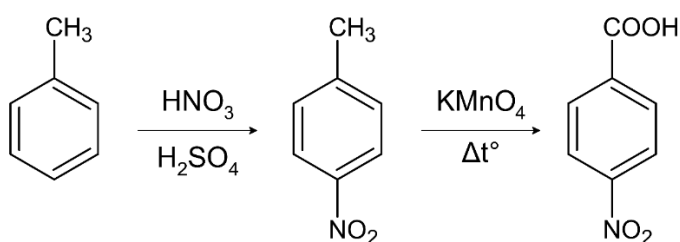


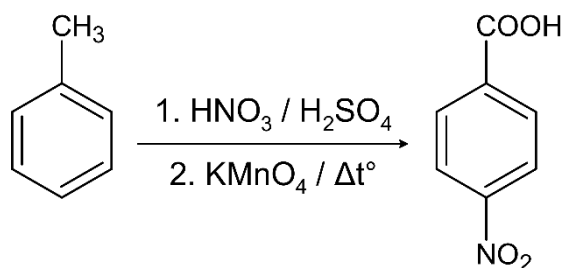
Zadanie 13

a) kwasu *p*-nitrobenzoesowego

Schemat reakcji:

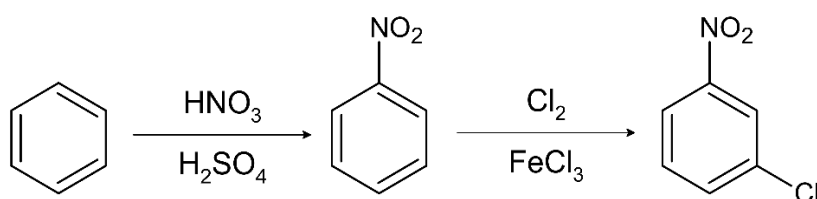


Skrócony schemat reakcji:

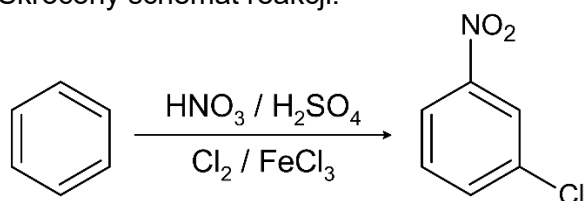


a) *m*-chloronitrobenzenu

Schemat reakcji:

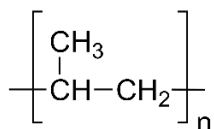


Skrócony schemat reakcji:



Zadanie 14.1

300 merów



Zadanie 14.2

Etap 1: addycja

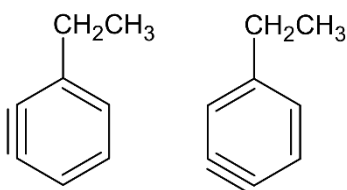
Etap 2: eliminacja

Etap 3: polimeryzacja

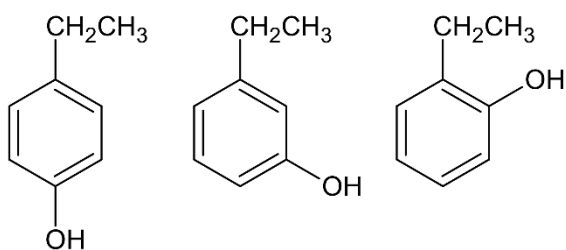
Zadanie 14.3

562,2 m³

Zadanie 15.1



Zadanie 15.2



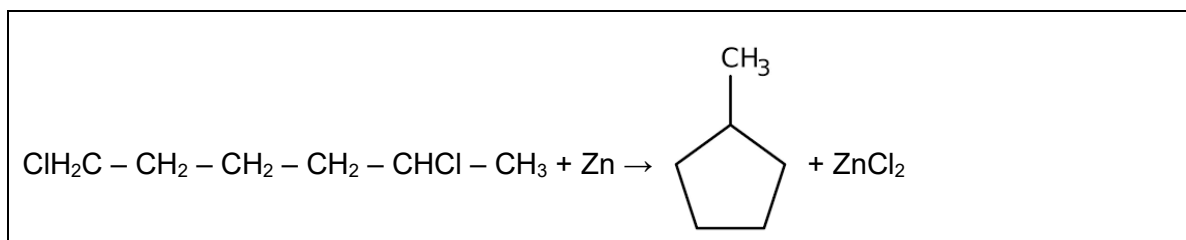
4-etylofenol
lub
p-etylofenol

3-etylofenol
lub
m-etylofenol

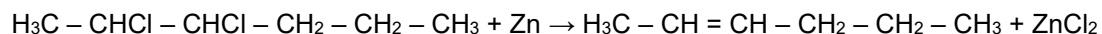
2-etylofenol
lub
o-etylofenol

Zadanie 16.1

a)

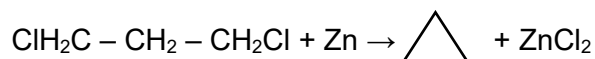


b)

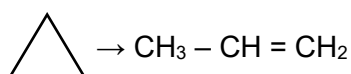


Zadanie 16.2

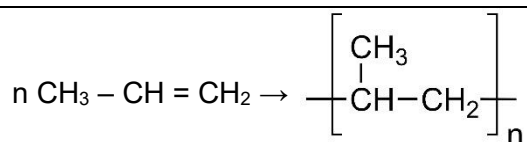
a)



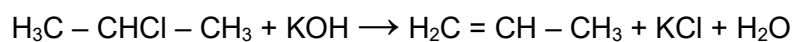
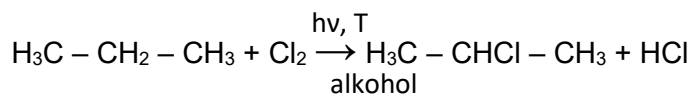
b)



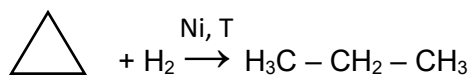
c)



Zadanie 16.3

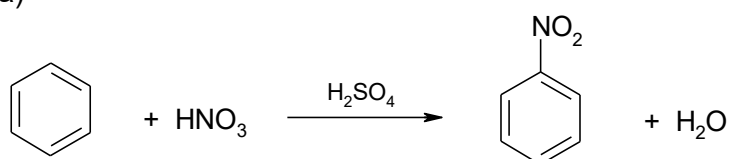


Zadanie 16.4

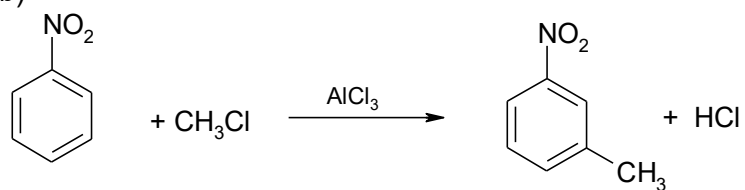


Zadanie 17.1

a)



b)



Zadanie 17.2

- 1: substytucja elektrofilowa
2: substytucja elektrofilowa

Zadanie 17.3

5,15%