

# VCAA Chemistry data book

## Summary of changes between 2025 and 2026 VCAA data books

Item number in 2026 data book	Change – compared to 2025 version of data book
1. Names of selected elements	Moved from item 17
2. Electrochemical series	Was Item 1. Some $E^0$ values have changed in 2 <sup>nd</sup> decimal place and $E^0$ is now (correctly) denoted as $E^\ominus$
3. Chemical relationships	Was Item 2. Many changes here Note that while $n = \frac{V}{V_M}$ has briefly disappeared, it is, apparently coming back. $n = \frac{N}{N_A}$ has been added. <ul style="list-style-type: none"> <li>• Formula for concentration in ppm has been added</li> <li>• Formula for density has been added</li> <li>• Formula for chemical calibration factor has been renamed as calibration factor for general calorimetry (and is further down the list)</li> <li>• Formula for enthalpy change of a reaction has been added</li> <li>• Thermal energy transferred is renamed as heat gained or lost</li> <li>• Formula for Calibration factor of reaction calorimetry has been added</li> <li>• Formula for standard cell potential has been added</li> <li>• Equilibrium constant is now denoted as <math>K_c</math> instead of <math>K</math> (this has also been changed in the relevant key knowledge dot point in the Study Design).</li> </ul>
4. Physical constants and standard values	Was item 3. Specific heat capacity of water is denoted as $c_w$ instead of $c$
5. Unit conversions	Was item 4 1 tonne = $1 \times 10^3$ kg or $1 \times 10^6$ g has been added
6. Metric prefixes	Was item 5. No other changes.
7. Acid-base indicators	Was item 6 Distinction between dilute and concentrated solutions of phenolphthalein added (pink or red), was previously just pink
8. Colours of selected oxidising agents and their conjugate reducing agents	Was item 7. Has been expanded to include more species <ul style="list-style-type: none"> <li>• Cobalt ion and metal; iron(II) ion and iron metal (currently with random superscript 2 included); nickel ion and metal have been added.</li> <li>• Distinction between dilute and concentrated solutions of manganese(II) ion has been added.</li> <li>• Note about addition of starch solution to detect presence of iodine at low concentrations has been added.</li> </ul>
9. Formulas and charges for selected ions	Was item 8. No changes to cations and anions.
10. Qualitative solubilities of selected ionic salts in water	Has replaced item 9 Solubility table

	Items 10 and 11 (Average bond enthalpies) have been deleted
11. Energy content of biomolecules in food	Was item 12. Name has been changed from Energy content of food groups No other changes
12. Molar enthalpies of combustion	Was item 13. There are now two sample equations and these are now in line with the information in the Study design (ie kJ has replaced $\text{kJ mol}^{-1}$ ) Values for molar enthalpy of combustion have changed for butane, ethanol, and glucose
13. Heats of combustion of selected fossil fuels	Was item 14. Name has been changed from Heats of combustion of selected blended fuels No other changes.
14. Heats of combustion of selected biofuels	Was item 15. Note about the heat of combustion of biodiesel being variable has been added. Also note about samples of biogas containing $\text{H}_2\text{S}$ and water vapour has been added
15. Periodic table of the elements	Was Item 16. Is still across two pages No obvious changes to relative atomic masses Note added about groups being numbered according to IUPAC convention.
16. Formats for representing organic molecules	Was item 18 Representations of organic molecules. No other change.
17. Functional group and substituent nomenclature in organic chemistry	Was item 19 Functional group nomenclature in organic chemistry <ul style="list-style-type: none"> <li>• New column has been added giving the IUPAC functional group structure</li> <li>• Functional group name column has been removed</li> <li>• Asterixis have been added with a note below the table indicating that the use of the prefix is beyond the scope of the VCE Chemistry course</li> <li>• Names of prefixes for alkyl substituents have been added</li> </ul>
18. Formulas of selected fatty acids	Was item 21. Position has moved from after amino acids to before amino acids in the book No other changes.
19. 2-amino acids	Was item 20. No other changes
20. Representation of selected biomolecules	Was item 25. Has been moved significantly forward in the book Structure of glycogen has been added
21. Characteristic ranges for infrared absorption	Was item 22. Wavenumbers have changed for ketones (was 1680 – 1850 and is now 1680 – 1700), esters (was 1720 – 1840 and is now 1720 – 1750) No other changes
22. $^{13}\text{C}$ -NMR data	Was item 23. No other changes.
23. $^1\text{H}$ - NMR data	Was item 24. No other changes.
24. Sustainability	Was item 26. Short description added at the beginning of this item No other changes