

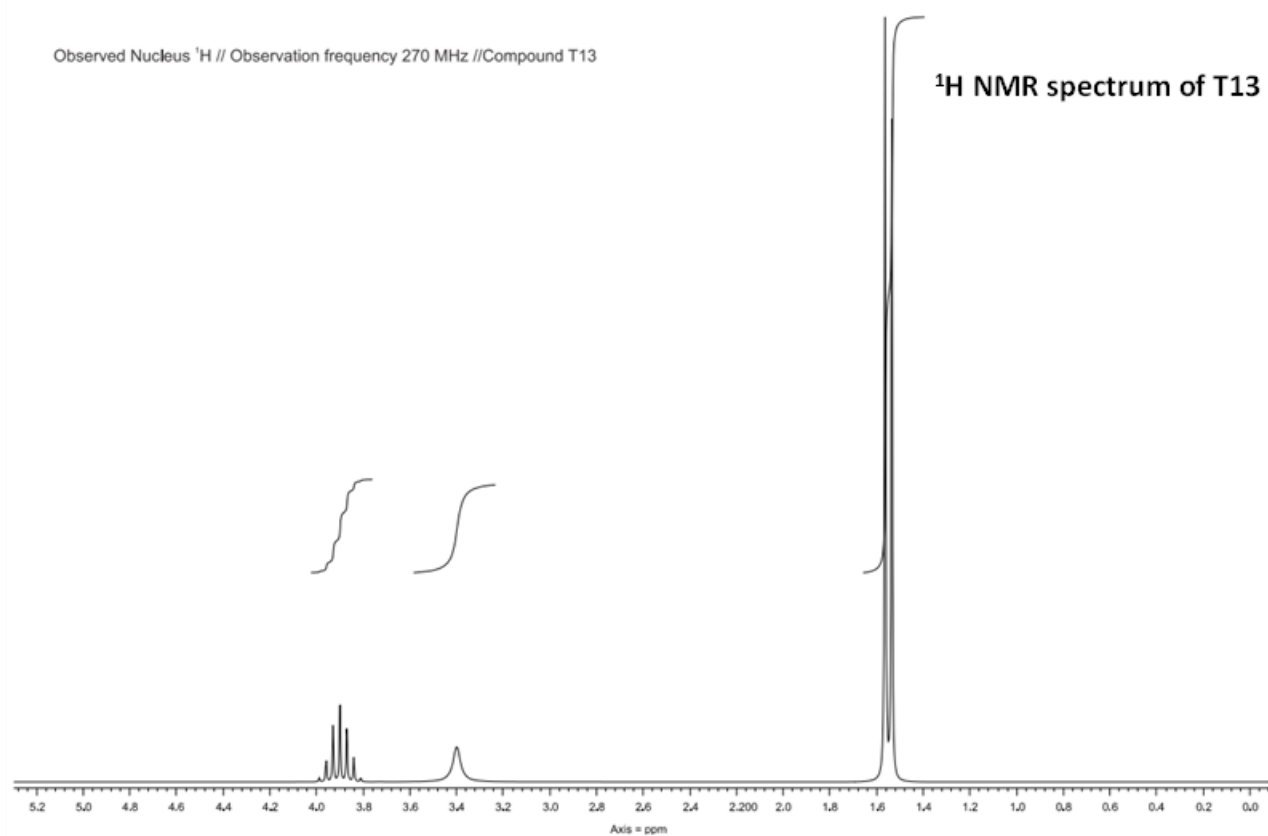
