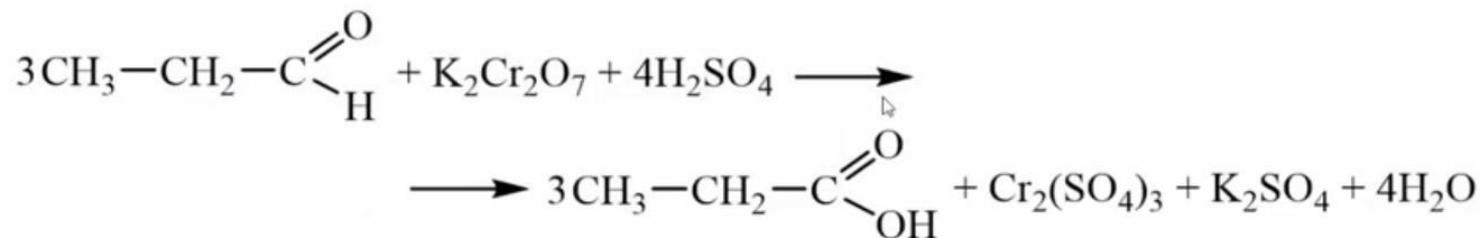
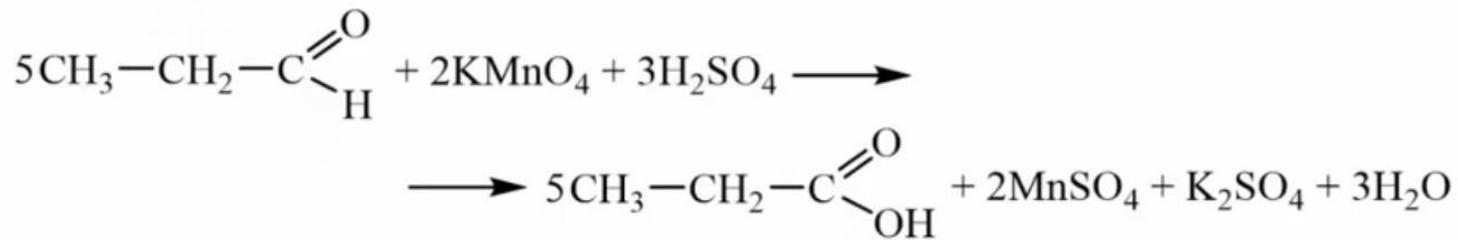
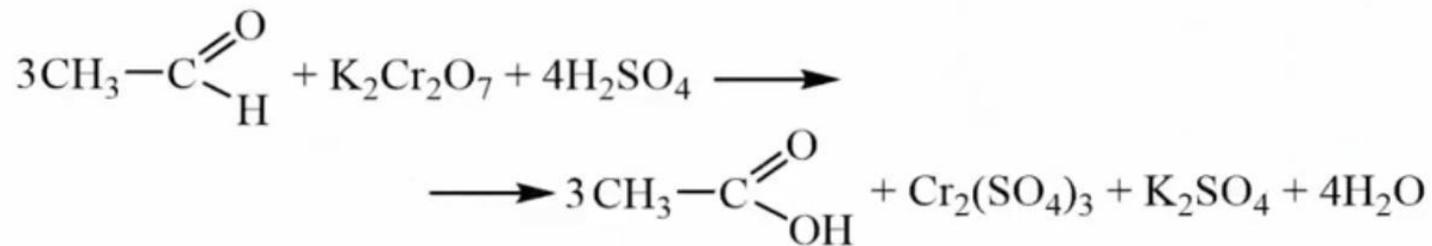
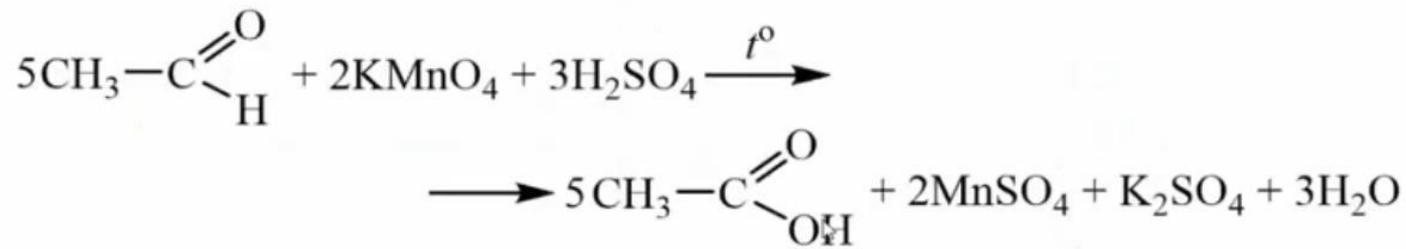
Альдегиды и кетоны

