

Chemia organiczna – ćwiczenia 3

Nomenklatura związków organicznych 3



dr inż. Piotr Niemiec

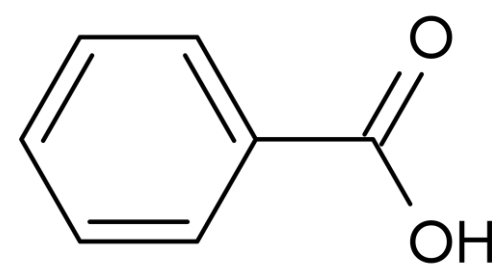
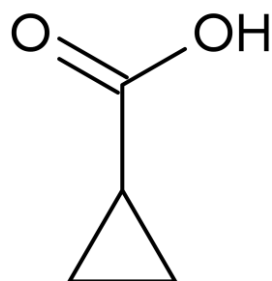
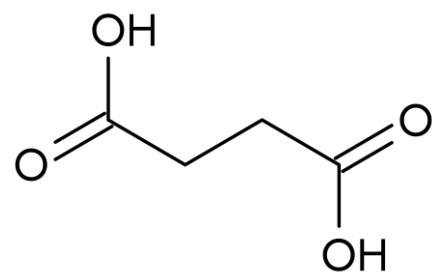
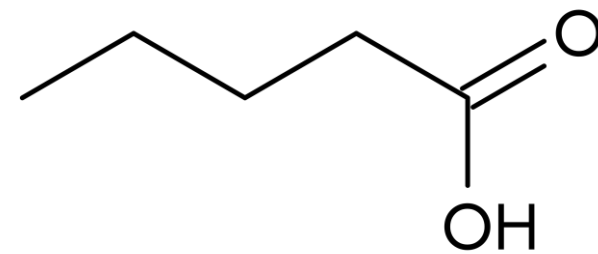
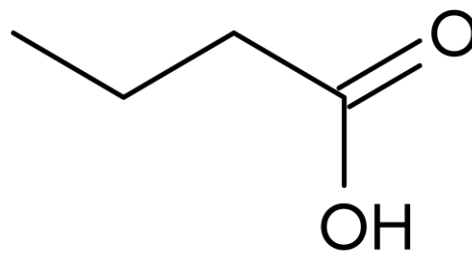
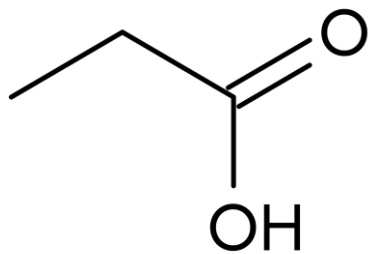
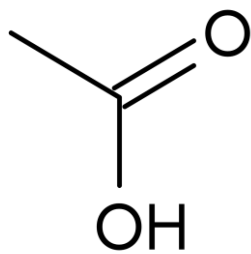
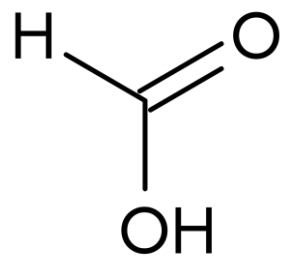
Katedra Chemii