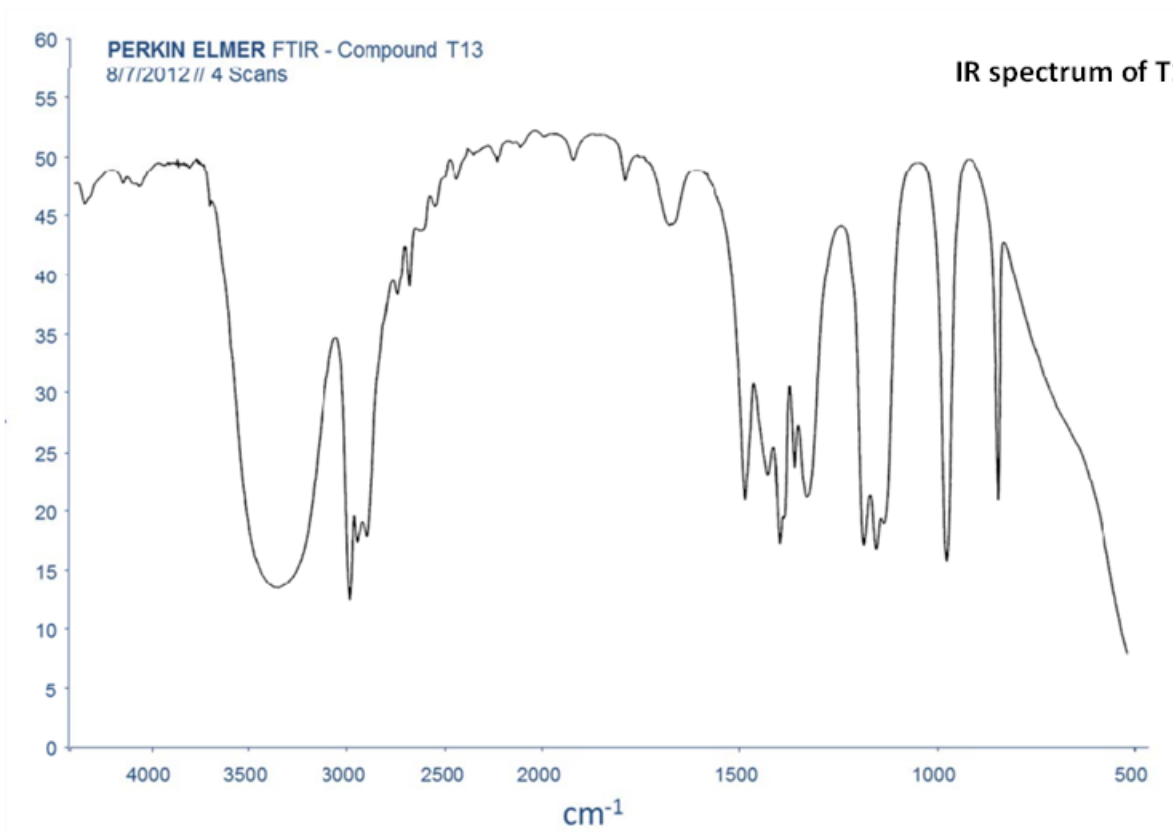
Cemeg