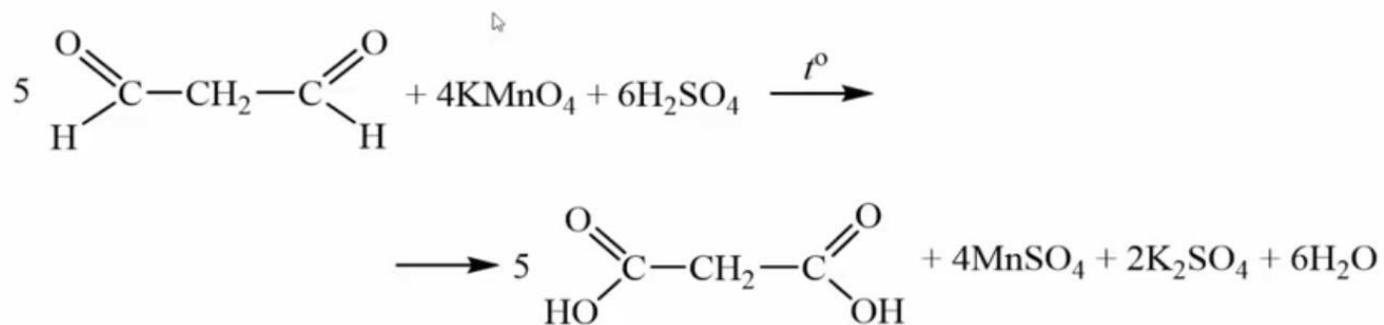
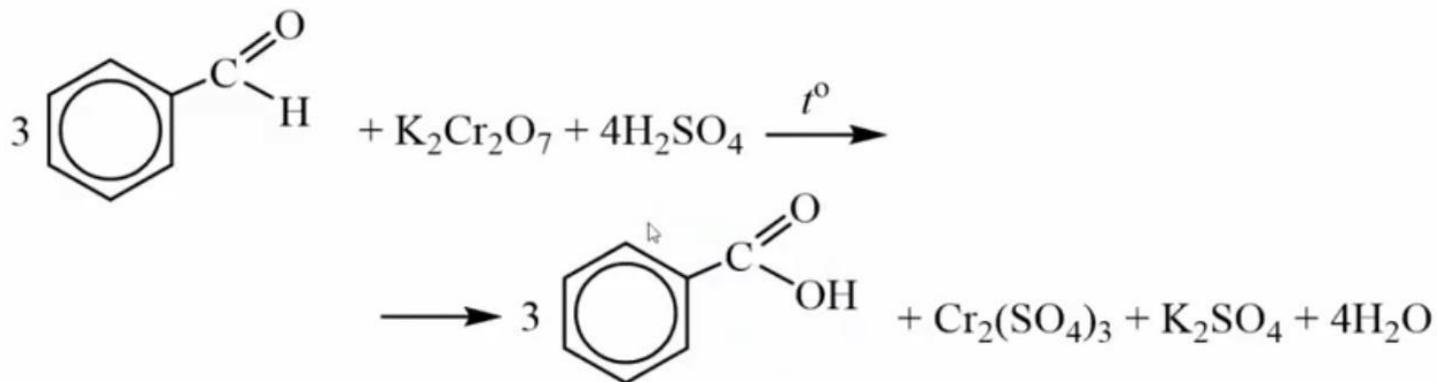
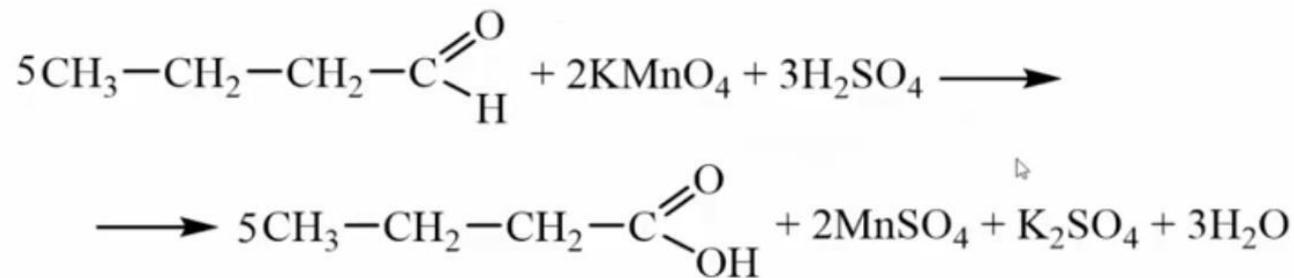


