

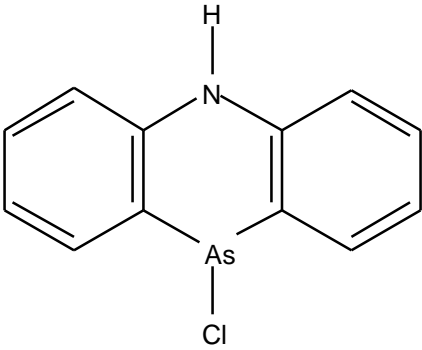
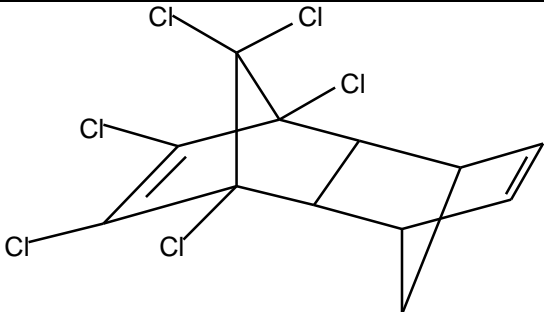
NAMED ORGANIC REAGENTS (PART 1)

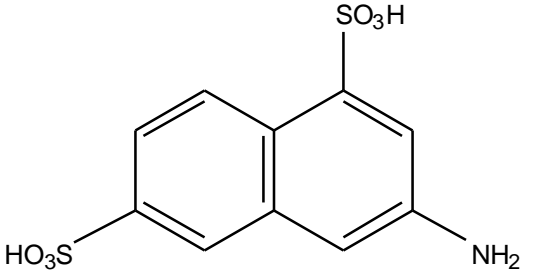
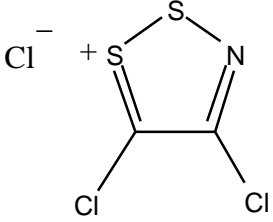
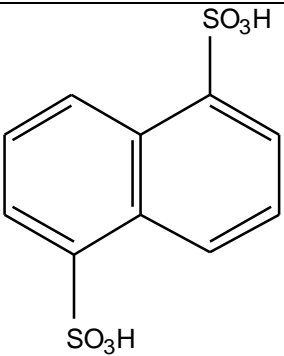
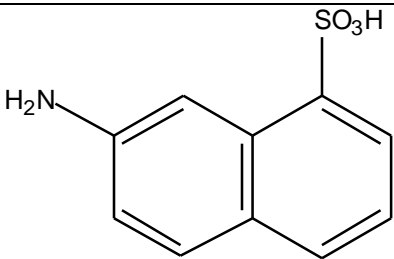
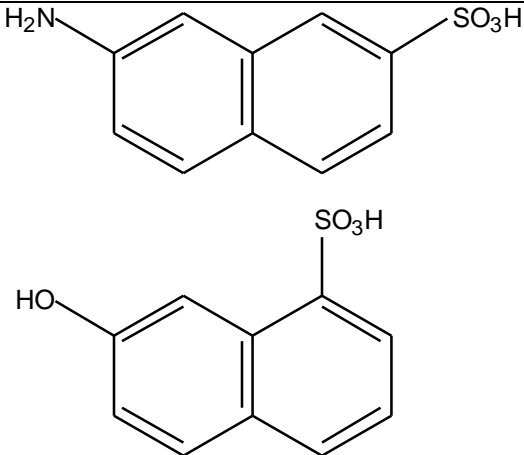
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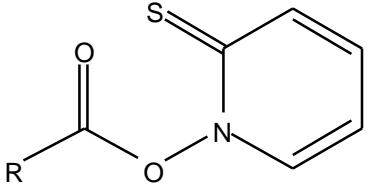
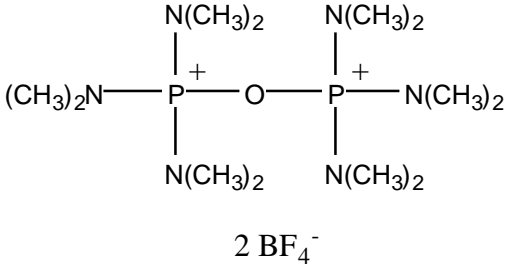
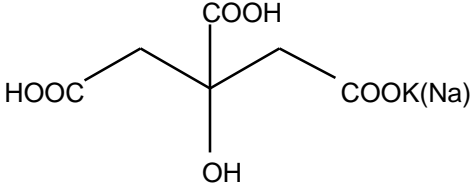
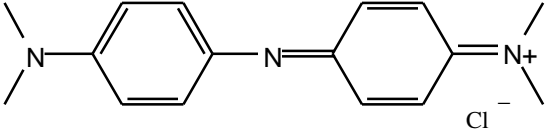
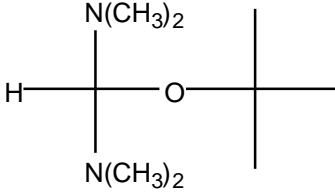
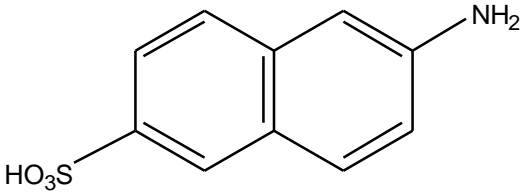
Department of Chemistry, York University
4700 Keele Street, Toronto, ONTARIO M3J 1P3, CANADA