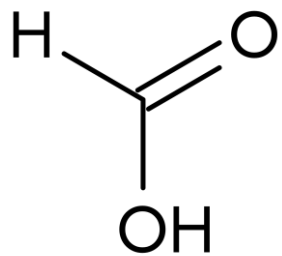
Wydział Matematyczno-Przyrodniczy

Akademia Tarnowska

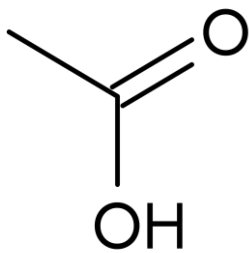
p_niemiec@atar.edu.pl

<https://piotrniemiec.atar.edu.pl>

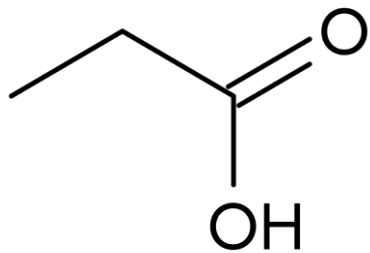




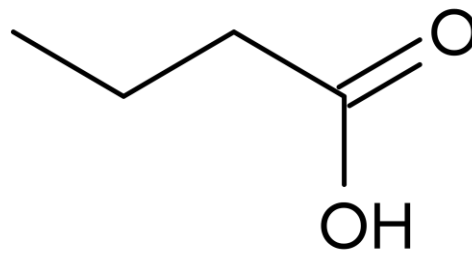
kwas mrówkowy



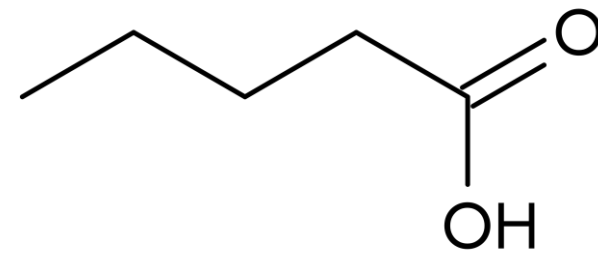
kwas octowy



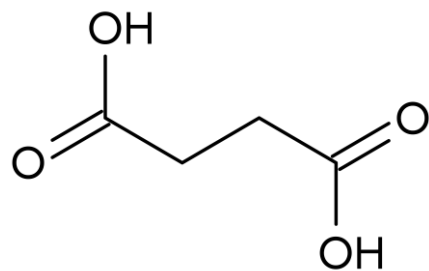
kwas propanowy



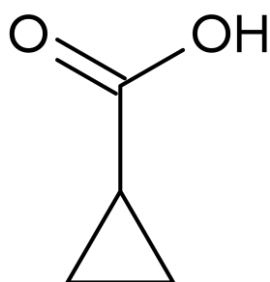
kwas butanowy



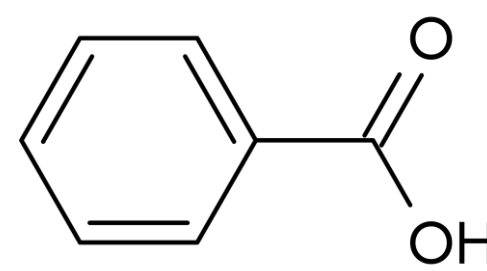
kwas pentanowy



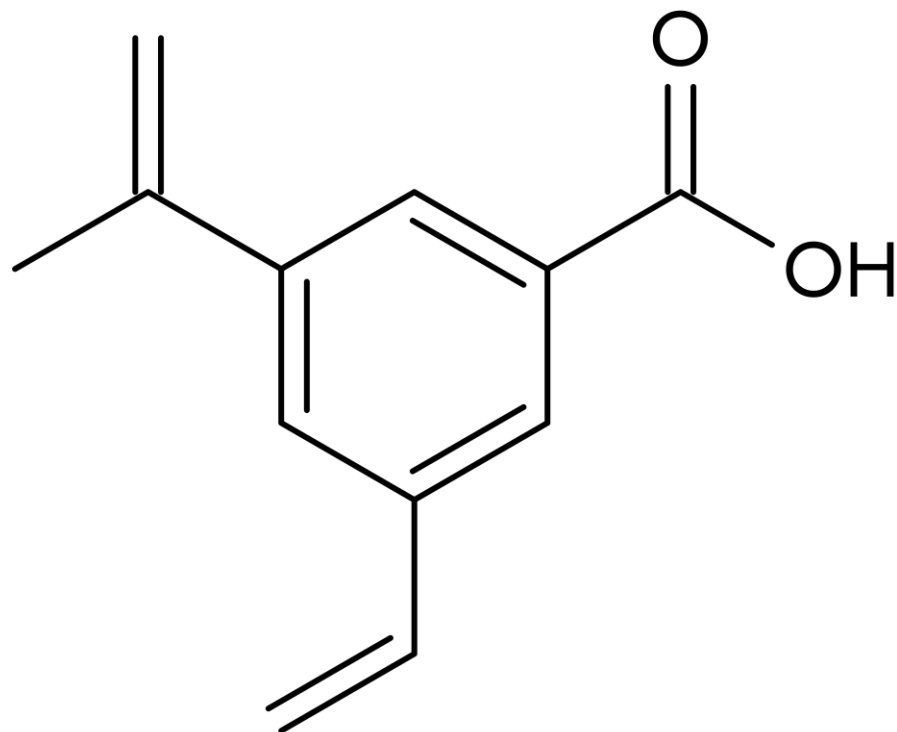
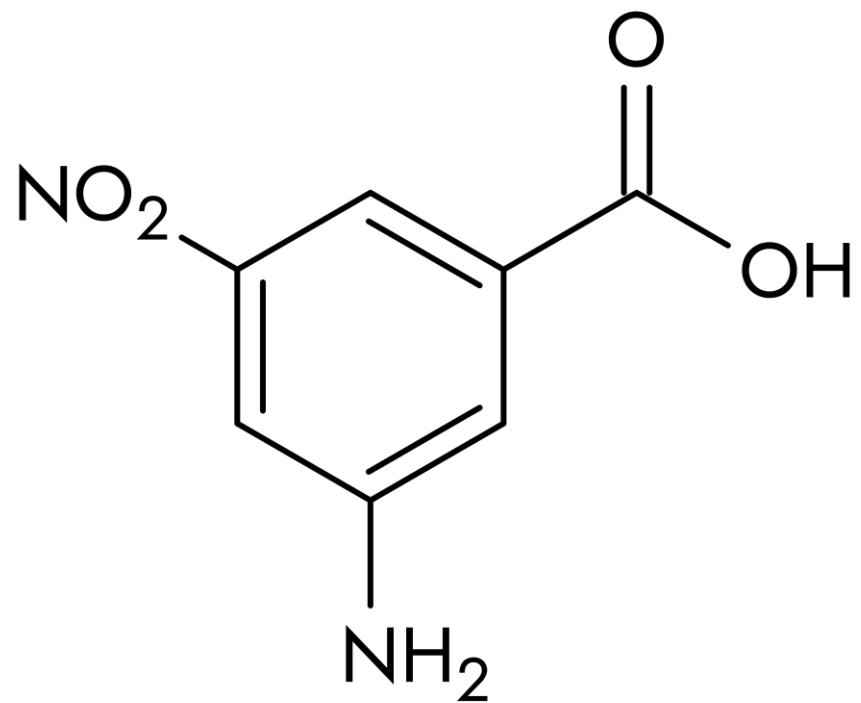
kwas butanodiowy

