

# Esterification of octan-1-ol and ethanoic acid essay



**ASSIGN  
BUSTER**

**Esterification of octan-1-ol and ethanoic acid**  
**Aims**To prepare a fruit flavouring ester octyl ethanoate from an alcohol of octan-1-ol and carboxylic acid of ethanoic acid by heating under reflux in the addition of concentrated sulphuric acid as catalyst, extract the ester from the equilibrium mixture by solvent extraction and observe the odour of the ester either orange or pear and finally obtain an infra-red spectrum of the ester product and label the vibrations in the functional group region and compare the fingerprint region to database spectrum proving the identity of the product  
**Safety**First of all, concentrated ethanoic acid is known as glacial acetic acid which is a clear and colourless liquid with strong and pungent odour of vinegar.

Concentrated solutions are flammable, corrosive and irritant. Humans can receive toxic exposure to it through the contact of eyes, skin or even inhalation and ingestion. Eye contact may cause severe damage including blindness while skin contact may cause blackening and hyperkeratosis of the skin of the hands.

Inhalation of the spray mist may produce severe irritation of respiratory tract, characterized by choking, coughing and shortness of breath. If inhaled, remove to fresh air immediately (Mallinckrodt Baker, Inc., 1997). Secondly, Sulphuric acid is highly corrosive which can easily burn and damage your skin and eyes when even diluted.

Inhalation of mist or vapour will cause irritation of the upper respiratory tract. High concentrations of liquid or spray mist may cause tissue damage particularly on mucous membranes of eyes, mouth and respiratory tract. Inflammation of eye is characterized by redness, watering, and itching. In

case of eyes or skin contact, flush with plenty of cold water for at least 15 minutes to dilute the chemicals (Sciencelab. com, Inc., 2012).

Thirdly, octan-1-ol is a combustible liquid with ammonia-like smell so it should be kept away from source of ignition to prevent fire explosion....