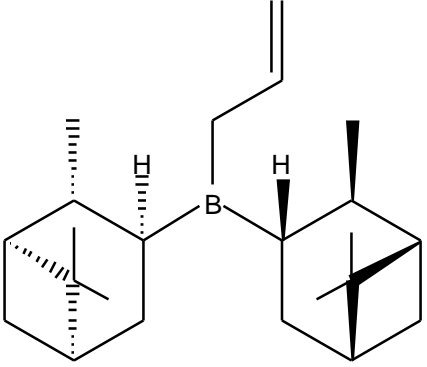
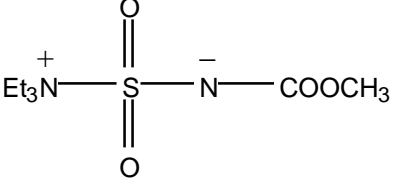
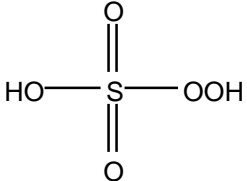
For suggestions, corrections, additional information, and comments please send e-mails to jandraos@yorku.ca

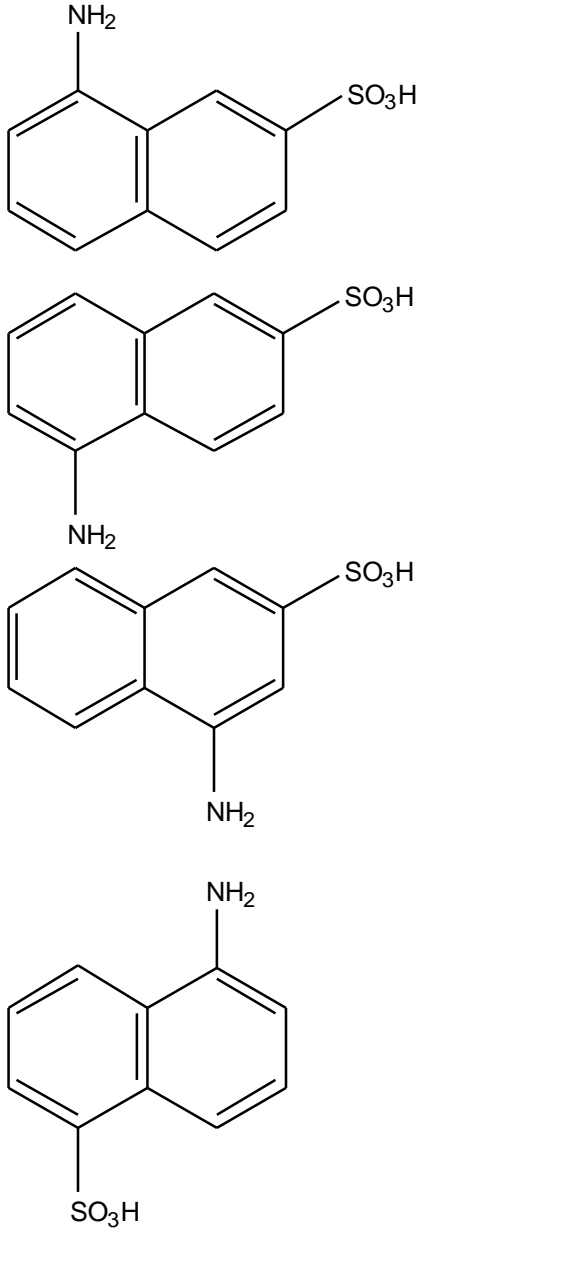
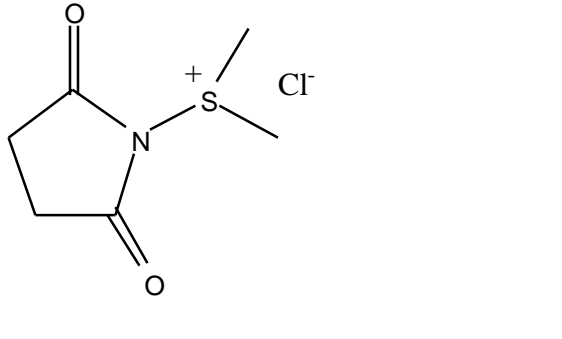
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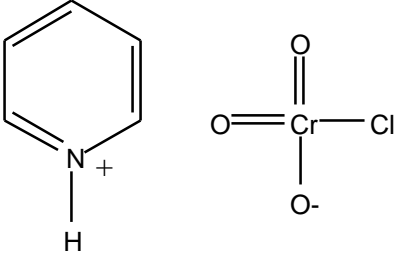
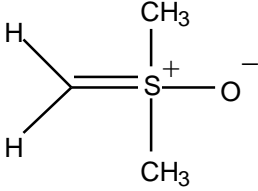
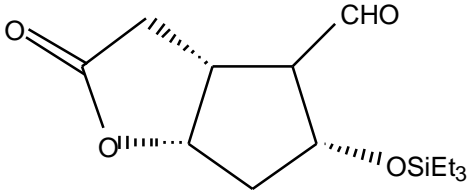
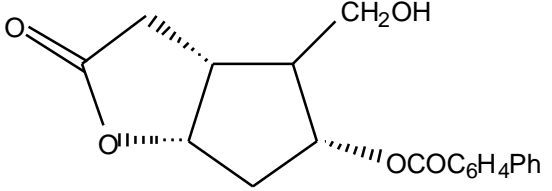
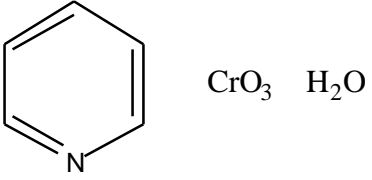