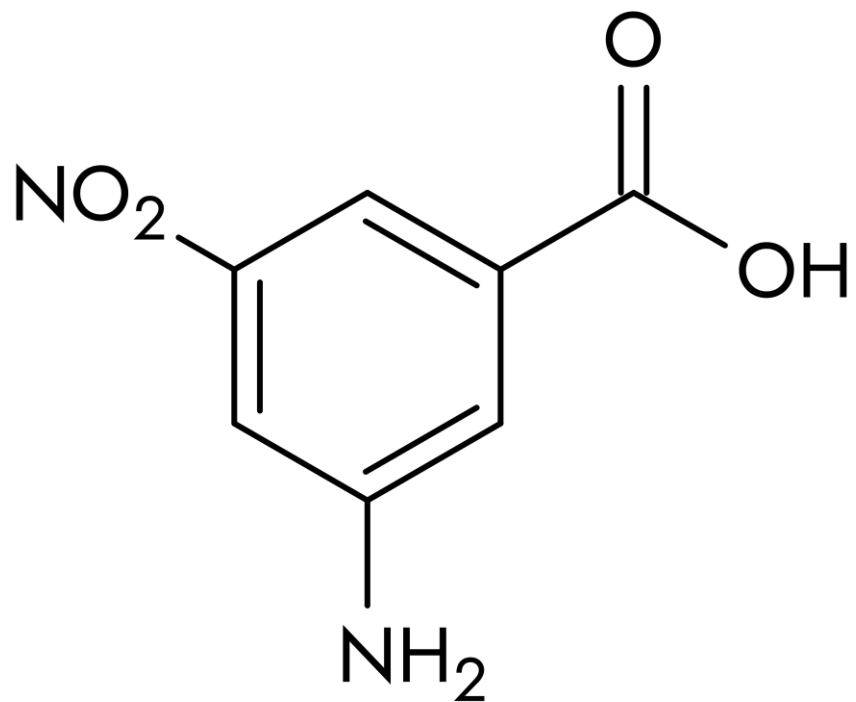


kwas cyklopropanokarboksylowy

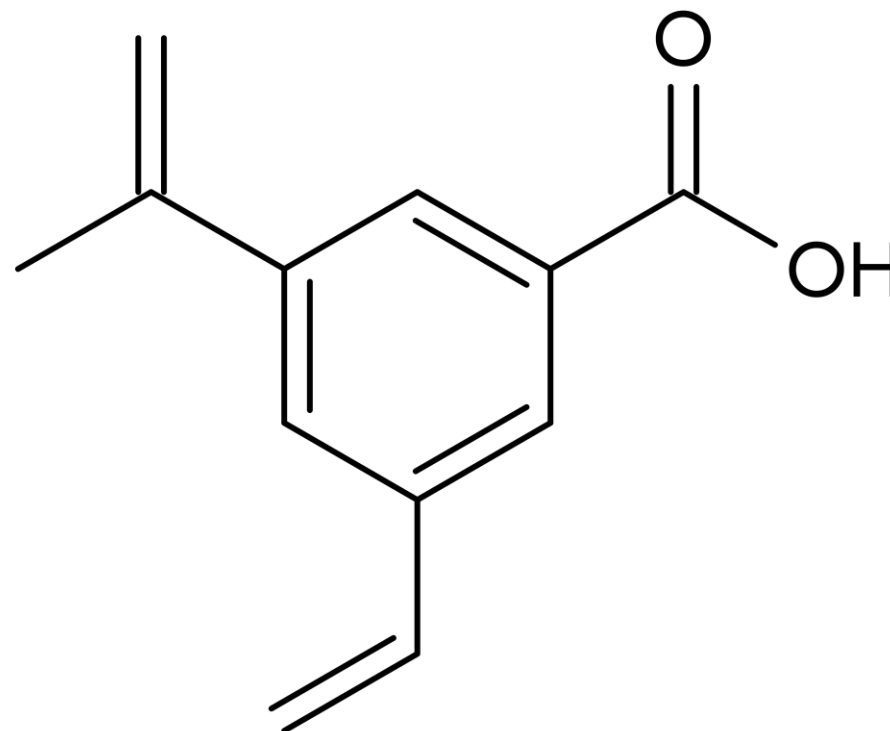


kwas benzoesowy

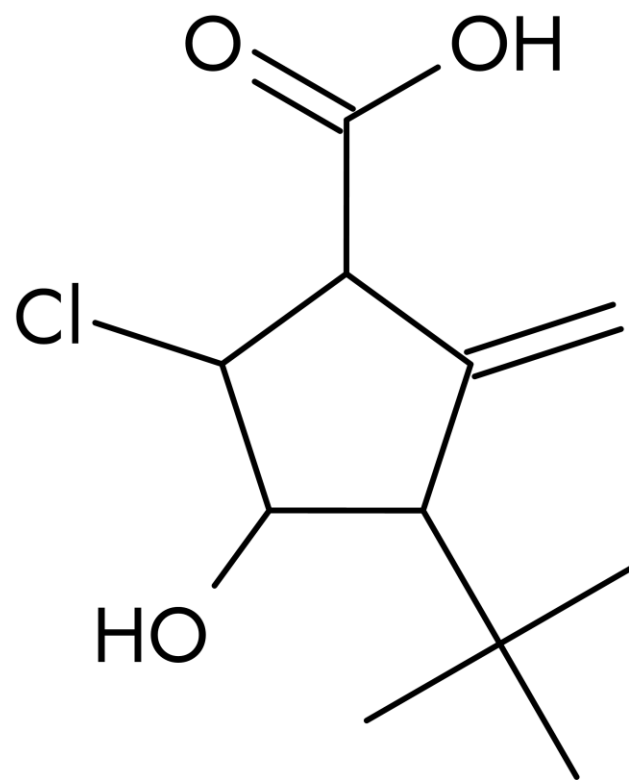


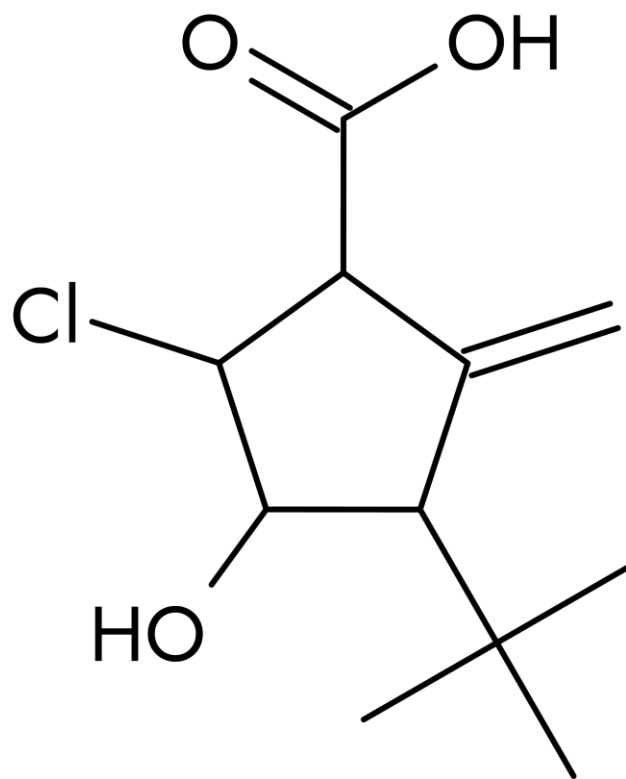


kwask 3-amino-5-nitrobenzesowy

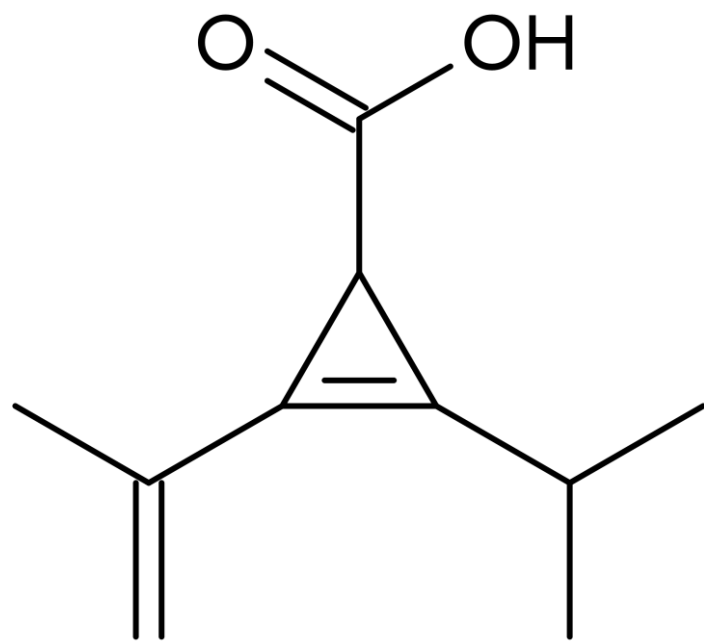


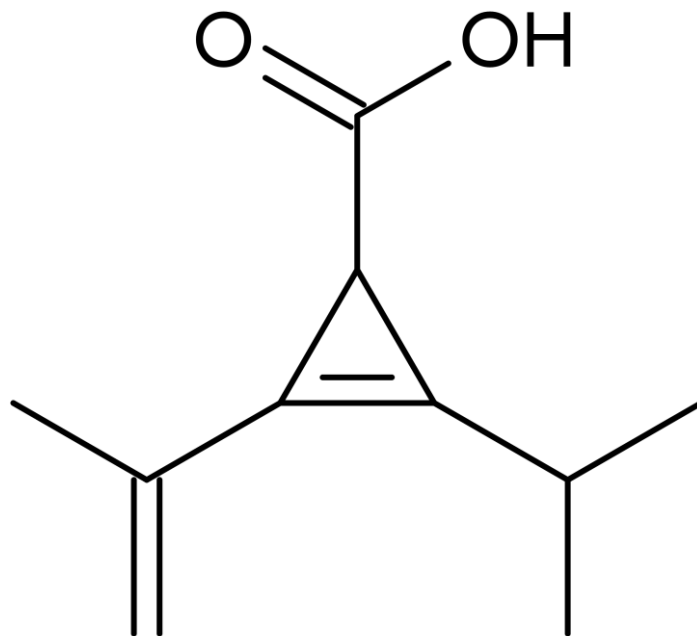
kwask 3-etenylo-5-(prop-1-en-2-ylo)benzoesowy



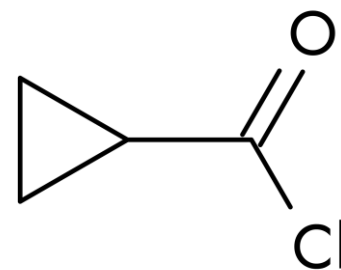
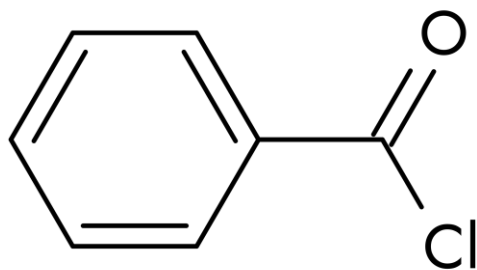
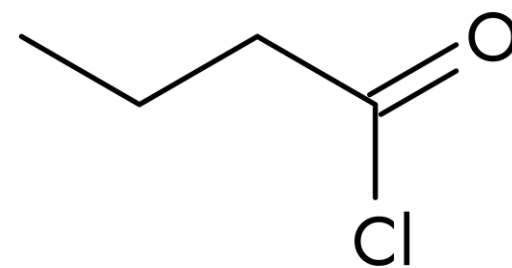
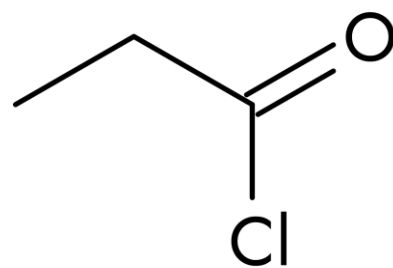
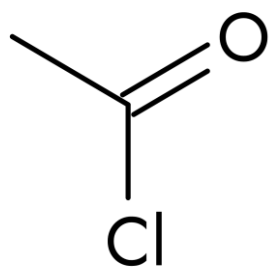
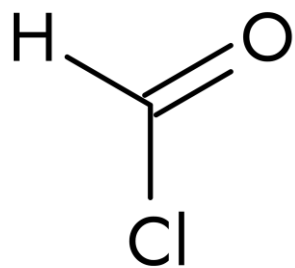


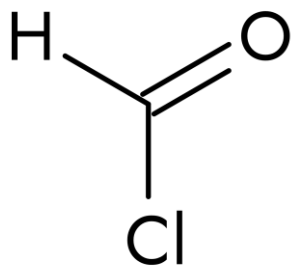
kwasy 3-*tert*-butylo-5-chloro-4-hydroksy-2-metylidenocyklopentanokarboksylowy