Amser: 1.5 awr (90 munud)

Atebwch DDAU gwestiwn

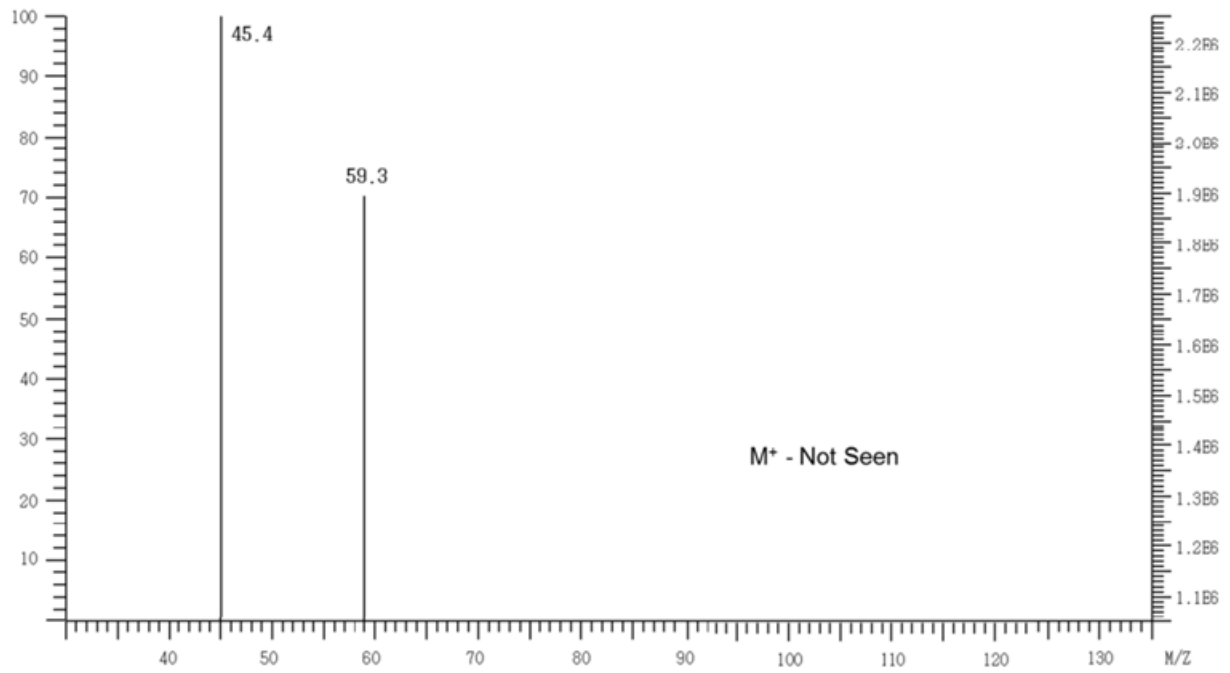
Cewch ddefnyddio cyfrifiannell a chopi o'r tabl
cyfnodol

1. Mae'r cwestiwn hwn yn ymwneud â bondio cemegol – atebwch rannau a-d.
 - (a) Tynnwch ddiagram i ddangos y rhyngweithiadau bondio mewn sodiwm clorid. [2 farc]
 - (b) Tynnwch ddiagram i ddangos bondio mewn dŵr. [2 farc]
 - (c) Tynnwch ddiagram i ddangos bondio mewn bensen. [2 farc]
 - (d) Disgrifiwch nodweddion y cyfansoddion hyn a sut mae'r nodweddion hyn yn gysylltiedig â'r mathau o fond. [4 marc]
2. Mae'r cwestiwn hwn yn ymwneud â chemeg feintiol – atebwch rannau a-e.
 - (a) Diffiniwch y gair 'môl' fel y'i defnyddir mewn cemeg. [1 marc]
 - (b) Rhowch yr hafaliad sy'n hafalu'n gywir y maint mewn molau â'r màs. [2 farc]
 - (c) Sut y byddech yn mynd ati i amcangyfrif nifer yr atomau mewn 1 gram yn union o botasiwm? [3 marc]
 - (d) Pam y mae'r mynegiad 1 môl o ocsigen yn amwys? [2 farc]
 - (e) Eglurwch sut y byddech chi'n paratoi 200 ml 0.05 M o hydoddiant dyfrllyd alwminiwm nitrad o'r halwyn anhydros? [2 farc]
3. Edrychwch ar y tri sbectrwm ar y ddwy dudalen nesaf a defnyddiwch y data i ddiddwytho adeiledd y cyfansoddyn **T13**. Darparwch dystiolaeth ar gyfer eich adeiledd. [10 marc]