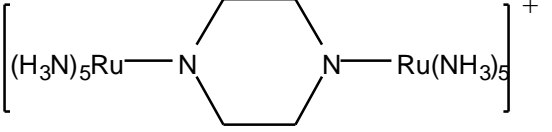
Reagent Name	CAS No.	Structure
Adam's catalyst (1943) (platinum oxide)	12137-21-2	Pt ₂ O
Adam's reagent (zinc cyanide)	557-21-1	Zn(CN) ₂
Adamite (zinc arsenate)	13464-44-3	Zn ₃ (AsO ₄) ₂
Adamsite (phenarsazine chloride, 10-chloro-5,10-dihydrophenarsazine)	578-94-9	
Adkins catalyst (1950) (chromium-copper oxide)	7440-47-3 1317-38-0	Cr / CuO
Aldrin	124-96-9 309-00-2 465-73-6	

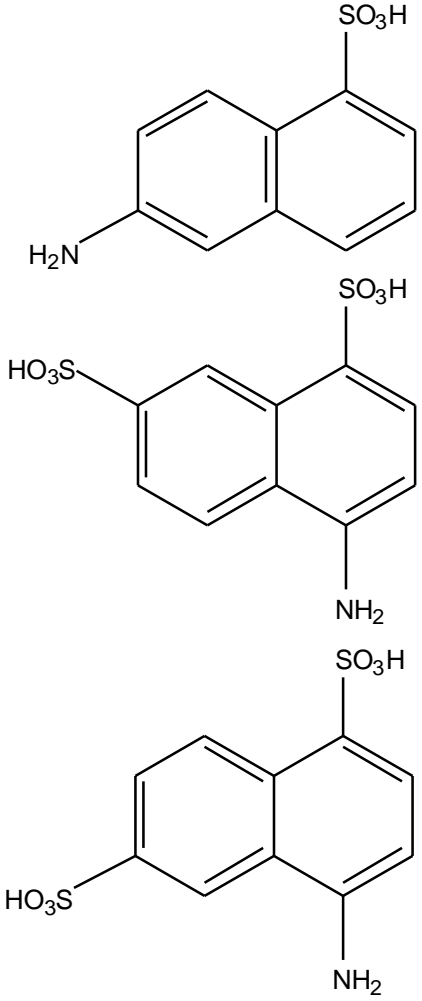
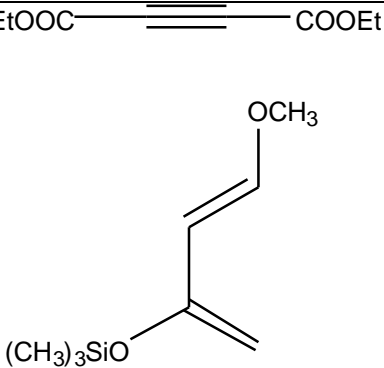
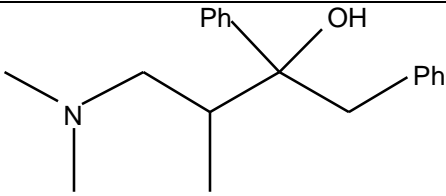