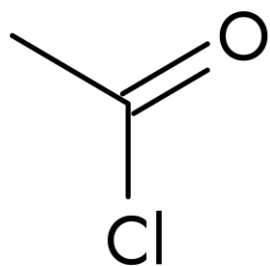


kwasy 2-(propan-2-ylo)-3-(prop-1-en-2-ylo)cykloprop-2-enokarboksylowe

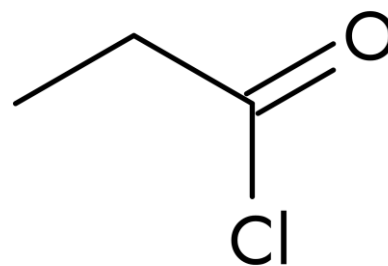




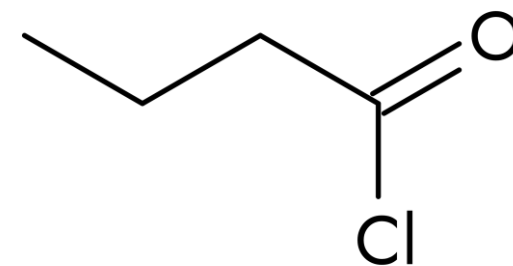
chlorek formylu



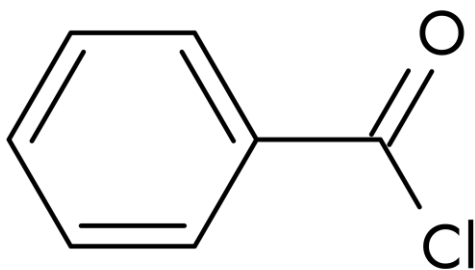
chlorek acetylu



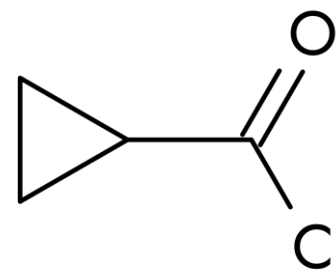
chlorek propanoilu



chlorek butanoilu



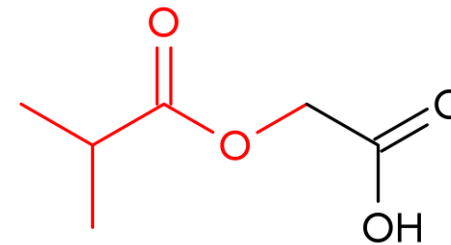
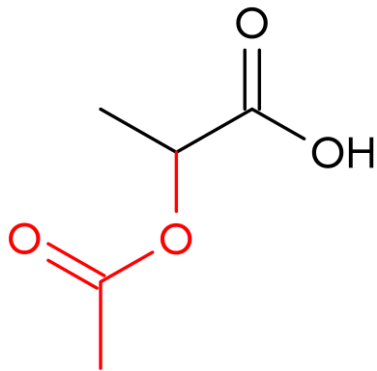
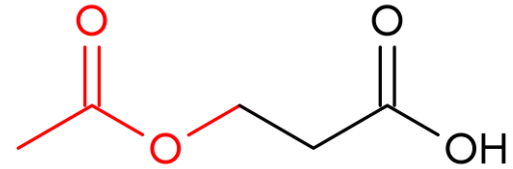
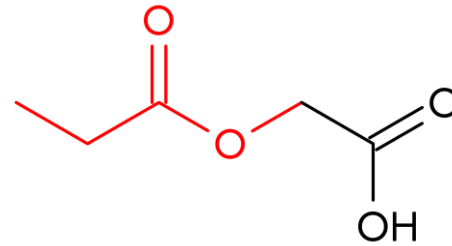
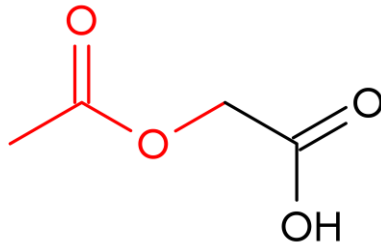
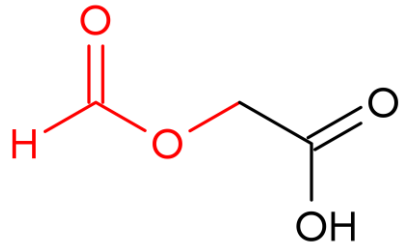
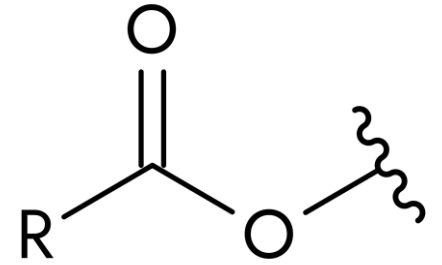
chlorek benzoilu



chlorek cyklopropanokarbonylu

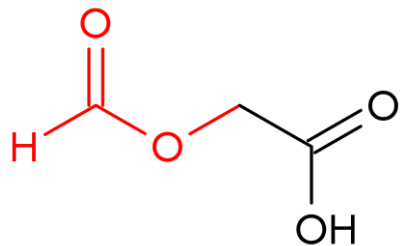
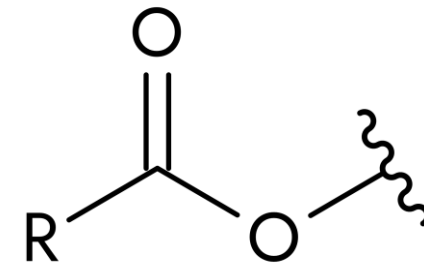
Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

a) gdy do cząsteczki przyłączony jest fragment RC(O)O- , to powinien on być nazwany jak przedrostek z użyciem końcówki **-yloksy** lub **-iloksy**.

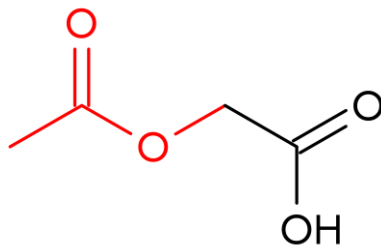


Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

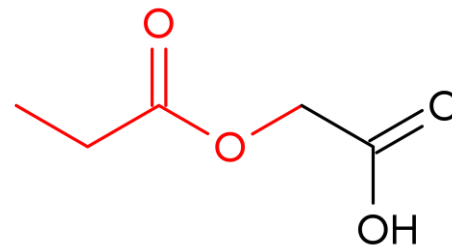
a) gdy do cząsteczki przyłączony jest fragment RC(O)O- , to powinien on być nazwany jak przedrostek z użyciem końcówki **-yloksy** lub **-iloksy**.



