

Ytterbian isotopes

Education in Chemistry

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rsc.li/2qcDGH3

Foundation level activity

Read the article 'The most important village in chemistry' (rsc.li/2qcDGH3). It mentions a number of elements that are associated with the town of Ytterby. Use the information in the table to work out the elements the data describes and the chemical symbols. Complete all the gaps in the table.

Element	Number of protons	Number of neutrons	Symbol
	39	49	$\begin{smallmatrix} 88 \\ 39 \end{smallmatrix}$
	68	94	$\begin{smallmatrix} 162 \\ 68 \end{smallmatrix}$
	64	92	$\begin{smallmatrix} 156 \\ 64 \end{smallmatrix}$
	66	96	$\begin{smallmatrix} 162 \\ 66 \end{smallmatrix}$
	70	98	$\begin{smallmatrix} 168 \\ 70 \end{smallmatrix}$
		24	$\begin{smallmatrix} 45 \\ 21 \end{smallmatrix}Sc$
	69	100	$\begin{smallmatrix} 169 \\ 69 \end{smallmatrix}$
	67	98	$\begin{smallmatrix} 165 \\ 67 \end{smallmatrix}$
<i>Dysprosium</i>		90	$\begin{smallmatrix} 156 \\ 66 \end{smallmatrix}Dy$
	71	104	$\begin{smallmatrix} 175 \\ 71 \end{smallmatrix}Lu$
<i>Gadolinium</i>			$\begin{smallmatrix} 154 \\ 64 \end{smallmatrix}Gd$
<i>Ytterbium</i>		106	$\begin{smallmatrix} 176 \\ 70 \end{smallmatrix}Yb$
<i>Terbium</i>	65		$\begin{smallmatrix} 159 \\ 65 \end{smallmatrix}Tb$
<i>Erbium</i>			$\begin{smallmatrix} 167 \\ 68 \end{smallmatrix}Er$