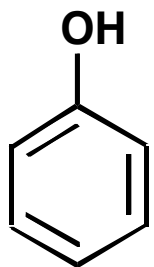
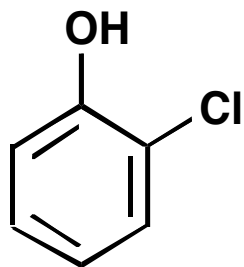


Fenolak eta Kinonak

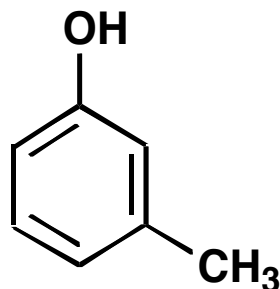
FENOLEN EGITURA ETA NOMENKLATURA



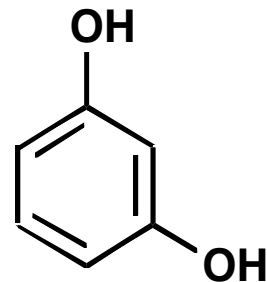
Fenola



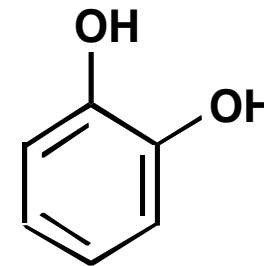
o-Klorofenola



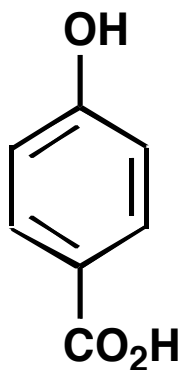
m-Kresola



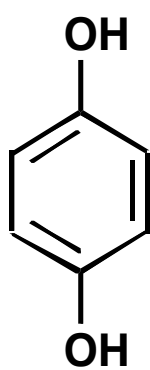
Resortzina



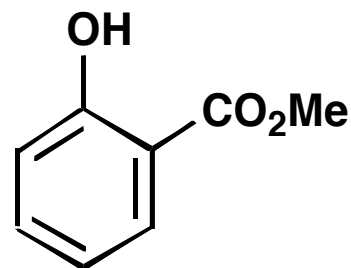
Katekola



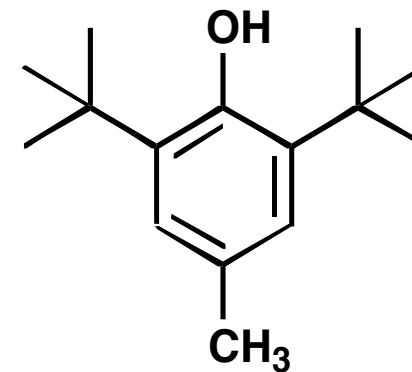
Azido
p-Hidroxibentzoikoa



Hidrokinona



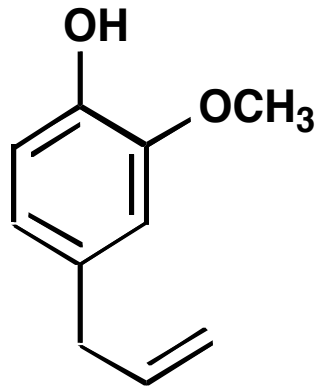
Metil salizilatoa
(antiinflamatorioa)



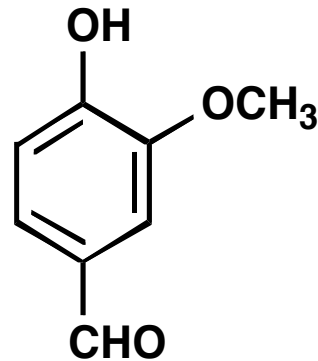
Hidroxitolueno butilatua
(BHT)
(elikagai-kontserbatzailea)

FENOLAK NATURAN ETA INDUSTRIAN

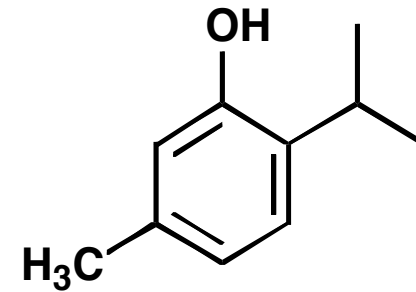
Fenol askok usain gozoa eta propietate interesgarriak dituzte.



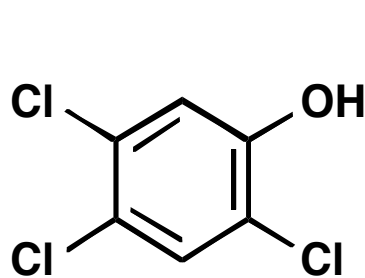
Eugenola
(Klabo-olioa)



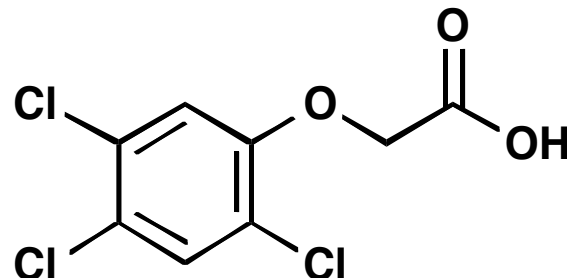
Bainilina
(Bainila-olioa)



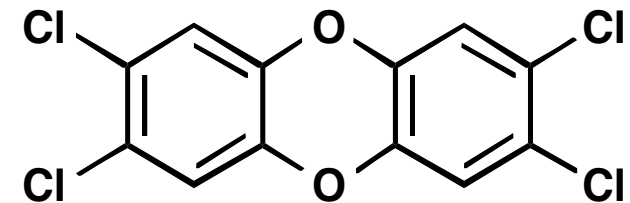
Timola
(Menda-olioa)