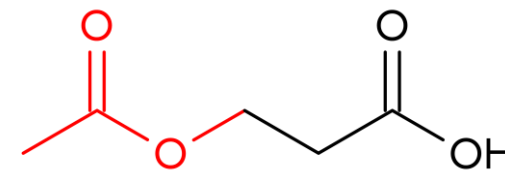
kwasy **(formyloksy)**octowy



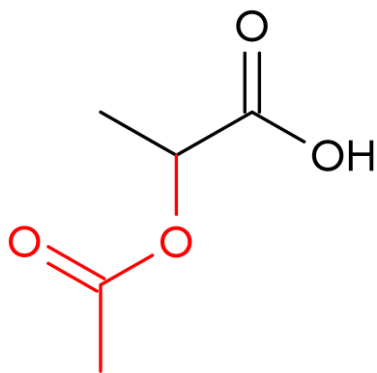
kwasy **(acetyloksy)**octowy



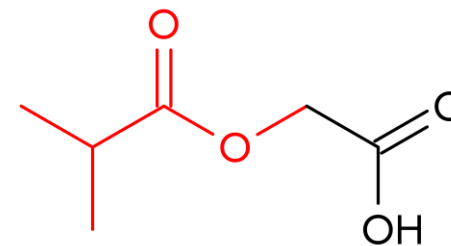
kwasy (propanoiloksy)octowy



kwasy 3-(acetyloksy)propanowy



kwasy 2-(**acetyloksy**)propanowy

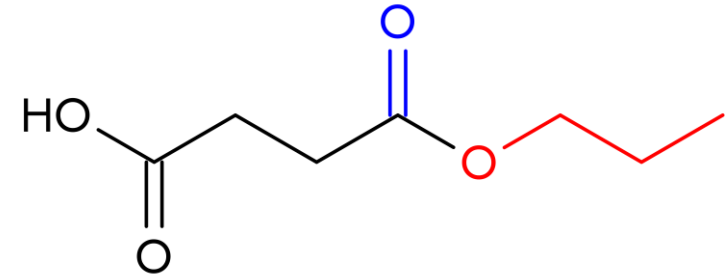
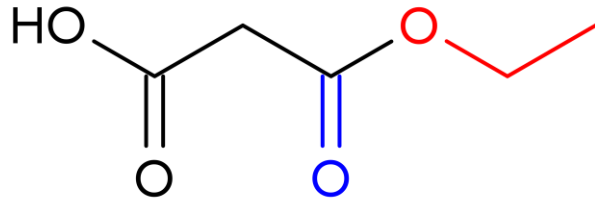
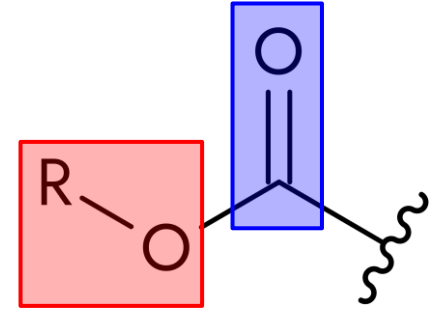


kwasy ((**2-metylopropanoil**)oksy)octowy

Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

gdy do cząsteczki przyłączony jest fragment ROC(O)- , to

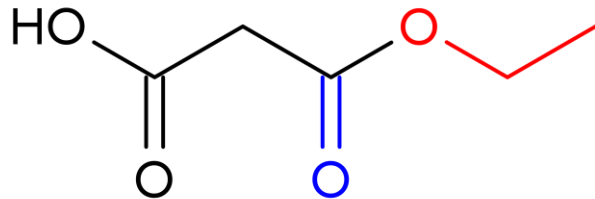
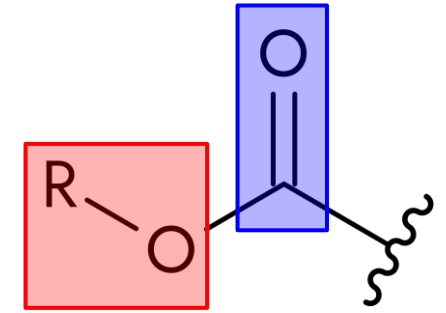
i. jeżeli atom węgla grupy estrowej znajduje się w łańcuchu głównym, to grupę estrową rozbija się na dwie osobne grupy: grupę ketonową oraz przyłączoną do niej grupę alkoksyłową



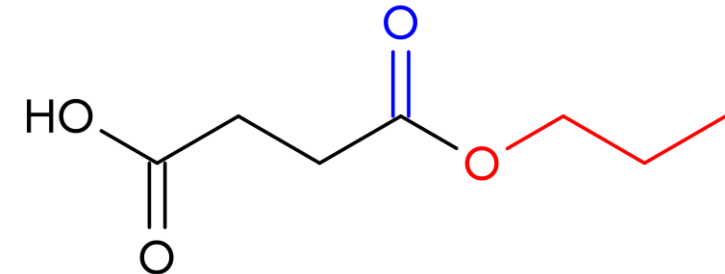
Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

gdy do cząsteczki przyłączony jest fragment ROC(O)- , to

i. jeżeli atom węgla grupy estrowej znajduje się w łańcuchu głównym, to grupę estrową rozbija się na dwie osobne grupy: grupę **ketonową** oraz przyłączoną do niej grupę **alkoksyłową**



kwas **3-etoksy-3-okso**propanowy

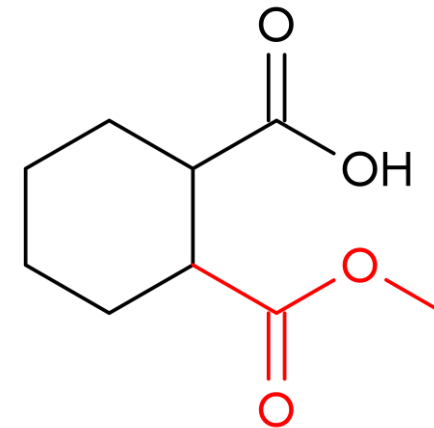
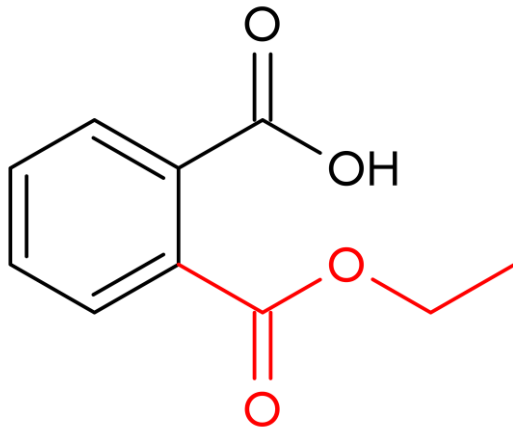
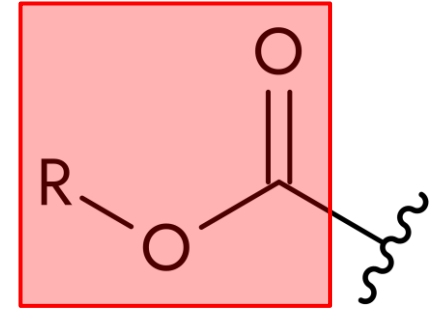


kwas **4-okso-4-propoksy**butanowy

Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

gdy do cząsteczki przyłączony jest fragment ROC(O)- , to

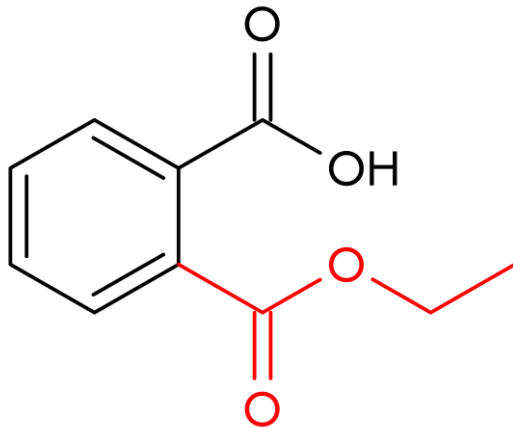
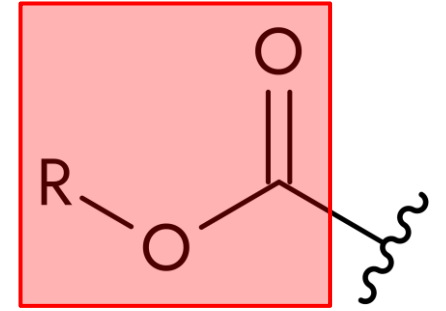
ii. jeżeli znajduje się ona poza głównym łańcuchem lub w pierścieniu, ale jest z nim bezpośrednio połączona jako podstawnik przez karbonylowy atom węgla, to nazwę takiego podstawnika tworzy się, dodając do nazwy grupy **alkoksyłowej**, końcówkę **-karbonylo**.