<p>Andresen's acid (3-amino-1,6-naphthalenedisulfonic acid)</p>	78887-55-7	
<p>Appel's reagent (1985) (4,5-dichloro-1,2,3-dithiazolium chloride)</p>	75318-43-3	
<p>Armstrong and Wynne's acid (1,5-naphthalenedisulfonic acid)</p>	81-04-9	
<p>Badische (Baden) acid (7-amino-1-naphthalenesulfonic acid)</p>	86-60-2	
<p>Bayer's acids 7-amino-2-naphthalenesulfonic acid or Cassella's acid</p> <p>7-hydroxy-1-naphthalenesulfonic acid</p>	494-44-0 132-57-0	

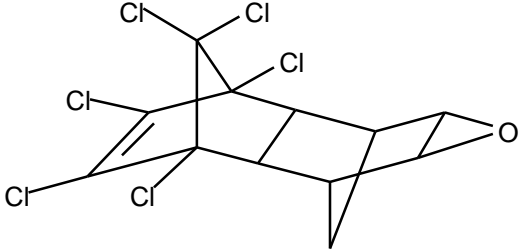
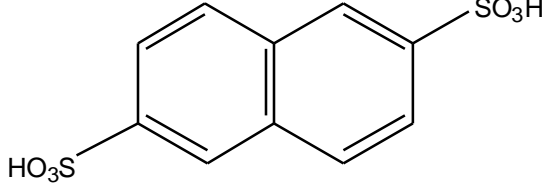
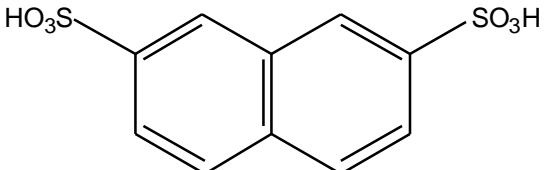
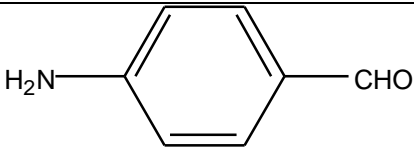
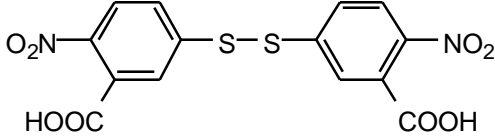
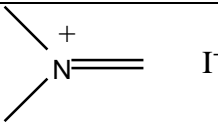
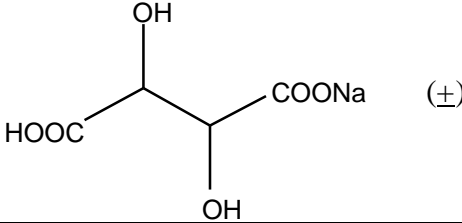
<p>Barton ester (1983) (R = CH₃, 1-acetoxy-1H-pyridine-2-thione)</p>	15922-79-9	
<p>Bates reagent (1975) (?-oxo-bis[tris-(dimethylamino)phosphonium] bis(tetrafluoroborate))</p>		
<p>Benedict's solution (1909) (aqueous solution of potassium thiocyanate, potassium ferrocyanide, potassium (sodium) citrate, copper sulfate, sodium carbonate)</p>	<p>333-20-0 14459-95-1 7758-98-7 497-19-8</p> <p>(Na salt) 68-04-2 (K salt) 6100-05-6</p>	<p>KCNS, K₄Fe(CN)₆ · 3H₂O, CuSO₄ · 5H₂O, Na₂CO₃,</p> 
<p>Bindschedler's green (1883) (N-[4-[[4-(dimethylamino)phenyl]imino]-2,5-cyclohexadien-1-ylidene]-N-methylmethanaminium chloride)</p>	4486-05-9	
<p>Bredereck's reagent (1968) (<i>t</i>-butoxy bis(dimethylamino)methane)</p>	5815-08-7	
<p>Brønner's acid (1882) (2-amino-6-naphthalenesulfonic acid)</p>	93-00-5	
<p>Brønsted catalyst, Brønsted-acid (1923)</p>		<p>$\text{HX} \rightleftharpoons \text{H}^+ + \text{X}^-$ proton donor</p>

