Hydroxy compounds

A-Level Chemistry · Vocabulary in context

Word	Example
alcohol /ˈælkəhɒl/	Ethanol is an **alcohol**.
acyl chloride /əˈkɪl ˈklɔːraɪd/	Ethanoyl chloride is an **acyl chloride**.
ester /ˈestə/	Fruity smells often come from an **ester**.
carboxylic acid /ˌkɑːbəkˈsɪlɪk ˈæsɪd/	Ethanoic acid is a **carboxylic acid**.
ethanoyl chloride	**Ethanoyl chloride** reacts with ethanol at room temperature.
ethyl ethanoate /ˈiːθaɪl ˈeθənəʊt/	**Ethyl ethanoate** is the ester made from ethanol and ethanoic acid.
fumes	Steamy **fumes** of HCl are given off. HCl
phenyl ethanoate	Phenol reacts with ethanoyl chloride to form the ester **phenyl ethanoate**.
Phenol /ˈfenɒl/	**Phenol** is used to make plastics and medicines.
benzene /ˈbenziːn/	**Benzene** is a ring of six carbon atoms.
phenylamine /ˌfiːˈnaɪləmiːn/	**Phenylamine** is used to make dyes.
diazonium salt /ˌdaɪəˈzəʊnɪəm sɒlt/	A **diazonium salt** is used to make azo dyes.
nitrogen gas	Warming a diazonium salt with water releases **nitrogen gas**.

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sodium phenoxide	Phenol dissolves in NaOH(aq) to form **sodium phenoxide**. NaOH(aq)
acidic /əˈsɪdɪk/	Phenol is more **acidic** than ethanol.
acidity /æˈsɪdɪti/	Phenol has a higher **acidity** than ethanol.
azo compound /ˈɑːzəʊ ˈkɒmpaʊnd/	An **azo compound** is often brightly coloured.
dyes	Azo compounds are used as **dyes**.
nitration /naɪˈtreɪʃn/	**Nitration** of benzene gives nitrobenzene.
bromination /ˌbrəʊmɪˈneɪʃn/	**Bromination** of phenol gives a white solid.
precipitate /prɪˈsɪpɪteɪt/	A white **precipitate** forms when silver nitrate meets chloride ions.
phenoxide ion	The **phenoxide ion** spreads its charge into the ring.
stabilised	The anion is **stabilised** by delocalisation.
weak acid /wiːk ˈæsɪd/	Vinegar contains a **weak acid**.
delocalised /diˈlɒkəlaɪzd/	Benzene's electrons are **delocalised** around the ring.
electrophiles	The electron-rich ring attracts **electrophiles**.
catalyst /ˈkætəlɪst/	A **catalyst** speeds up a reaction without being used up.
reagents	Dilute **reagents** are enough to nitrate phenol.

Word	Example
substituents	The –OH group directs **substituents** to positions 2, 4 and 6. –OH 2、4 6
naphthol	**Naphthol** is a phenol with two fused rings.
inductive effect /ɪn'dʌktɪv ɪ'fekt/	Alkyl groups push electrons towards a carbon: the **inductive effect**.
carbonates /'kɑːbəneɪts/	Phenol is too weak an acid to react with **carbonates**.
decolourises	Phenol **decolourises** bromine water.
bromine water /'brəʊmaɪn 'wɔːtə/	An alkene turns orange **bromine water** colourless.
activated /'æktɪveɪtɪd/	The –OH group makes the ring **activated**. –OH
reversible /rɪ'vɜːsɪbl/	Esterification with a carboxylic acid is **reversible**.
observation /ɒbzə'veɪʃn/	Misty fumes are the **observation** when an acyl chloride reacts.

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