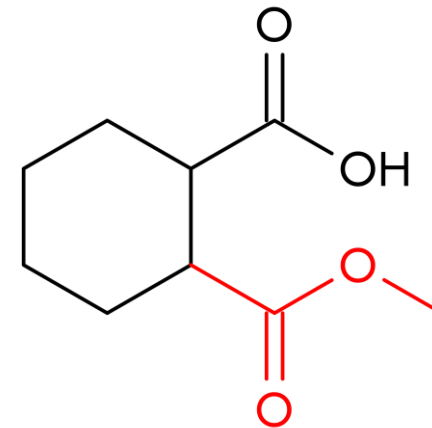
Estry – jeżeli fragment estrowy przyjmuje rolę podstawnika

gdy do cząsteczki przyłączony jest fragment ROC(O)- , to

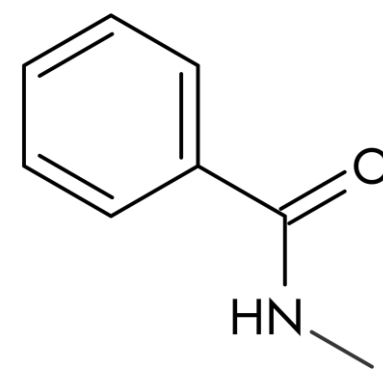
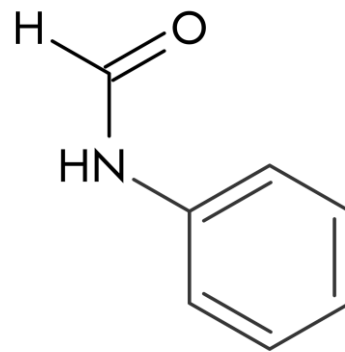
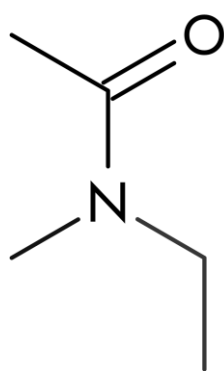
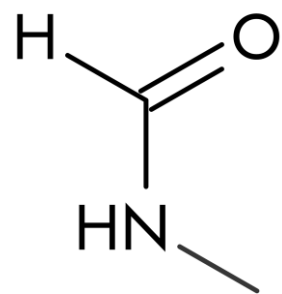
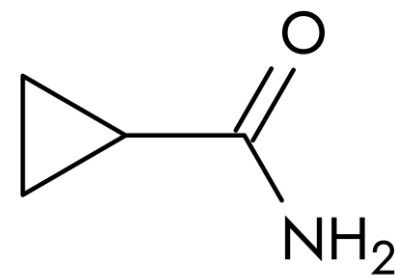
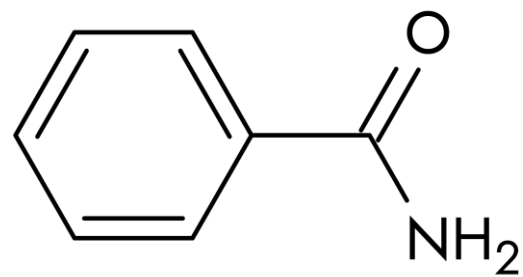
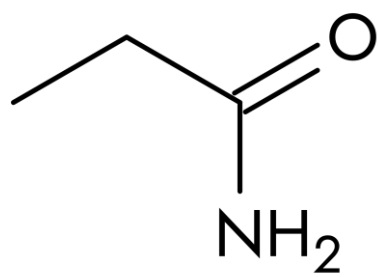
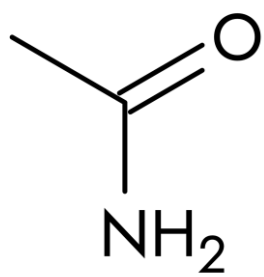
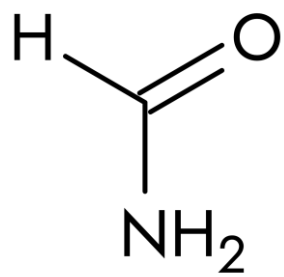
ii. jeżeli znajduje się ona poza głównym łańcuchem lub w pierścieniu, ale jest z nim bezpośrednio połączona jako podstawnik przez karbonylowy atom węgla, to nazwę takiego podstawnika tworzy się, dodając do nazwy grupy **alkoksylowej**, końcówkę **-karbonylo**.

