

H ₂ SO ₄	Br ₂ /CCl ₄	KMnO ₄	CrO ₃	Alcoholic AgNO ₃	Compound
Insoluble	-	-	-	-	Alkanes
Soluble	-	-	-	-	Alcohol
Insoluble	-	-	-	+	Alkyl
Soluble	+	+	-	-	Alkene

2. What chemical tests could you do to distinguish the following compounds from each other? Which of the two compounds will give a positive test? What indicates a positive test for the reaction?
- 2-bromoethanol and 1,2-dibromoethane
 - Chromic Test for 2-bromoethanol; it's positive if it becomes blue-green.
 - Silver Nitrate Test for 1,2-dibromoethane; it's positive if silver precipitate forms.
 - 2-hexanol and 1-hexene
 - Lucas test for 2-hexanol; yields positive if a 2nd phase forms.
 - Bromine-water test for 1-hexene; yields positive if reddish color disappears.
 - 1-chloro-2-methyl-2-propanol and 1,2-dichloro-2-methylpropane
 - Lucas test for 1-chloro-2-methyl-2-propanol; yields positive if a 2nd phase forms.
 - Silver Nitrate Test for 1,2-dichloro-2-methylpropane; it yields positive if silver precipitate forms.
 - butyl bromide and butane
 - Chromic Test for butyl bromide; it's positive if it becomes blue-green.
 - Silver Nitrate Test for butane; it yields positive if silver precipitate forms.

V. References

[1] Hagen, J. and Wood, J. Supplement to Laboratory Manual (Fall 2009) Chemical Tests accessed July 23, 2013 from < http://psc710cs.net/compounds/chemical_tests.html >

- Alkenes and Alkynes
 - o Bromine Addition
 - o Bayer Test
- Aromatic Hydrocarbons
 - o Aluminum Chloride/Chloroform
- Halohydrocarbons
 - o Alcoholic Silver Nitrate Test ...