2,4,5-Triklorofenola
(egur-kontserbatzailea)



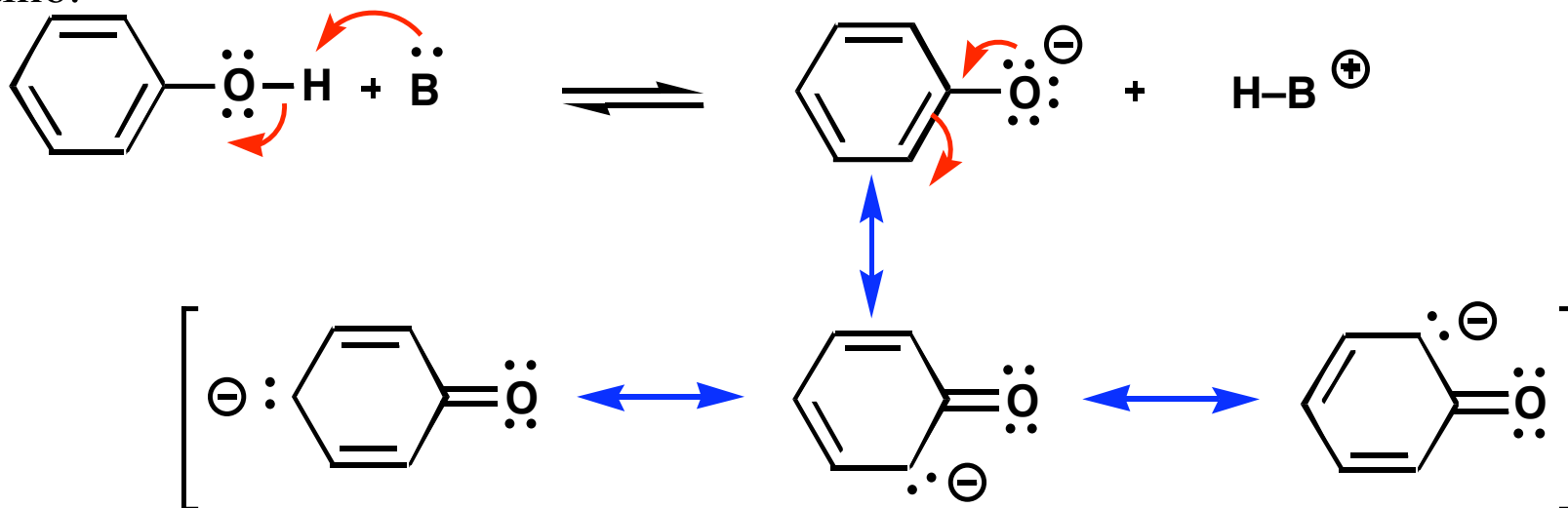
2,4,5-T
(belargaltzailea
)



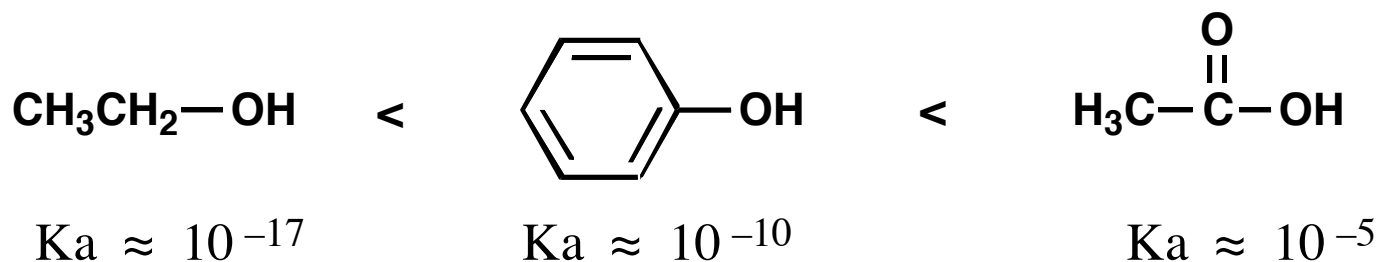
TCDD Dioxina
(mutageno arriskutsua)