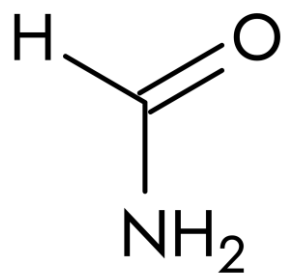


kwasy 2-(**etoksykarbonylo**)benzoesowy

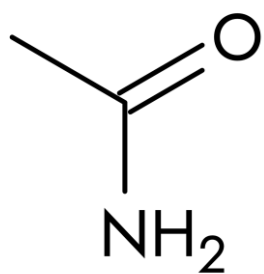


kwasy 2-(**metoksykarbonylo**)cykloheksano-1-karboksylowy

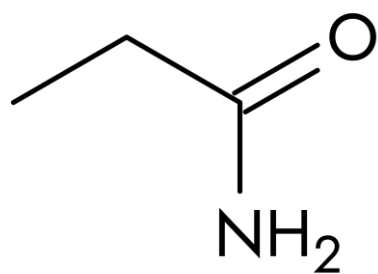




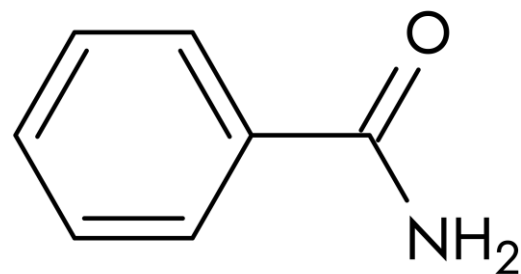
formamid



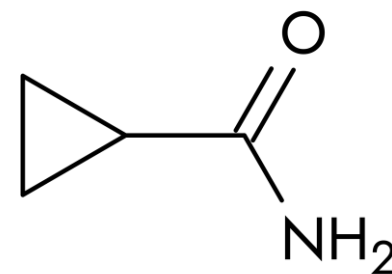
acetamid



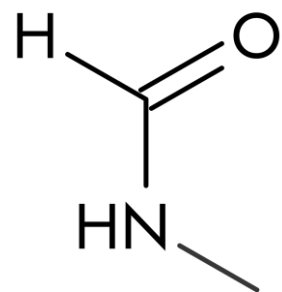
propanoamid



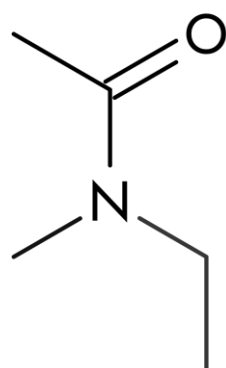
benzamid



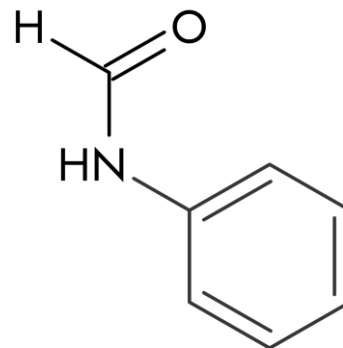
cyklopropanokarboksyamid



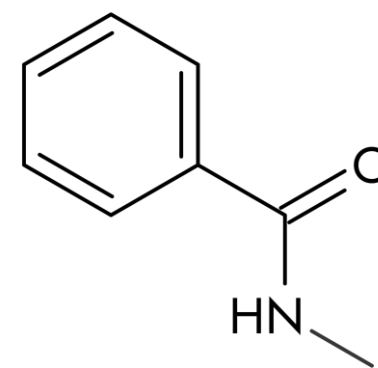
N-metyloformamid



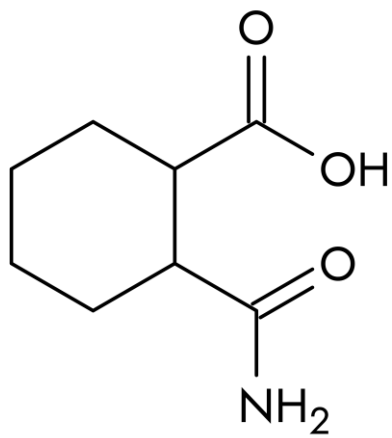
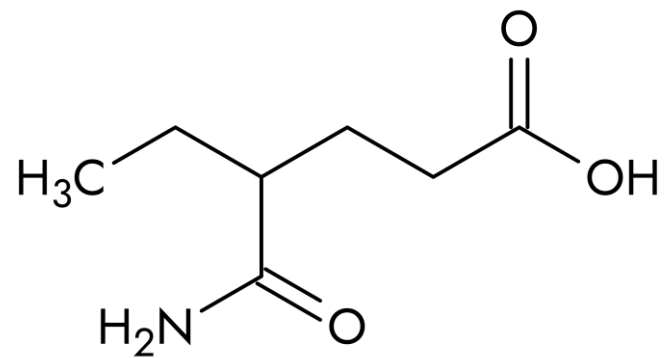
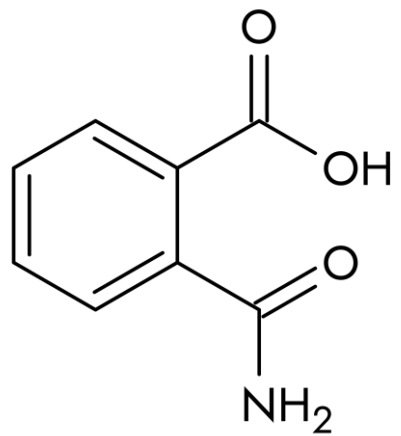
N-etylo-N-metyloacetamid

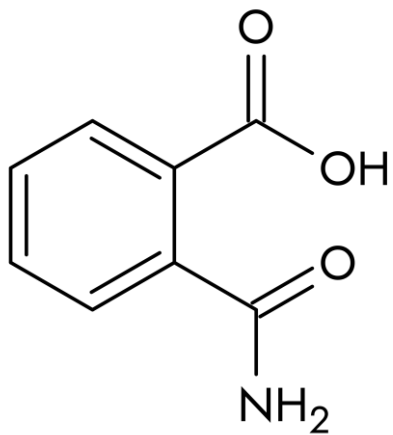


N-metylobenzamid

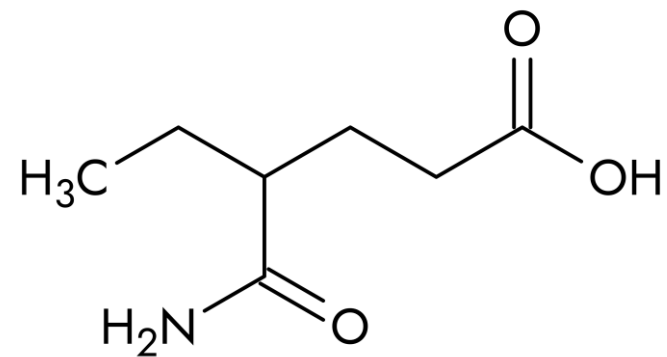


N-fenyloformamid

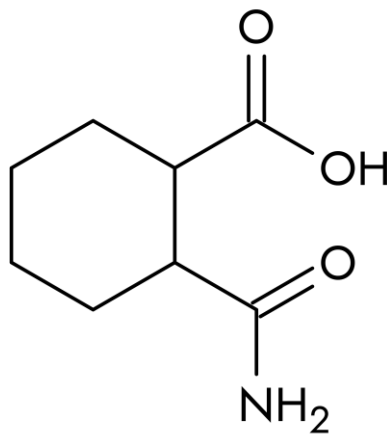




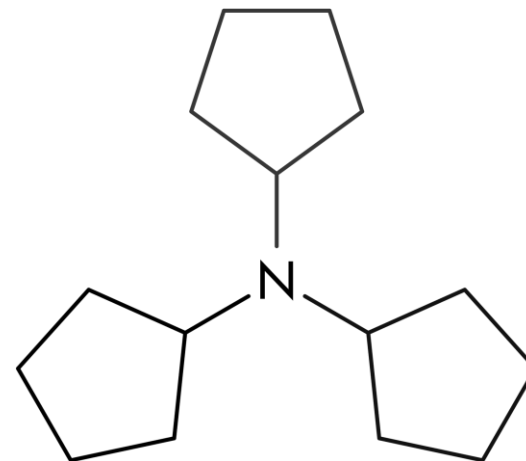
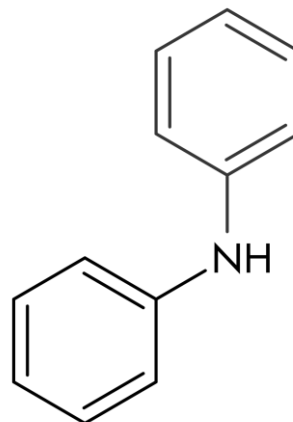
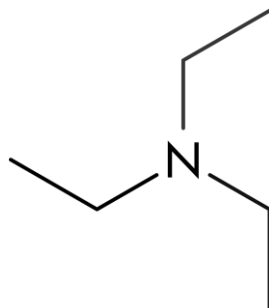
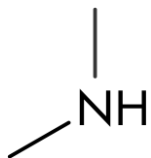
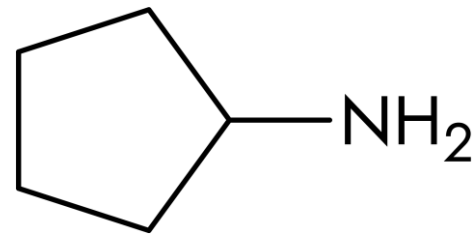
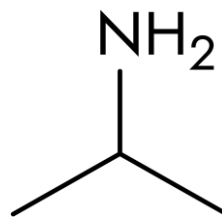
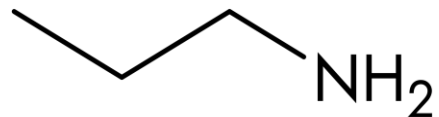
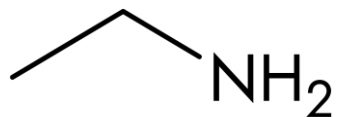
kwasy 2-karbamoilobenzoesowe