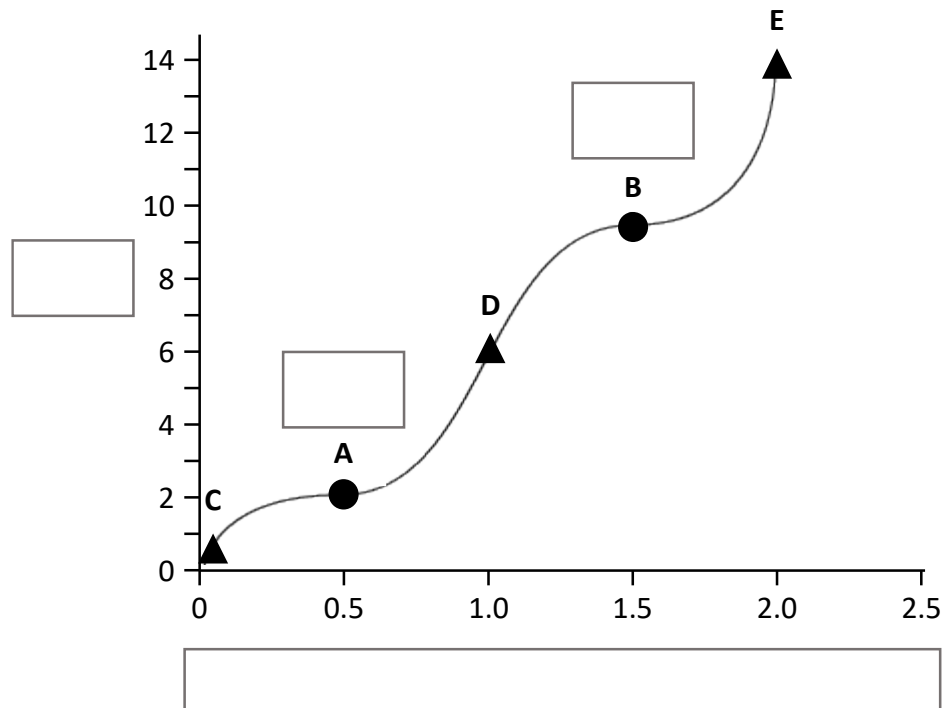


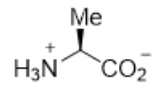
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AutoSpec EI+ Magnet BpM:210 BpI:5570560 TIC: 70789054 Flags: Hall
File Text: T13

El mass spectrum of T13



4. Atebwch bob rhan o'r cwestiwn hwn Mae'r graff hwn yn dangos proffil titradiad yr asid amino, L-Ala (L-alanin; Me = CH₃)





L-Ala

- (a) Labelwch yr echelinau X ac Y a rhowch yr unedau fel y bo'n briodol. [2 farc]
- (b) Labelwch y pwyntiau A a B. [2 farc]
- (c) Tynnwch lun adeileddau'r prif ffurfiau sy'n bresennol yn C, D ac E. [4 marc]
- (d) Mae polymerau asidau amino yn facrofoleciwlau biolegol o ba fath? [2 farc]

THE PERIODIC TABLE

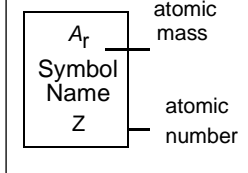
Group

3 4 5 6 7 0

Period ← s Block →

p Block

Key



d Block

f Block

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(1091-01A)