FENOLEN AZIDO-BASE ERREAKZIOAK

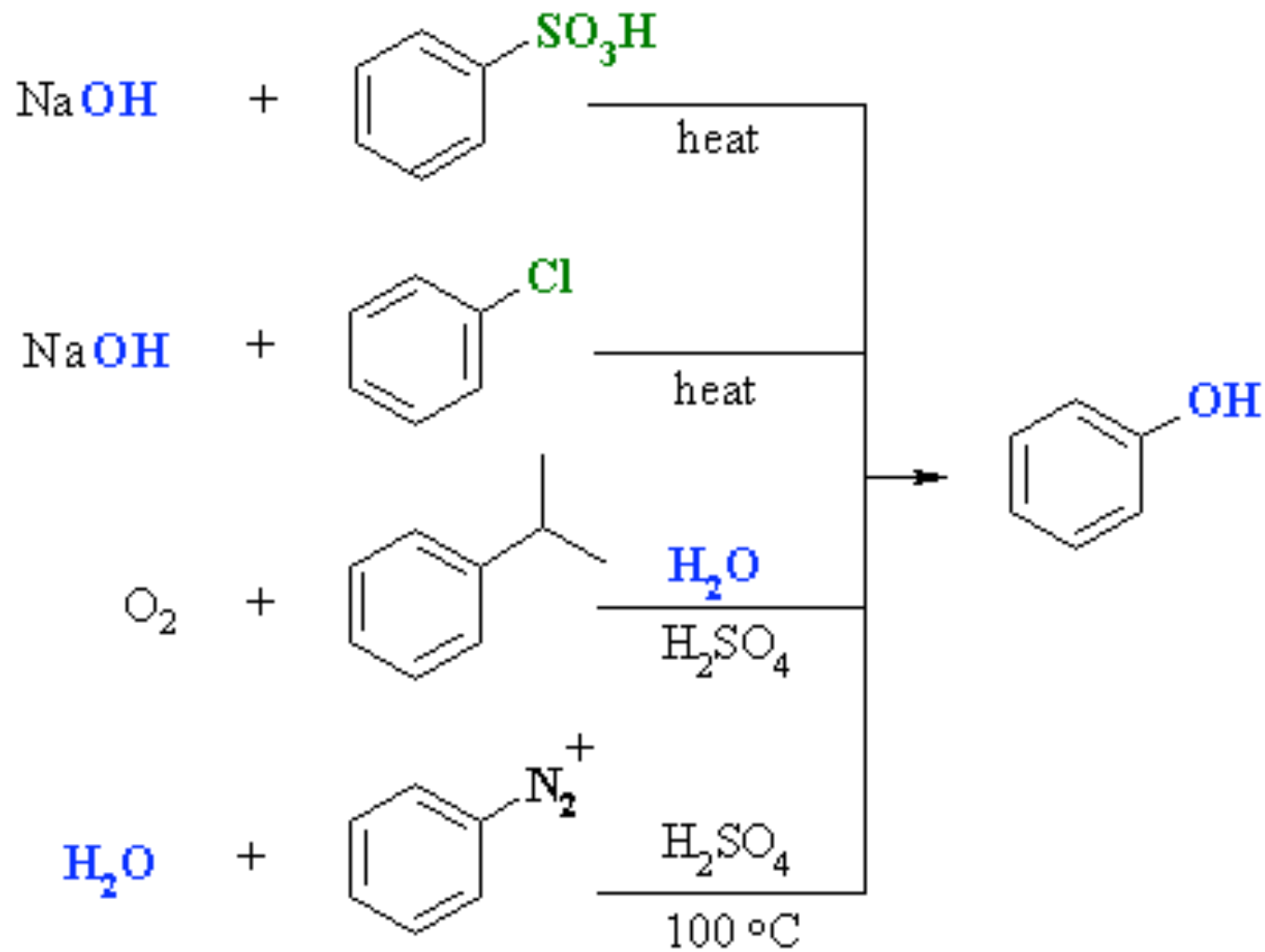
Fenolen **O–H** lotura ohizko alkoholena baino ahulagoa da, fenolato anioia erresonantziaz estabilizatua dagoelako, eta oreka eskuinera lerratuagoa alkoholetan baino.



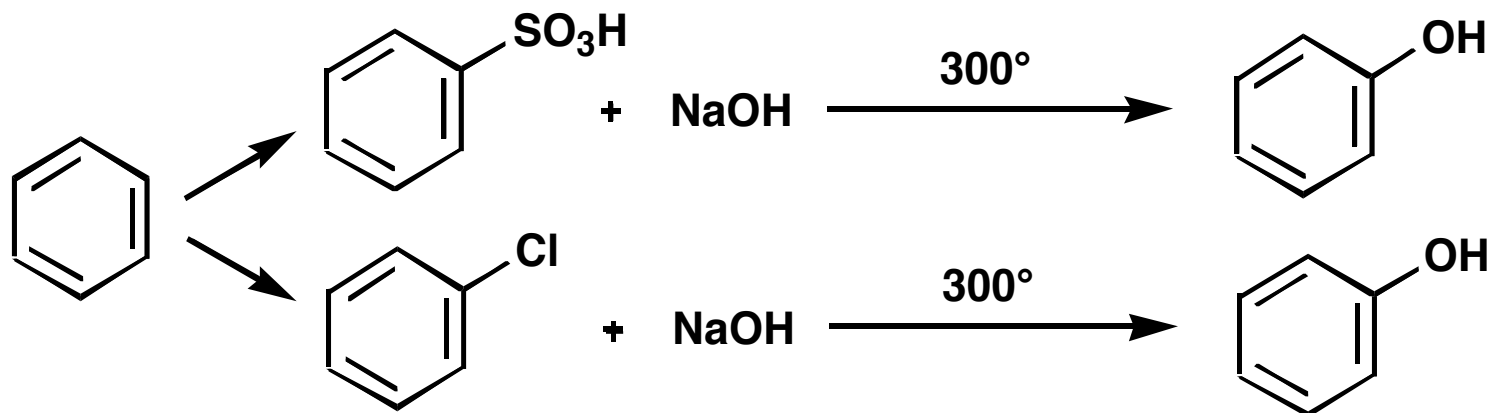
Fenolen **O–H** loturak **NaOH**-rekin erreakzionatzen du, fenolatoa emanez. Aldiz, base ahulagoak, **NaHCO₃** bezalakoak, ez dute erreakzionatzen fenolarekin baina bai azido karboxilikoekin.