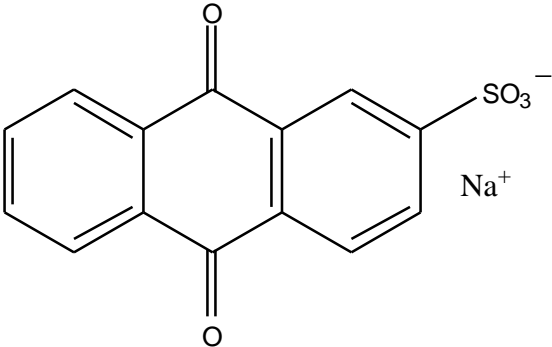
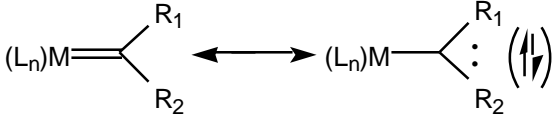
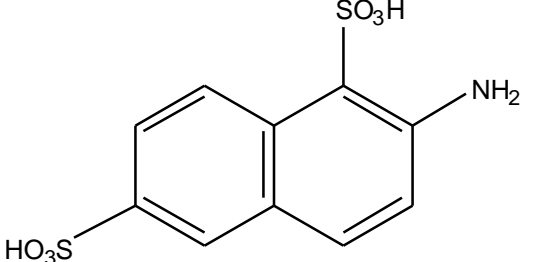
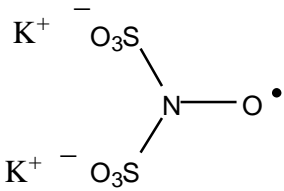
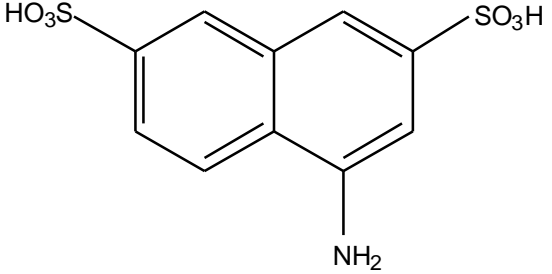
<p>Brown's reagent (1989) (allyl bis-(2,6,6-trimethylbicyclo[3.3.1]-hept-3-yl)-borane)</p>	<p>85116-38-7 106356-53-0</p>	
<p>Burgess reagent (1968) (methyl N-(triethylammoniumsulfonyl)carbamate)</p>	<p>29684-56-8</p>	
<p>Caro's acid (1898) (persulfuric acid)</p>		
<p>Claisen's alkali (1919) (potassium hydroxide-water-methanol)</p>	<p>1310-58-3 7713-18-5 67-56-1</p>	<p>KOH / H₂O / CH₃OH</p>

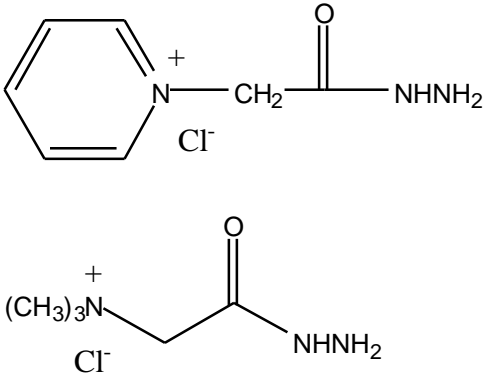
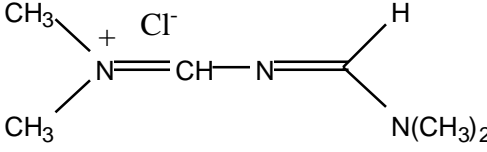
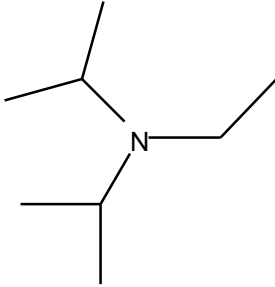
<p>Cleve's acids</p> <p>8-amino-1-naphthalenesulfonic acid (Cleve's ?-acid) (1878/1888)</p> <p>5-amino-2-naphthalenesulfonic acid (Cleve's ?-acid, Erdmann ?-acid) (1887)</p> <p>4-amino-2-naphthalenesulfonic acid (Cleve's ?-acid) (1886)</p> <p>5-amino-1-naphthalenesulfonic acid (Cleve's ?-acid, Laurent's acid) (1875)</p>	<p>119-28-8</p> <p>119-79-9</p> <p>134-54-3</p> <p>84-89-9</p>	 <p>The structures show naphthalene rings with an amino group (NH₂) and a sulfonic acid group (SO₃H) at various positions: 8-amino-1-naphthalenesulfonic acid (top), 5-amino-2-naphthalenesulfonic acid (second), 4-amino-2-naphthalenesulfonic acid (third), and 5-amino-1-naphthalenesulfonic acid (bottom).</p>
<p>Collin's reagent (1968) (chromium trioxide bispyridine complex)</p>		<p>(C₅H₅N)₂ CrO₃</p>
<p>Collman's reagent (1972) (disodium tetracarbonylferrate)</p>	<p>59733-73-2</p>	<p>Na₂Fe(CO)₄</p>
<p>Corey-Kim reagent (1972) (N-chlorosuccinimide-dimethyl sulfide)</p>	<p>54884-50-3</p>	 <p>The structure shows a five-membered succinimide ring with a carbonyl group (=O) at the top and bottom, and a nitrogen atom bonded to a dimethylsulfonium group (-S⁺(CH₃)₂) and a chlorine atom (Cl⁻).</p>

