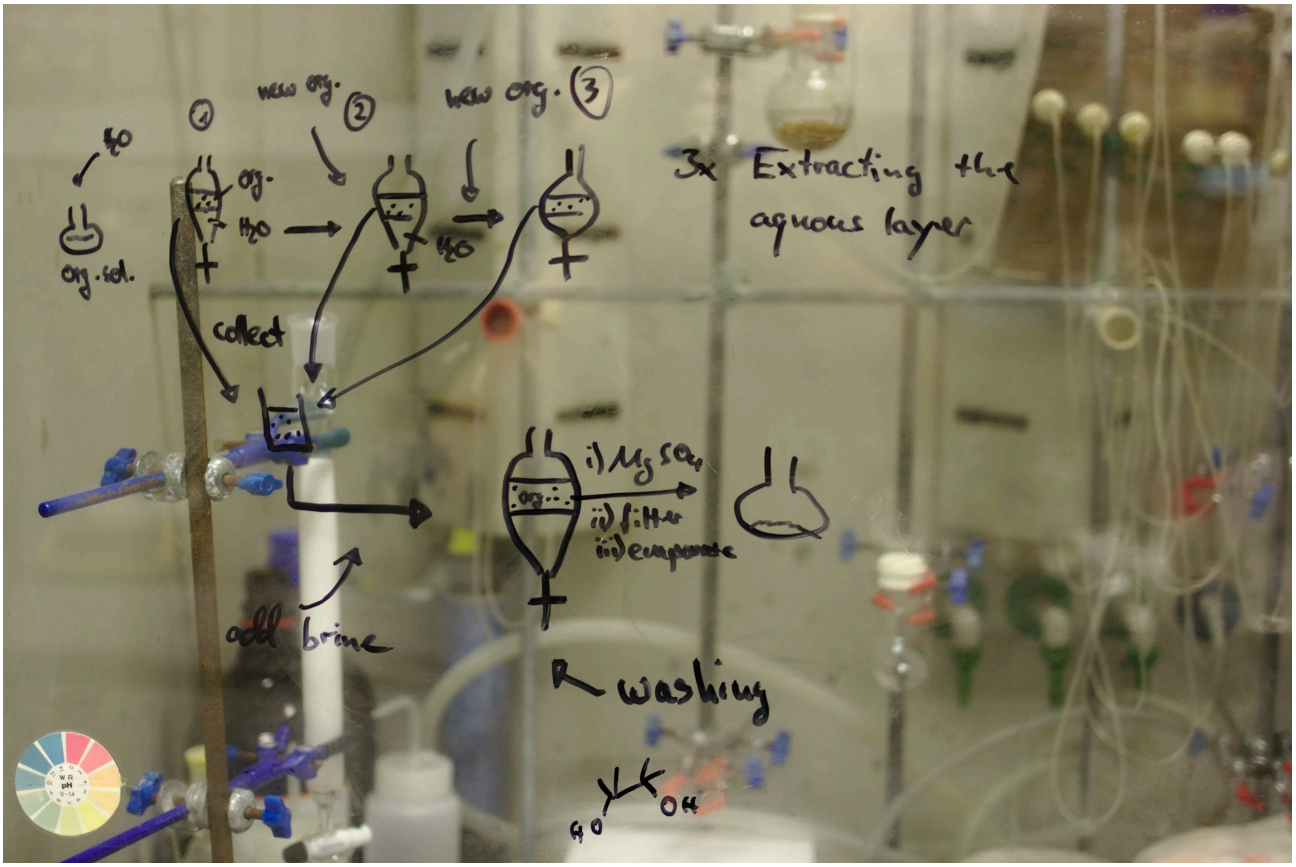
# IB Chemistry IA Format & Structure: Step-by-Step Guide for 2025

ts-tutoring.com/blog/ib-chemistry-ia-format-and-structure

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The IB Chemistry IA is your chance to run your own experiment — **and it counts for 20% of your final grade.**

A clear format helps you stay focused, hit every criterion, and avoid losing points for messy structure or missed sections.

Under the 2025 syllabus, SL and HL students follow the **same IA format**, with a **3,000-word limit** (excluding tables, figures, and citations).

This guide walks you through each section so you know exactly what to include and how to present it.