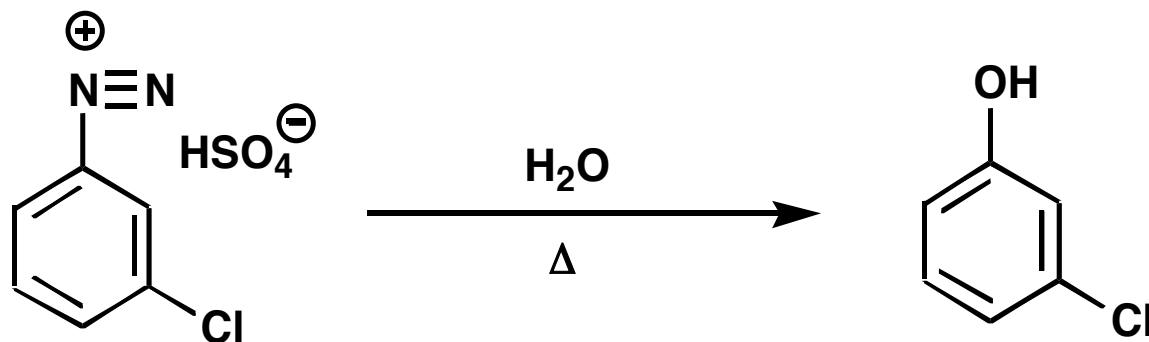
FENOLEN PRESTAKUNTZA



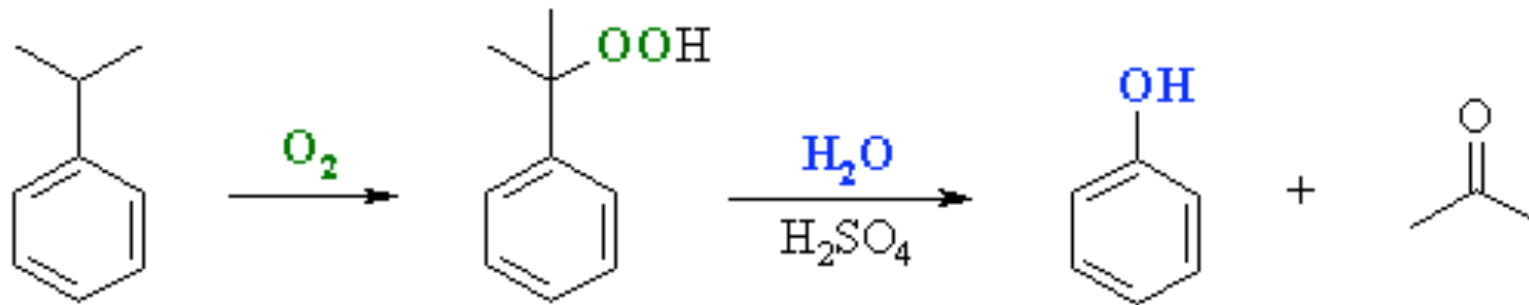
Fenolak lortzeko, S_NAr erreakziotarako talde aterakor onak (**Cl**, **SO₃H**) dituzten arenoak erabil daitezke. Erreakzio hauei *DOW prozedura* esaten zaie, Dow Chemical enpresak garatuak direlako



Laborategian, fenol ordezkatuak prestatzeko, Sandmeyer-en erreakzioa da egokia

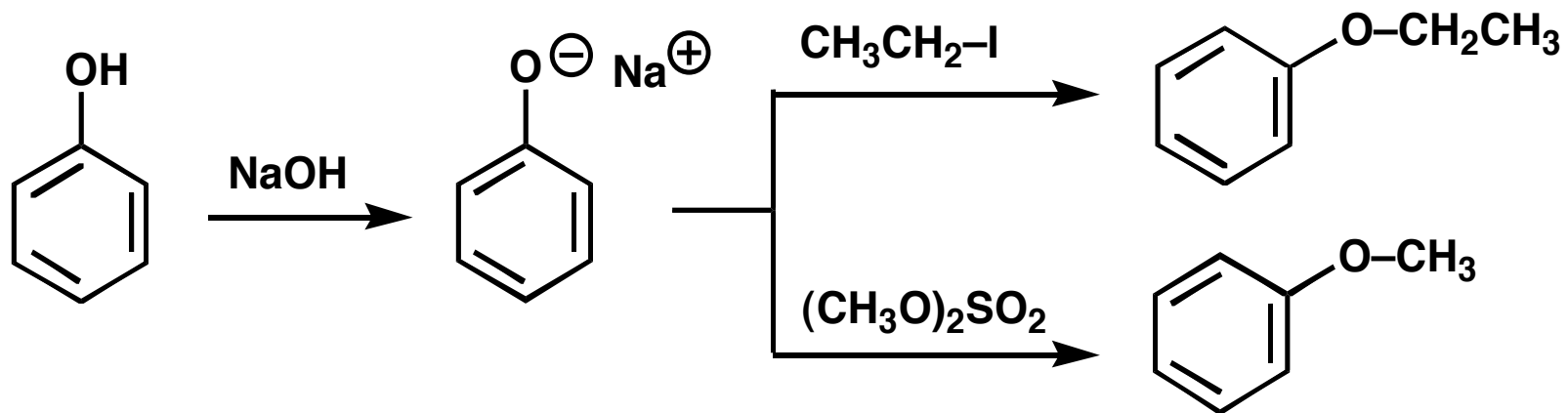
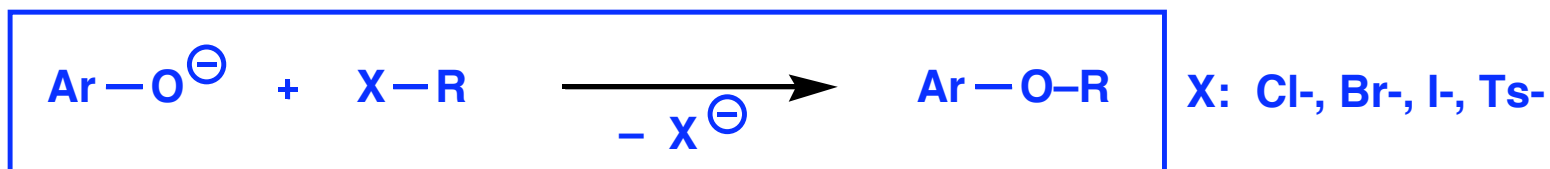