Окисляются до карбоновых кислот
(НСОН – до CO_2)

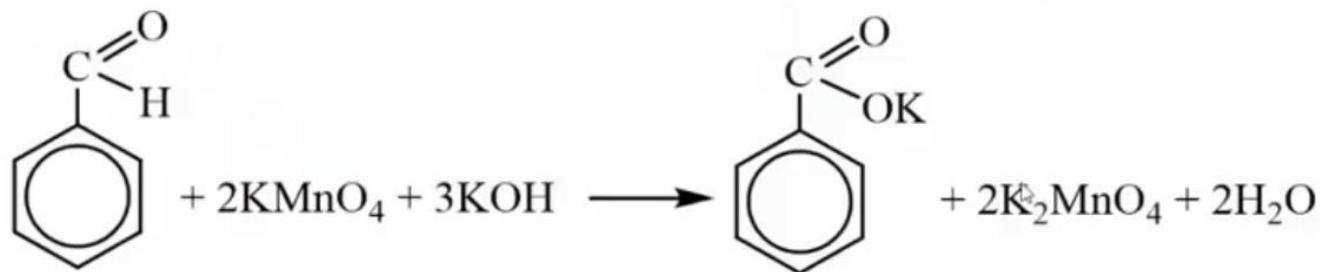
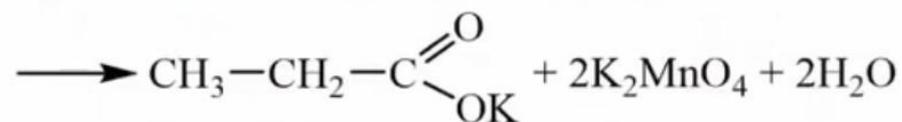
Кетоны не окисляются



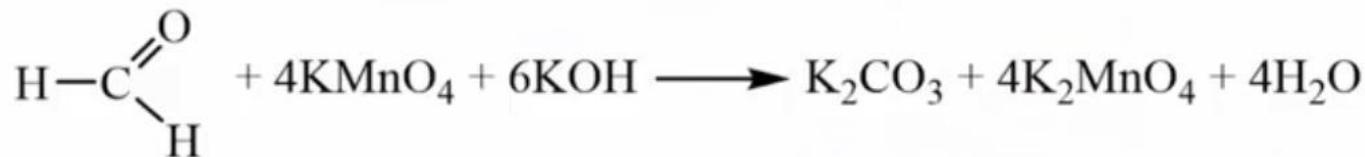
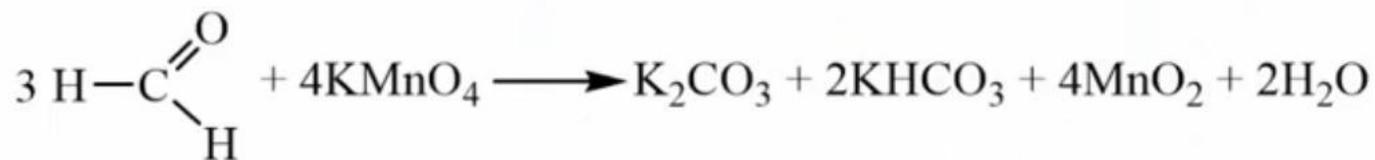
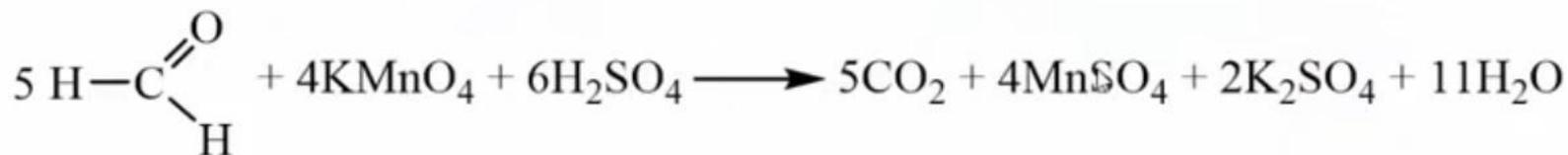