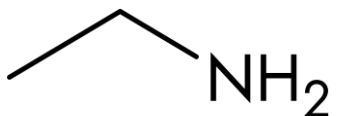


kwasy 4-karbamoiloheksanowe

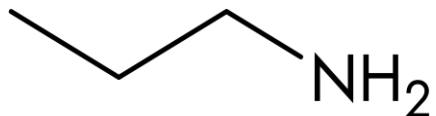


kwasy 2-karbamoilocykloheksano-1-karboxylowe

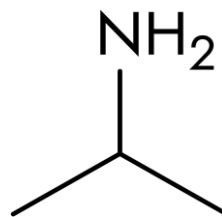




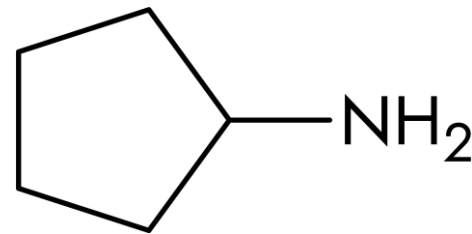
etanoamina



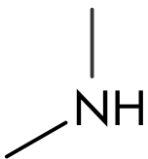
propano-1-amina



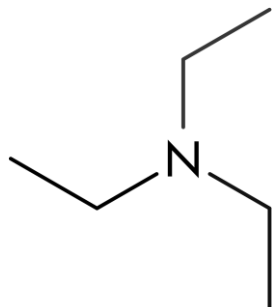
propano-2-amina



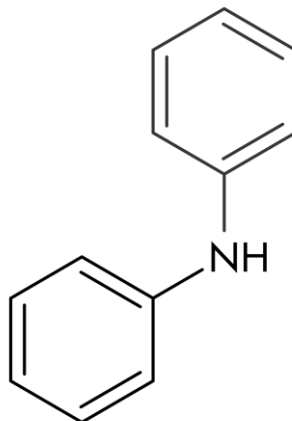
cyklopentanoamina



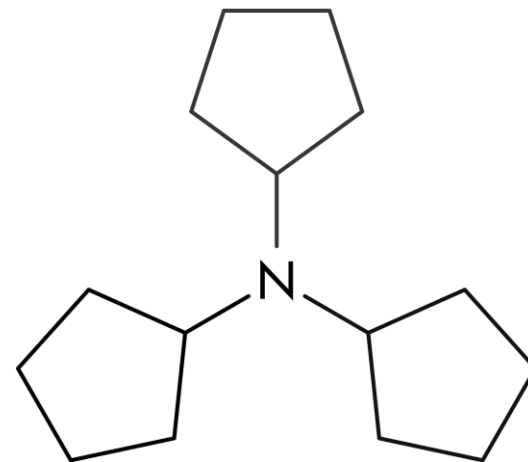
N-metyloetanoamina



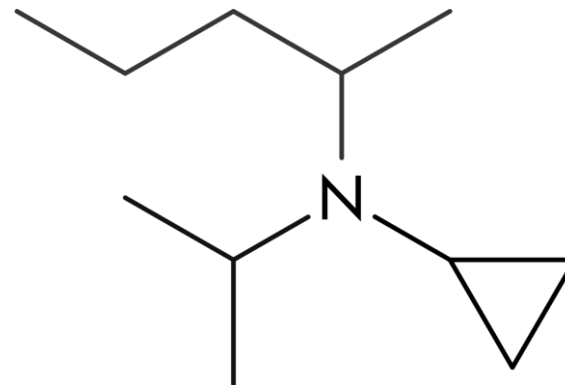
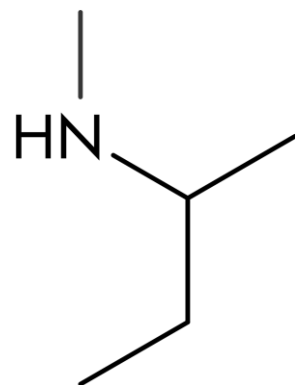
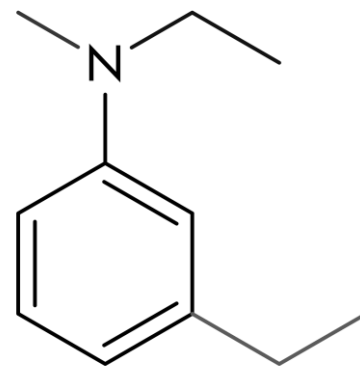
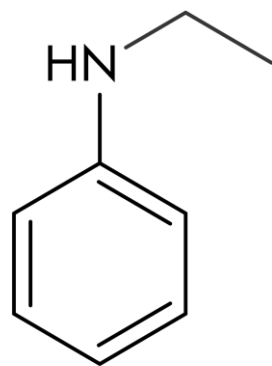
N,N-dietyloetanoamina

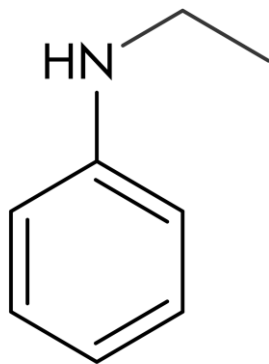


N-fenyloanilina

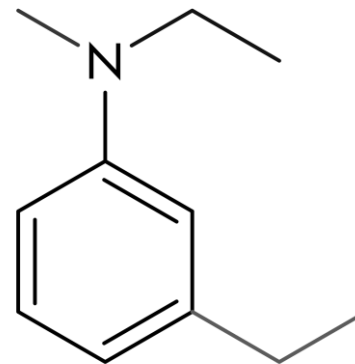


N,N-dicyklopentylocyklopentanoamina

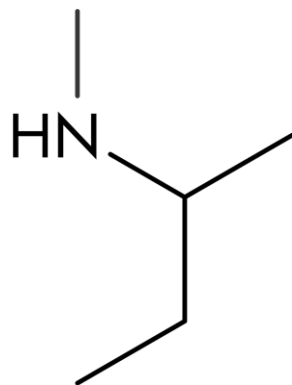




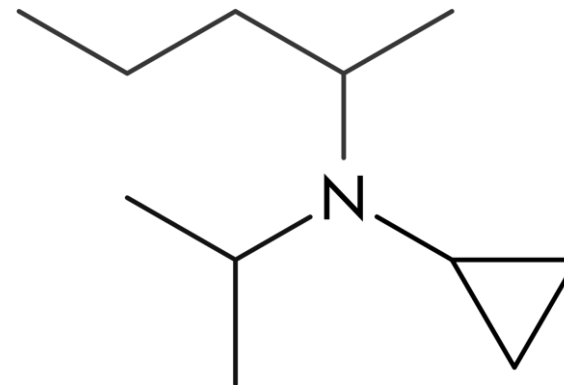
N-etyloanilina



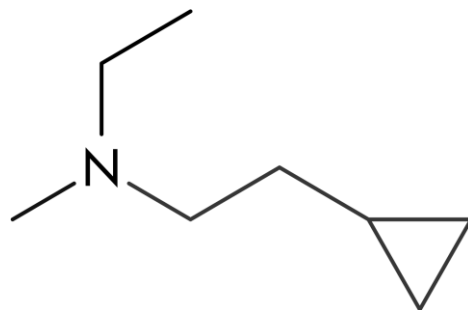
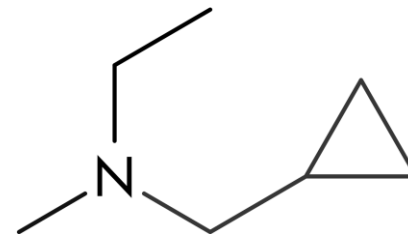
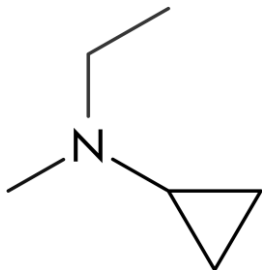
N,3-dietylo-N-metyloanilina

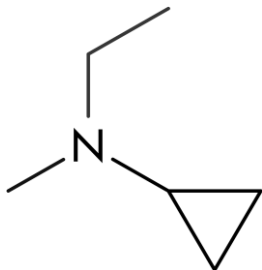


N-metylopropano-2-amina

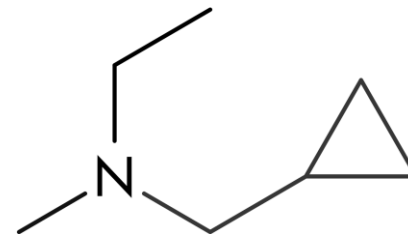


N-(pent-2-ylo)-N-(prop-2-ylo)cyklopropanoamina

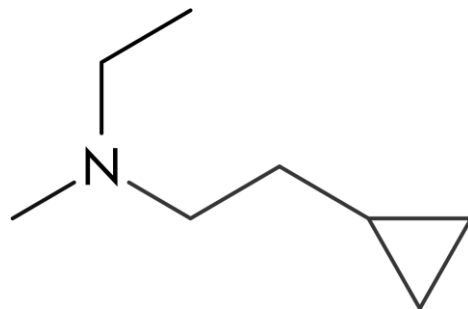




N-etylo-N-metylocyklopropanoamina



N-(cyklopropylometrylo)-N-metyloetanoamina



2-cyklopropylo-N-etylo-N-metyloetanoamina