FENOLAREN PRESTAKUNTZA INDUSTRIALA



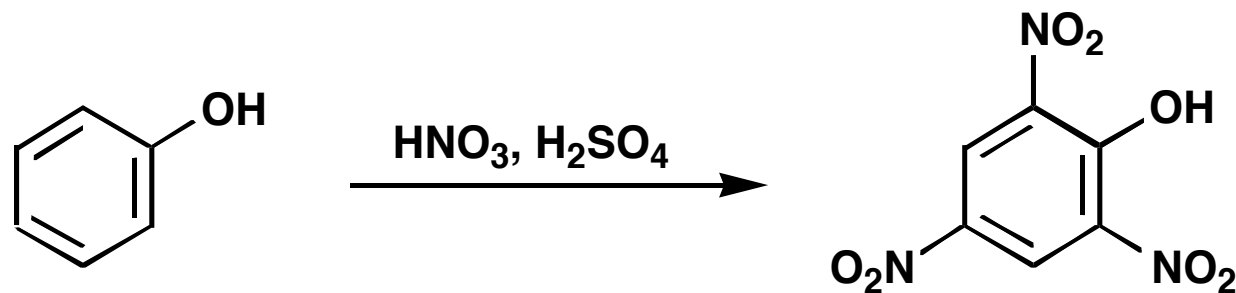
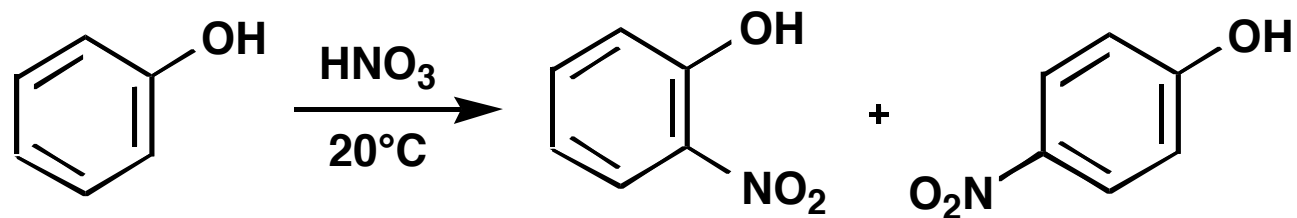
FENOLEN ERREAKZIOAK

Fenolatoak nukleozale onak dira eta WILLIAMSON-en erreakzioa ematen dute, *eterrak* osatzeko



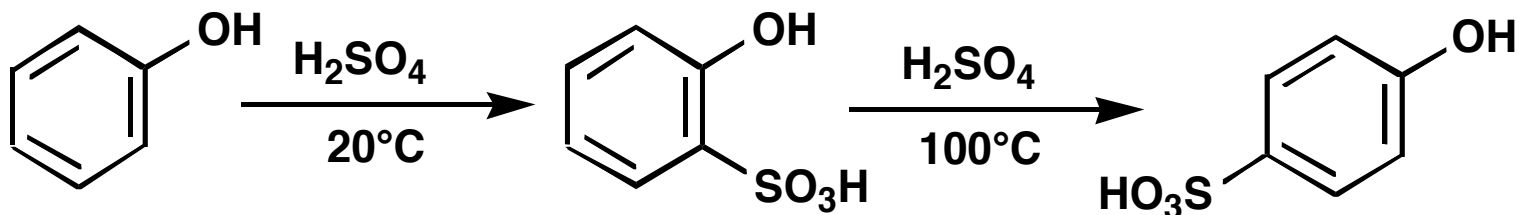
Fenolak oso aktibatuak daude S_EAr erreakziotarako, **OH** taldea elektroemale sendoa delako.

a) Nitrazioa

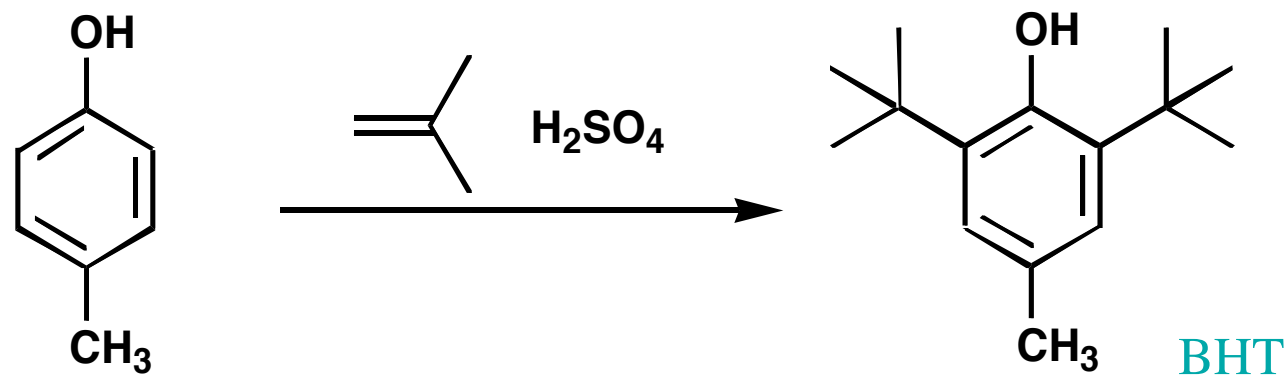


2,4,6-Trinitrofenola
(Azido pikrikoa)