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|---|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|--------------------------------|--------------------------------|------------------------------|----------------------------|------------------------------|----------------------------|----------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|-----------------------------|
| 1 | s Block | | | | | | | | | | | | p Block | | | | | |
| 1 | 1.01 H Hydrogen 1 | | | | | | | | | | | 4.00 He Helium 2 | | | | | | |
| 2 | 6.94 Li Lithium 3 | 9.01 Be Beryllium 4 | | | | | | | | | | | 10.8 B Boron 5 | 12.0 C Carbon 6 | 14.0 N Nitrogen 7 | 16.0 O Oxygen 8 | 19.0 F Fluorine 9 | 20.2 Ne Neon 10 |
| 3 | 23.0 Na Sodium 11 | 24.3 Mg Magnesium 12 | | | | | | | | | | | 27.0 Al Aluminium 13 | 28.1 Si Silicon 14 | 31.0 P Phosphorus 15 | 32.1 S Sulfur 16 | 35.5 Cl Chlorine 17 | 40.0 Ar Argon 18 |
| 4 | 39.1 K Potassium 19 | 40.1 Ca Calcium 20 | 45.0 Sc Scandium 21 | 47.9 Ti Titanium 22 | 50.9 V Vanadium 23 | 52.0 Cr Chromium 24 | 54.9 Mn Manganese 25 | 55.8 Fe Iron 26 | 58.9 Co Cobalt 27 | 58.7 Ni Nickel 28 | 63.5 Cu Copper 29 | 65.4 Zn Zinc 30 | 69.7 Ga Gallium 31 | 72.6 Ge Germanium 32 | 74.9 As Arsenic 33 | 79.0 Se Selenium 34 | 79.9 Br Bromine 35 | 83.8 Kr Krypton 36 |
| 5 | 85.5 Rb Rubidium 37 | 87.6 Sr Strontium 38 | 88.9 Y Yttrium 39 | 91.2 Zr Zirconium 40 | 92.9 Nb Niobium 41 | 95.9 Mo Molybdenum 42 | 98.9 Tc Technetium 43 | 101 Ru Ruthenium 44 | 103 Rh Rhodium 45 | 106 Pd Palladium 46 | 108 Ag Silver 47 | 112 Cd Cadmium 48 | 115 In Indium 49 | 119 Sn Tin 50 | 122 Sb Antimony 51 | 128 Te Tellurium 52 | 127 I Iodine 53 | 131 Xe Xenon 54 |
| 6 | 133 Cs Caesium 55 | 137 Ba Barium 56 | 139 La Lanthanum 57 | 179 Hf Hafnium 72 | 181 Ta Tantalum 73 | 184 W Tungsten 74 | 186 Re Rhenium 75 | 190 Os Osmium 76 | 192 Ir Iridium 77 | 195 Pt Platinum 78 | 197 Au Gold 79 | 201 Hg Mercury 80 | 204 Tl Thallium 81 | 207 Pb Lead 82 | 209 Bi Bismuth 83 | (210) Po Polonium 84 | (210) At Astatine 85 | (222) Rn Radon 86 |
| 7 | (223) Fr Francium 87 | (226) Ra Radium 88 | (227) Ac Actinium 89 | | | | | | | | | | | | | | | |

► Lanthanoid elements

►► element

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|---------------------------|---------------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|---------------------------|----------------------------|------------------------------|-----------------------------|
| 140 Ce Cerium 58 | 141 Pr Praseodymium 59 | 144 Nd Neodymium 60 | (147) Pm Promethium 61 | 150 Sm Samarium 62 | (153) Eu Europium 63 | 157 Gd Gadolinium 64 | 159 Tb Terbium 65 | 163 Dy Dysprosium 66 | 165 Ho Holmium 67 | 167 Er Erbium 68 | 169 Tm Thulium 69 | 173 Yb Ytterbium 70 | 175 Lu Lutetium 71 |
|---------------------------|---------------------------------|------------------------------|---------------------------------|-----------------------------|-------------------------------|-------------------------------|----------------------------|-------------------------------|----------------------------|---------------------------|----------------------------|------------------------------|-----------------------------|

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| 232 Th Thorium 90 | (231) Pa Protactinium 91 | 238 U Uranium 92 | (237) Np Neptunium 93 | (242) Pu Plutonium 94 | (243) Am Americium 95 | (247) Cm Curium 96 | (245) Bk Berkelium 97 | (251) Cf Californium 98 | (254) Es Einsteinium 99 | (253) Fm Fermium 100 | (256) Md Mendelevium 101 | (254) No Nobelium 102 | (257) Lr Lawrencium 103 |
|----------------------------|-----------------------------------|---------------------------|--------------------------------|--------------------------------|--------------------------------|-----------------------------|--------------------------------|----------------------------------|----------------------------------|-------------------------------|-----------------------------------|--------------------------------|----------------------------------|