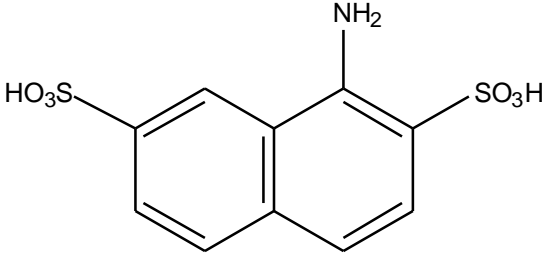
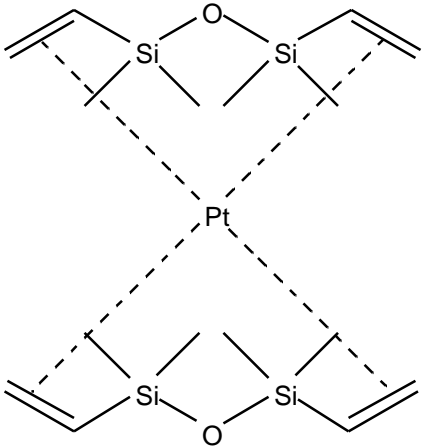
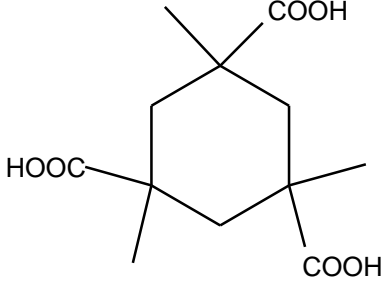
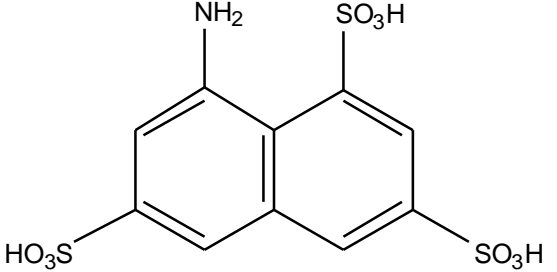
<p>Corey's reagent pyridinium chlorochromate (PCC), or dimethylsulfoxonium methylide (dimethyloxosulfonium methylide)</p>	<p>26299-14-9</p> <p>5367-24-8 70775-39-2</p>	 
<p>Corey aldehyde (hexahydro-4-carboxaldehyde-5-(4-triethylsiloxy)cyclopenta[b]furan-2-one)</p>	<p>122437-68-7 128948-10-7</p>	
<p>Corey lactone (hexahydro-4-hydroxymethyl-5-(4-phenylbenzoyloxy)cyclopenta[b]furan-2-one)</p>	<p>38754-71-1 54382-73-9 31752-99-5</p>	
<p>Cornforth reagent (1962) (chromium trioxide/ pyridine/water)</p>	<p>110-86-1 1333-82-0</p>	
<p>Crabtree's catalyst (1977) ((1,5-cyclooctadiene)bis(methyldiphenylphosphine)iridium(I) hexafluorophosphate) or ((1,5-cyclooctadiene)tricyclohexylphosphine pyridinioiridium(I) hexafluorophosphate)</p>	<p>1333-74-0</p>	<p>$\text{Ir}[(\text{COD})(\text{P}(\text{CH}_3)\text{Ph}_2)_2]^+ \text{PF}_6^- / \text{H}_2$</p> <p>$\text{Ir}[(\text{COD})(\text{PCy}_3)(\text{pyr})]^+ \text{PF}_6^- / \text{H}_2$</p>
<p>Creutz-Taube complex or ion (1969) (decaammine-?-pyrazine-$\text{N}^1:\text{N}^4$)diruthenium(5+) or ?-pyrazine-bis[pentaammineruthenium(III,II)]</p>	<p>35599-57-6</p>	