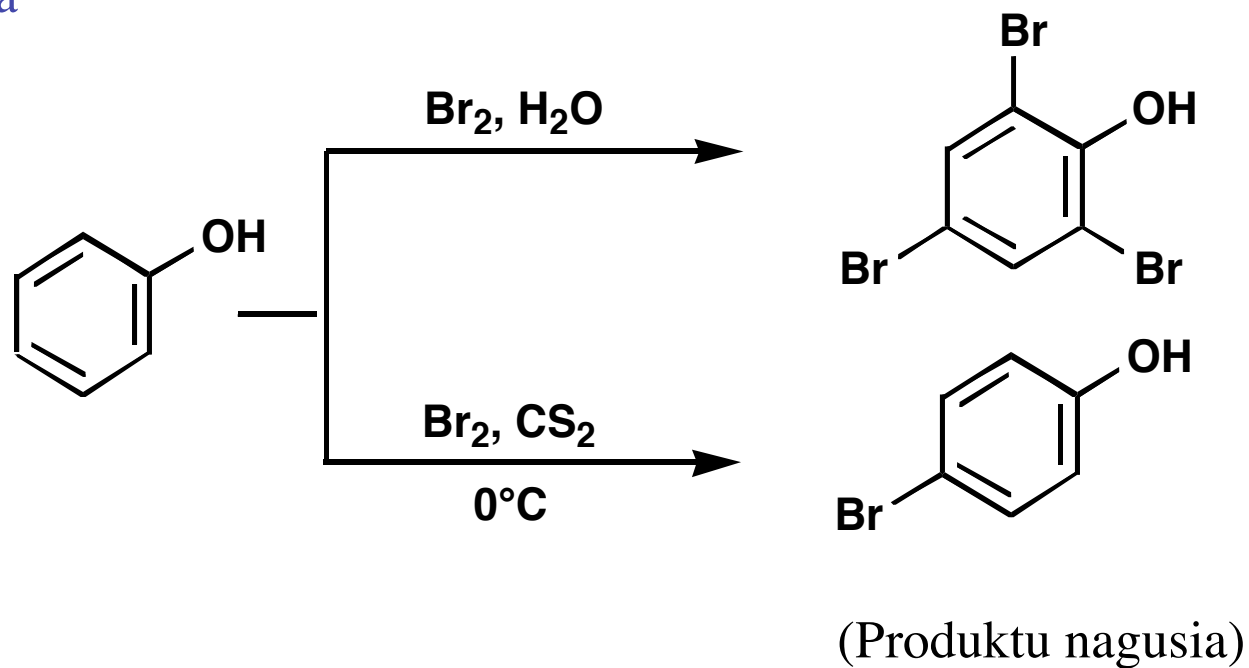
b) Sulfonazioa



c) Friedel&Crafts-en
alkilazioa

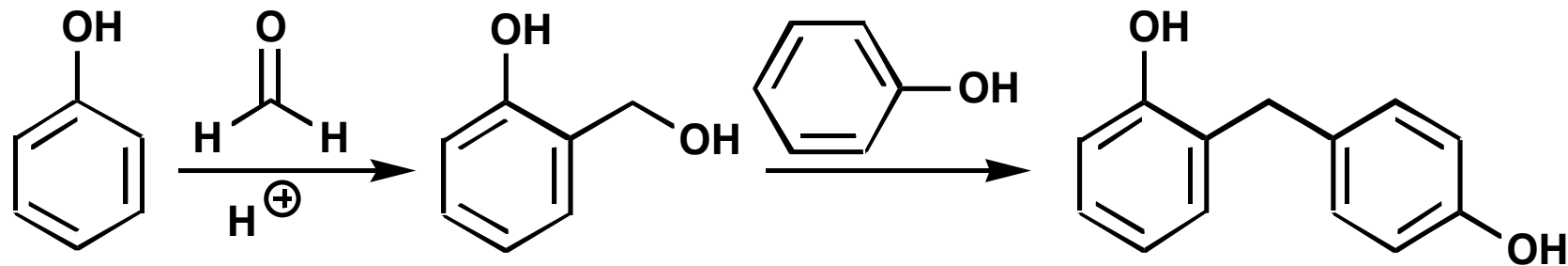


d) Halogenazioa



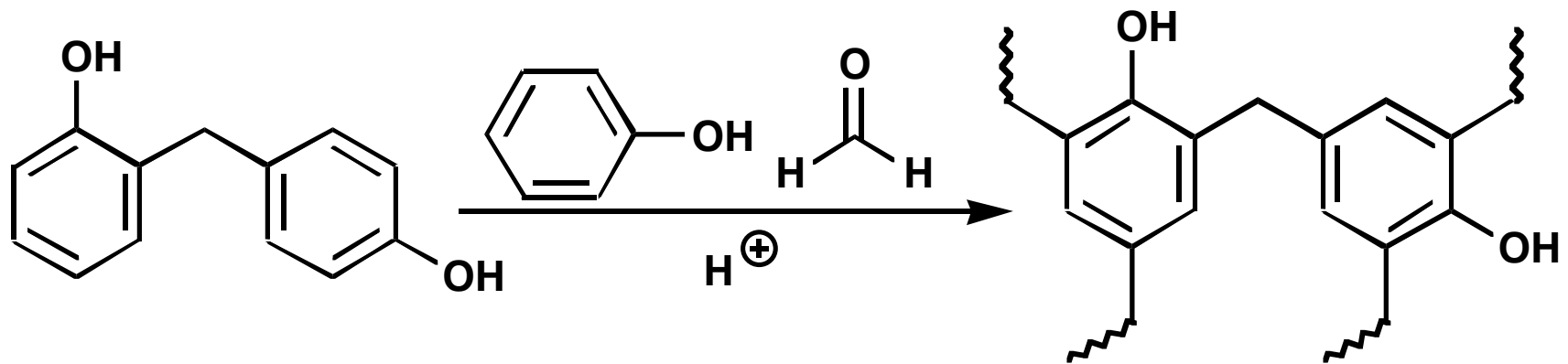
POLIMERIZAZIOA

Formaldehidoak ($\text{H}_2\text{C}=\text{O}$) elektrozale bezala jokatzen du fenolarekiko, erreakzioa ingurune azidoan katalizatzen delarik. Horrela lortutako materiala *bakelita* da.



