Learning Tracker; What’s In A Medicine

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| **Topics** | **R** | **Y** | **G** |
| **Organic Functional Groups** |  |  |  |
| Recall the formulae of the following homologous series: carboxylic acids, phenols, acid anhydrides, esters, aldehydes, ketones, ethers |  |  |  |
| Recall primary, secondary and tertiary alcohols in terms of the differences in structures |  |  |  |
| **Organic reactions** |  |  |  |
| Describe the following properties of phenols: acidic nature, and their reaction with alkalis but **not** carbonates, reaction with acid anhydrides (but **not** carboxylic acids) to form esters |  |  |  |
| Recall the test for phenols with neutral iron(III) chloride solution, to give a purple colouration |  |  |  |
| Describe the different reactions of alcohols, including reagents and conditions used. (e.g. ester formation, oxidation, dehydration and substitution to form haloalkanes) |  |  |  |
| Describe techniques for making an organic solid including purification by recrystallisation. **(PAG 6)** |  |  |  |
| Describe techniques and procedures for melting point determination and TLC **(PAG 6)** |  |  |  |
| Explain the principles of green chemistry |  |  |  |
| **Reaction mechanisms** |  |  |  |
| Recall the term elimination reaction in the context of forming alkenes from alcohols |  |  |  |
| **Modern Analytical Techniques** |  |  |  |
| Interpret mass spectra in terms of M+ peak, additional common peaks caused by positive ions, and the presence of an M+1 peak. |  |  |  |
| Describe how high-resolution mass spectra can give additional information about molecules. |  |  |  |
| Interpret infra-red spectra in terms of bonds found in organic molecules and possible functional groups present. |  |  |  |
| Predict the appearance of mass spectra and/or infra-red spectra when given additional information about an organic molecule |  |  |  |
| Analyse a variety of information sources to determine the structure of an organic molecule |  |  |  |

**How can I improve?**

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