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<tbody>
<tr>
<td>1</td>
<td>Proteins are condensation polymers formed from amino acid monomers.</td>
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<tr>
<td>2</td>
<td>The general structure of amino acids.</td>
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<tr>
<td>3</td>
<td>The acid-base properties of amino acids and the formation of zwitterions.</td>
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<td>4</td>
<td>The formation and hydrolysis of the peptide link between amino acid residues in proteins (Storyline EP2, Activity EP2.2).</td>
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<tr>
<td>5</td>
<td>The use of paper chromatography to identify amino acids (Activity EP2.2).</td>
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<tr>
<td>6</td>
<td>The importance of amino acid sequence in determining the properties of proteins, and the diversity of proteins in living things (Storyline EP2).</td>
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<tr>
<td>7</td>
<td>Stereo-isomers: cis-trans and optical isomers (enantiomers).</td>
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<tr>
<td>8</td>
<td>The use of the term chiral as applied to a molecule.</td>
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<tr>
<td>9</td>
<td>How nuclear magnetic resonance (n.m.r.) spectroscopy can be used for the elucidation of molecular structure.</td>
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<tr>
<td>10</td>
<td>The interpretation of n.m.r. spectra for simple compounds given relevant information (Activity EP2.3).</td>
</tr>
<tr>
<td>11</td>
<td>The expression for the equilibrium constant, K&lt;sub&gt;e&lt;/sub&gt;, for a given reaction.</td>
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<td>12</td>
<td>The way in which changes of temperature and pressure affect the magnitude of the equilibrium constant.</td>
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<td>13</td>
<td>The use of values of K&lt;sub&gt;e&lt;/sub&gt;, together with given data on equilibrium concentrations, to calculate the composition of equilibrium mixtures.</td>
</tr>
<tr>
<td>14</td>
<td>The primary, secondary and tertiary structures of proteins (Storyline EP4).</td>
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<tr>
<td>15</td>
<td>The role of hydrogen bonds and other intermolecular forces in determining the structure and properties of proteins (Storyline EP4).</td>
</tr>
<tr>
<td>16</td>
<td>The double helix structure of DNA in terms of a sugar-phosphate backbone and attached bases (Storyline EP2).</td>
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<tr>
<td>17</td>
<td>The significance of hydrogen bonding in the pairing of bases in DNA, and the replication of genetic information (Storyline EP2, Activities EP2.7 and EP2.8).</td>
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<tr>
<td>18</td>
<td>How DNA encodes for the amino acid sequence in a protein.</td>
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<tr>
<td>19</td>
<td>The use of empirical rate equations of the form: rate=(k[A]^m[B]^n) where (m) and (n) are integers.</td>
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<tr>
<td>20</td>
<td>The meaning of the terms: rate of reaction, rate constant, order of reaction (both overall and with respect to a given reagent).</td>
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<td>21</td>
<td>Experimental methods for measuring the rate of reaction.</td>
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<tr>
<td>22</td>
<td>How to use experimental data to find the order of a reaction (zero, first or second).</td>
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<tr>
<td>23</td>
<td>How to use given data to calculate half-lives for a reaction.</td>
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<tr>
<td>24</td>
<td>The industrial importance of enzymes (Storyline EP6).</td>
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<tr>
<td>25</td>
<td>The characteristics of enzyme catalysis, including: specificity, temperature and pH sensitivity, and inhibition (Storyline EP6).</td>
</tr>
<tr>
<td>26</td>
<td>The specificity of enzymes in terms of a simple 'lock and key' model of enzyme action.</td>
</tr>
<tr>
<td>27</td>
<td>The technique of 'genetic engineering' and its applications (Storyline EP3 and EPS5).</td>
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