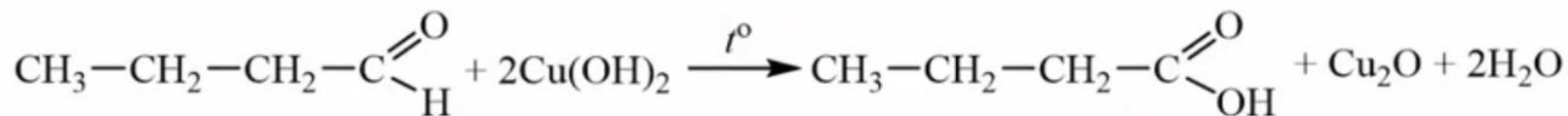
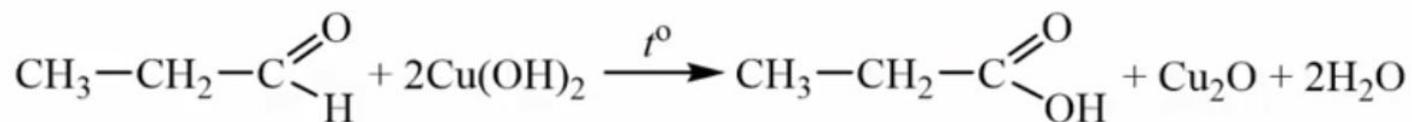
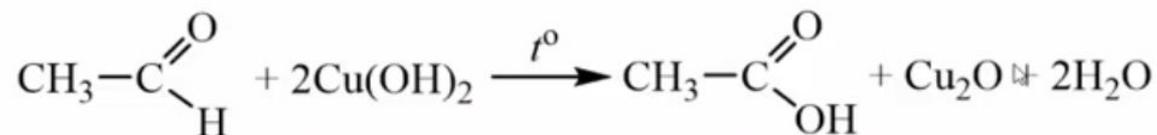
Ex. 11

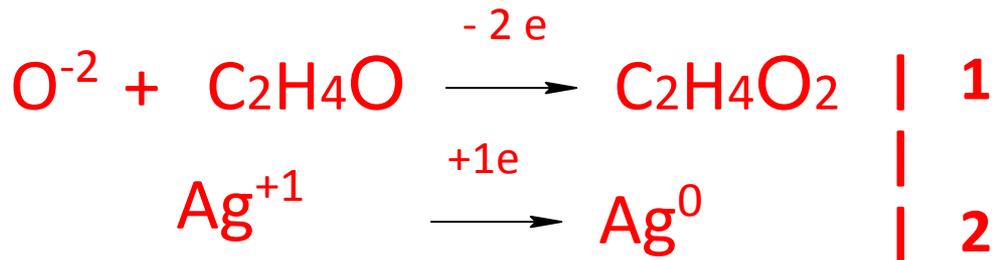
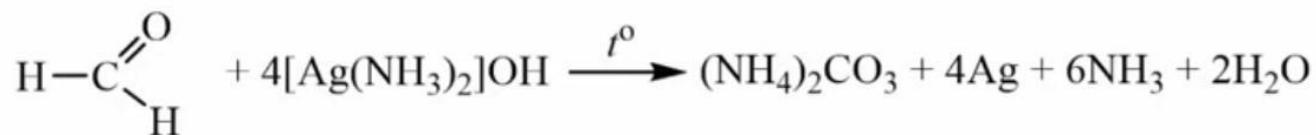
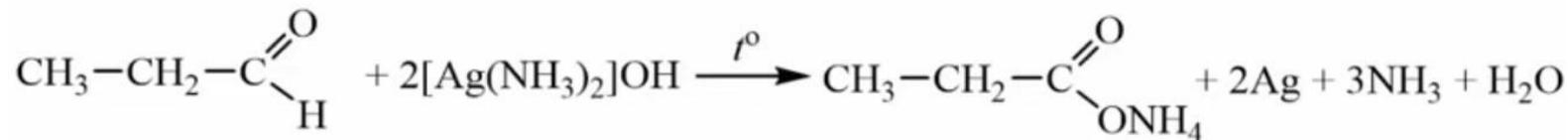
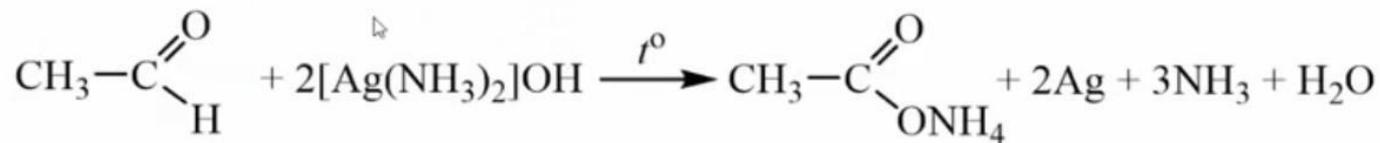


