	Module title	Original episode content combined	Core learning outcome
1	**From Topic to Research Question**	Ep 1 Good Research Question; Ep 2 IV vs DV; Ep 3 Forgotten/Controlled Variable; Ep 4 Observable vs Measurable	Turn a broad chemistry idea into a **specific, measurable and controllable investigation**
2	**Preparing Standard Solutions**	Ep 5 Standard Solution; Ep 6 Volumetric Flask vs Measuring Cylinder	Prepare solutions of **known concentration accurately** and choose appropriate volumetric apparatus
3	**Dilution as a Research Tool**	Ep 7 Serial Dilution; Ep 8 Serial vs Direct Dilution	Calculate and prepare dilutions; decide **when serial or direct dilution is appropriate**
4	**Calibration Curves & UV–Vis**	Ep 9 Calibration Curve; Ep 10 UV–Vis Measurement; Ep 11 Beer–Lambert Law	Connect **concentration → absorbance → calibration curve** and understand why A=\varepsilon lc matters
5	**From Calibration to Unknown Concentration**	Ep 12 Calibration Curve Errors; Ep 13 Unknown Concentration	Diagnose a poor calibration curve and use a valid one to determine an **unknown concentration**
6	**Liquid–Liquid Extraction**	Ep 14 What is LLE?; Ep 15 Why Layers Separate; Ep 16 Multiple Extractions	Understand **immiscibility, partitioning, layer identification and repeated extraction**
7	**Standardisation & Primary Standards**	Ep 17 Standardisation; Ep 18 Primary Standards	Understand why some solutions must be standardised and what makes a substance suitable as a **primary standard**
8	**Reliability, Accuracy & Data Quality**	Ep 19 Repeats; Ep 20 Accuracy vs Precision; Ep 21 Anomalous Results	Judge whether experimental data are **reliable, precise, accurate and defensible**
9	**Designing the Measurement Strategy**	Ep 22 Concentration Range Design; Ep 23 Choosing Analytical Technique	Choose an appropriate **range, measurement method and analytical technique** for the research question
10	**From Research Question to Experimental Method**	Ep 24 RQ → Experimental Method; Ep 25 Simple Experiment Excellence	Integrate everything into a coherent investigation: **RQ → variables → method → data → evidence → conclusion**

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