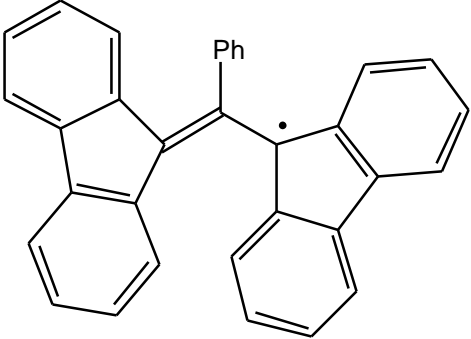
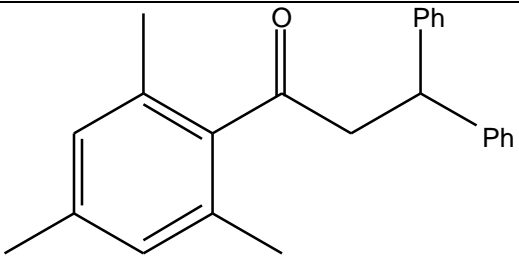
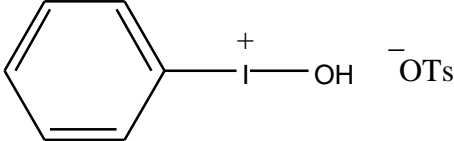
<p>Dahl acids</p> <p>6-amino-1-naphthalenesulfonic acid</p> <p>4-amino-1,7-naphthalenedisulfonic acid or Dahl's acid II</p> <p>4-amino-1,6-naphthalenedisulfonic acid or Dahl's acid III</p>	<p>81-05-0</p> <p>85-74-5</p> <p>85-75-6</p>	 <p>The image shows three chemical structures of naphthalene derivatives. The first is 6-amino-1-naphthalenesulfonic acid, with an amino group at position 6 and a sulfonic acid group at position 1. The second is 4-amino-1,7-naphthalenedisulfonic acid, with sulfonic acid groups at positions 1 and 7, and an amino group at position 4. The third is 4-amino-1,6-naphthalenedisulfonic acid, with sulfonic acid groups at positions 1 and 6, and an amino group at position 4.</p>
<p>Danishefsky reagent (1974) (dicarboxyethylacetylene), Danishefsky's diene (<i>trans</i>-1-methoxy-3- trimethylsilyloxy-1,3-butadiene)</p>	<p>762-21-0</p> <p>103559-89-3</p> <p>103559-90-6</p>	<p>EtOOC \equiv COOEt</p>  <p>The image shows two chemical structures. The first is the structure of Danishefsky reagent, which is diethyl acetylenedicarboxylate, represented as EtOOC-C≡C-COOEt. The second is the structure of Danishefsky's diene, which is <i>trans</i>-1-methoxy-3-trimethylsilyloxy-1,3-butadiene, shown as a diene with a methoxy group at C1 and a trimethylsilyloxy group at C3.</p>
<p>Darvon alcohol (4-dimethylamino-3-methyl-1,2-diphenyl- 2-butanol)</p>	<p>38345-66-3</p>	 <p>The image shows the chemical structure of Darvon alcohol, which is 4-dimethylamino-3-methyl-1,2-diphenyl-2-butanol. It features a central carbon atom bonded to a phenyl group, a hydroxyl group, a methyl group, and a 2-(dimethylamino)ethyl group.</p>
<p>Dewar benzene (1867) (bicyclo[2.2.0]-hexa-2,5-diene)</p>	<p>5649-95-6</p> <p>66050-60-0</p> <p>66050-61-1</p>	 <p>The image shows the chemical structure of Dewar benzene, which is bicyclo[2.2.0]hexa-2,5-diene. It consists of two fused five-membered rings, each containing a double bond.</p>