Hidroximetilfenola
(*orto*- eta *para*- nahastea)

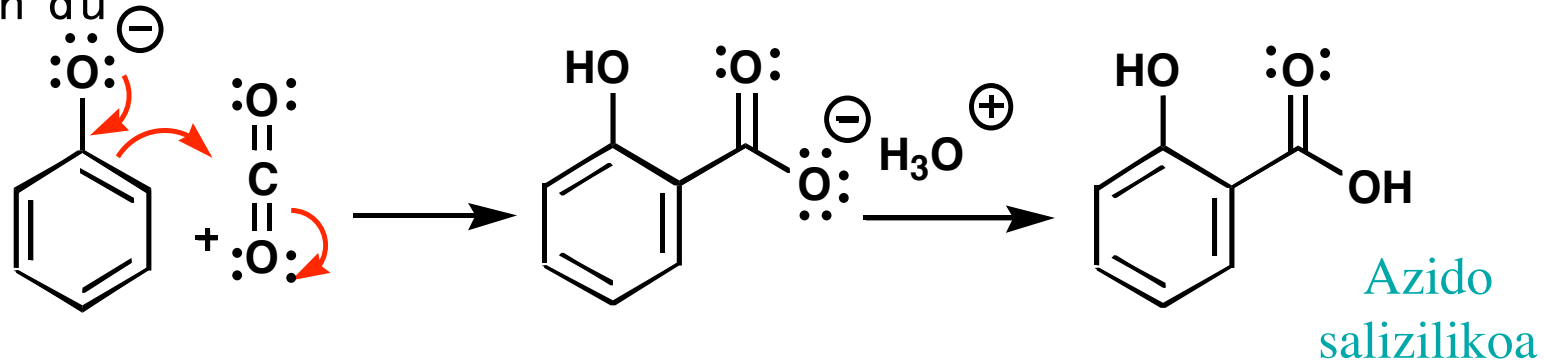
Prepolimeroa



Bakelita

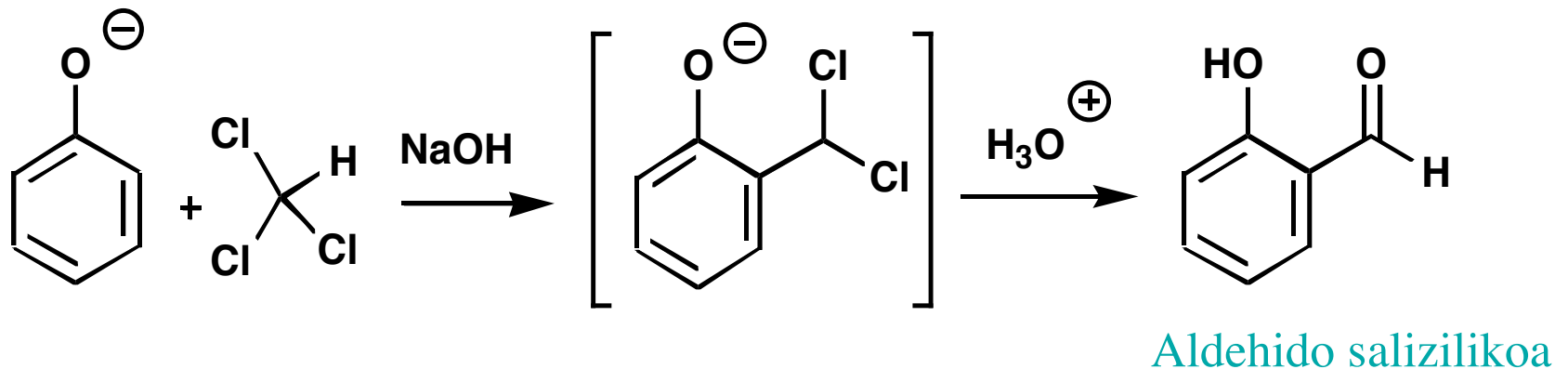
KOLBE-SCHMITTEn erreakzioa

Fenolak ingurune basikoan karbono dioxidorekin azido salizilikoa ematen du

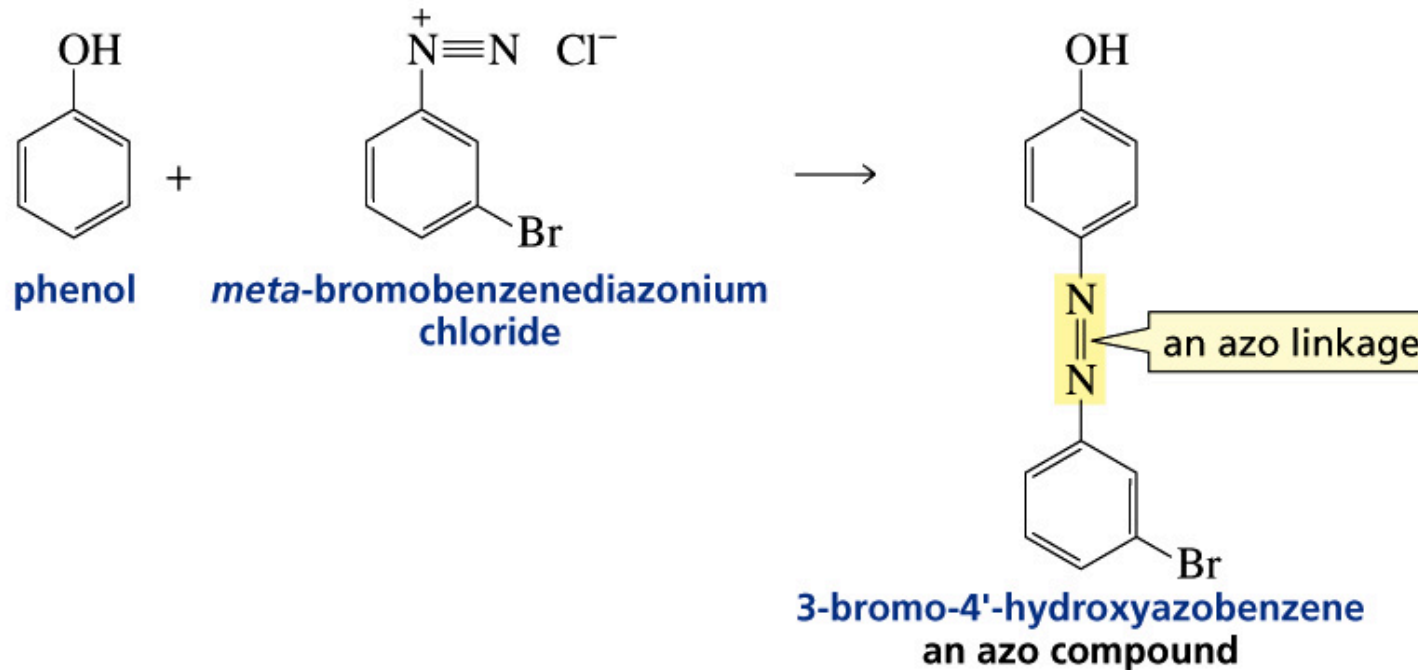


REIMER-TIEMANNen erreakzioa