Формальдегид окисляется до CO_2



Example



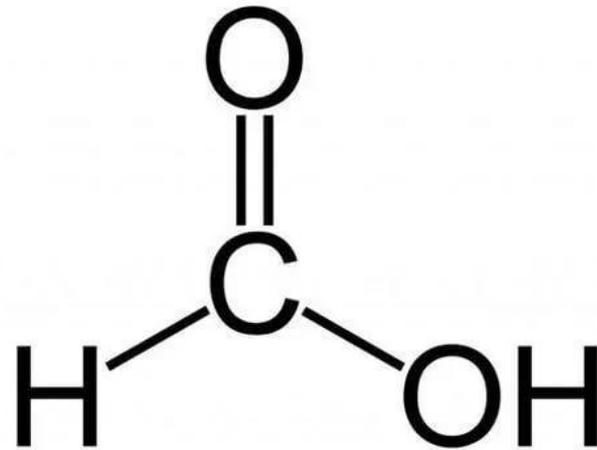
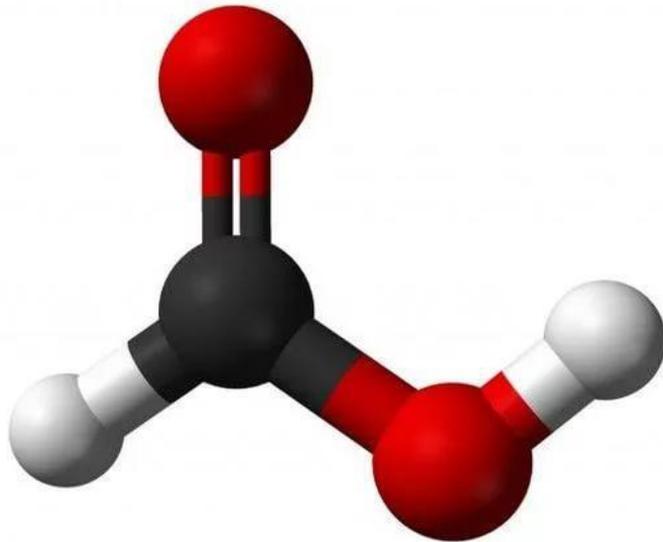


Муравьиная

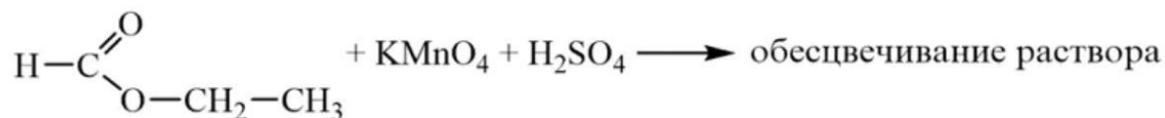
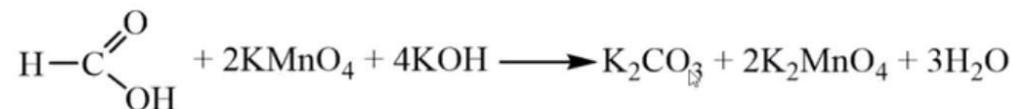
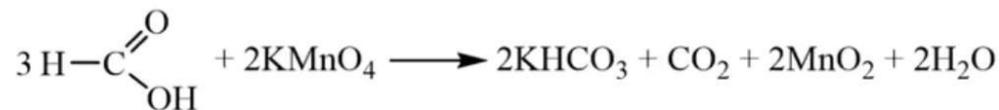
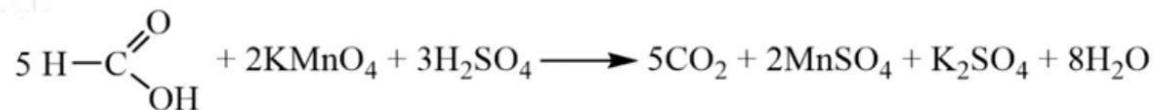
кислота

Окисляется до углекислого газа

(НСООН – до CO_2)



10.1



10.2