Dieldrin	60-57-1 72-20-8 128-10-9 56816-04-7	
Ebert and Merz acids (1876) 2,6-naphthalenedisulfonic acid	581-75-9	
2,7-naphthalenedisulfonic acid	92-41-1	
Edman's reagent (1950) (phenylisothiocyanate)	103-72-0	$\text{Ph}-\text{N}=\text{C}=\text{S}$
Ehrlich's reagent (1-amino-4-benzaldehyde)	100-10-7	
Ellman's reagent (1959) (bis(4-nitro-5-carboxyl-phenyl)disulfide)	69-78-3	
Eschenmoser's salt (1971) (dimethyl(methylene) ammonium iodide)	33797-51-2	
Fehling solution (1849) (aqueous solution of copper sulfate, sodium hydroxide, and sodium tartrate)	7758-98-7 1310-73-2 868-18-8	$\text{CuSO}_4 \cdot 5\text{H}_2\text{O}$ NaOH 
Fenton reagent (1893) (hydrogen peroxide- iron salts)	7722-84-1	$\text{H}_2\text{O}_2 \text{ Fe}^{+2}$
Fetizon's reagent (1968) (silver carbonate- celite)	534-16-7	Ag_2CO_3 / celite

<p>Fieser's reagent (chromium trioxide/acetic acid), Fieser's solution (1924) (potassium hydroxide-water-sodium anthraquinone ?-sulfonate-sodium hydrosulfite)</p>	<p>1333-82-0 64-19-7 1310-58-3 7713-18-5 7775-14-6 131-08-8</p>	<p>CrO₃, CH₃COOH KOH, H₂O, Na₂S₂O₄,</p> 
<p>Fischer carbene (1964)</p>		
<p>Karl Fischer reagent (1935) (iodine-sulfur dioxide - water)</p>	<p>7553-56-2 7446-09-5 7713-18-5</p>	<p>I₂ / SO₂ / H₂O</p>
<p>Forsling's acid (1888) (2-amino-1,6-naphthalenedisulfonic acid)</p>	<p>6838-02-4</p>	
<p>Frémy's salt (1845) (potassium nitrosodisulfonate)</p>	<p>14293-70-0</p>	
<p>Freund's acid (1895)</p>	<p>6251-07-6</p>	

buckminsterfullerene, fullerenes (1985)	99685-96-8	C ₆₀
Girard reagent P, Girard reagent T (1943)	1126-58-5 123-46-6	
Gold's reagent (1960) (3-(dimethylamino)-2-azaprop-2-en-1-ylidene dimethylammonium chloride)	20353-93-9	
Gomberg radical (1900) (triphenylmethyl radical)	2216-49-1	Ph ₃ C•
Grignard reagent (1900) (aryl or alkyl magnesium halides)		RMgBr
Heyns catalyst (1947) (10% platinum-charcoal)	7440-06-4 7440-44-0	Pt / C
Hünig's base (1958) (diisopropylethylamine)	7087-68-5	
Lemieux-Johnson reagent (1958) (sodium periodate-osmium tetroxide), Lemieux-von Rudloff reagent (1955) (sodium periodate-potassium permanganate)	7790-28-5 20816-12-0 7790-28-5 7722-64-7	NaIO ₄ / OsO ₄ NaIO ₄ / KMnO ₄
Jones reagent (1946) (chromium trioxide/sulfuric acid)	1333-82-0 7664-93-9	CrO ₃ / H ₂ SO ₄

<p>Kalle's acid (1-amino-2,7-naphthalenedisulfonic acid)</p>	<p>486-54-4</p>	
<p>Karstedt catalyst (1968)</p>		
<p>Kemp's triacid (1981) (cyclohexyl triacid)</p>	<p>79410-20-1 118514-35-5 136662-41-4</p>	
<p>Kiliani reagent (1901) (chromic acid-sulfuric acid-water)</p>	<p>1333-82-0 7664-93-9 7713-18-5</p>	<p>$\text{H}_2\text{CrO}_4 / \text{H}_2\text{SO}_4 / \text{H}_2\text{O}$</p>
<p>Koch's acid (8-amino-1,3,6-naphthalenetrisulfonic acid)</p>	<p>117-42-0</p>	

<p>Koelsch radical (1957)</p>	<p>2152-02-5 72087-85-5</p>	
<p>Kohler's ketone (1935) (mesityl-1,1-diphenylethyl ketone)</p>	<p>55800-31-2</p>	
<p>Koser's reagent (1982) (hydroxy(tosyloxy)iodobenzene)</p>	<p>124515-97-5</p>	
<p>Künig's salt (1904) (N-methyl-N-[5-(benzylamino)penta-2,4-dienylidene]aniline hydrochloride)</p>	<p>13984-07-1</p>	