Fenolak diklorokarbenorekin erreakzionatzen du salizilaldehidoa emateko



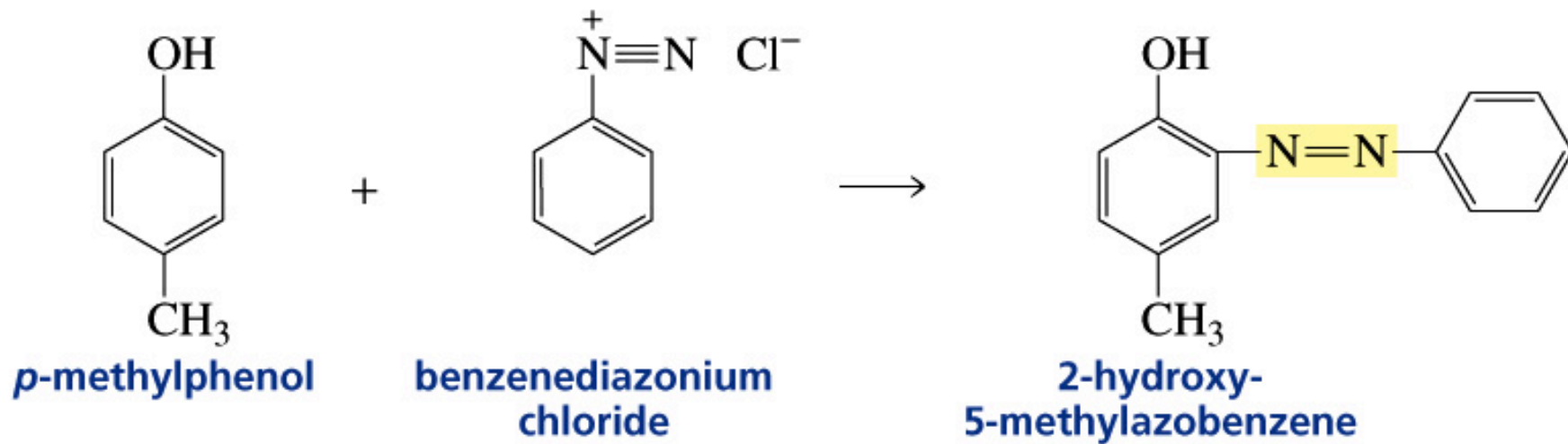
Arenodiazonium ioia Elektrozale



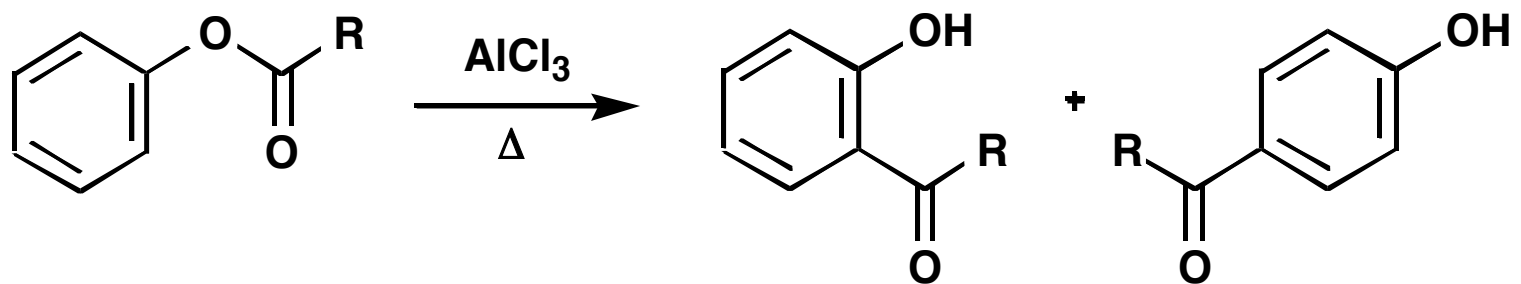
Erreakzio hau eraztun aromatiko oso aktibatuak bakarrik ematen dute

Ordezkapena nagusiki paran ematen da

para posizioa blokeaturik dagoenean ...



FRIES-en transposizioa



Oxidazioak Kinonetara