## Overall IB Chemistry IA Format (Quick Overview)




**Word limit:** 3,000 words max (excluding graphs, tables, equations, citations, and appendices)

- **Format:** Typed, digital submission (usually as a PDF)
- **Font & spacing:** Use a clean, legible font like Arial or Times New Roman, 11–12 pt, with 1.15–1.5 line spacing
- **Citation style:** Any consistent academic format (APA is most common**)**

**Suggested IA Structure:**

- Title Page
- Introduction
- Research Question
- Hypothesis (optional)
- Variables
- Materials & Equipment
- Safety & Ethics

- Methodology
- Data Collection
- Data Analysis
- Conclusion
- Evaluation
- References
- Appendices (optional)

Use clear headings for each section — it makes your report easier to follow and easier to mark.

## Title Page

Your title page sets the tone for your Chemistry IA. Include the following details:

- **Title:** A clear, specific description of your investigation (e.g., “How does temperature affect the rate of reaction between X and Y?”)
- **Student Name:** As registered with the IB
- **Candidate Number:** Your IB number
- **Date:** Submission date
- **Word Count:** Excluding bibliography, tables, figures, and appendices

A clean title page makes your Chemistry IA feel like a finished, serious piece of work.

Not mandatory, but highly recommended. A table of contents makes your Chemistry IA easier to navigate — especially if it’s on the longer side.

Use the auto-generate feature in Word or Google Docs to save time and keep everything aligned.

It’s a small detail that adds clarity and shows you’ve taken care with your structure — something examiners always appreciate.

## Introduction

Your introduction sets the stage for your Chemistry IA. Keep it focused and relevant:

- **Context & Background**: Give a brief explanation of the chemical concept you're exploring — just enough to help the reader understand your aim.
- **Personal or Real-World Relevance**: Why did you choose this topic? Does it connect to something personal, environmental, or industrial?
- **Key Theory**: Mention any foundational concepts the reader needs to know (e.g., collision theory, Le Chatelier's Principle). Keep it brief — you'll expand in later sections if needed.
- **(Optional ) Hypothesis**: If your experiment is hypothesis-driven, state it clearly.

## Research Question (Standalone Section)



Your Chemistry IA **research question** should be clearly stated in its own section.

- Make it **specific**: What exactly are you testing or measuring?
- Make it **measurable**: Include variables, units, or methods if possible.
- Make it **chemically relevant**: Ensure it connects to key chemistry concepts and techniques.

**Example:**
How does increasing the concentration of hydrogen peroxide affect the rate of its decomposition when catalyzed by potassium iodide?

*Tip: Your entire IA hinges on this question — keep it clear, focused, and testable.*

## Variables

List and briefly explain each variable involved in your Chemistry IA investigation:

- **Independent Variable** – What you're intentionally changing (e.g., concentration, temperature, pH)
- **Dependent Variable** – What you're measuring as a result (e.g., rate of reaction, color intensity, volume of gas)
- **Controlled Variables** – Factors you'll keep constant to ensure a fair test (e.g., volume of solution, duration of reaction, ambient temperature)

Keep it brief, but make sure each variable is clearly defined and relevant to your research question.

## Materials and Equipment



Include a detailed list of everything you used in your Chemistry IA. This helps ensure your experiment is reproducible and shows you've planned with precision.

- **Chemicals** – List all substances used, with concentrations and volumes (e.g., 0.1 mol/L HCl, 25 mL).
  **Apparatus** – Include all relevant lab equipment. Be specific about the type and precision (e.g., burette ±0.05 mL, digital balance ±0.01 g).

- **Measurement Uncertainties** – Where applicable, note the uncertainty of each instrument. This becomes important in your error analysis later.

Being thorough here signals to the examiner that you understand both the practical and technical sides of the investigation.

## Safety, Ethical, and Environmental Considerations



Keep this section short but purposeful. You're showing the examiner that you've handled your investigation responsibly throughout your Chemistry IA.

- **Safety**: Mention any precautions you took — gloves, goggles, fume hood, handling corrosive or toxic substances, etc.

- **Ethical**: If your experiment involved any living organisms or controversial materials, note how you ensured ethical treatment.

- **Environmental**: Address how you disposed of chemicals safely or reduced environmental harm (e.g., neutralizing acids before disposal, minimizing waste).

Even if your IA doesn't raise major concerns, a brief acknowledgment of these aspects shows maturity and awareness.

## Methodology (Experimental Procedure)




This is where you walk the reader through exactly how you conducted your investigation in your Chemistry IA.

- **Step-by-step procedure**: Write your method clearly enough that someone else could repeat it exactly. Keep it organized and easy to follow.
- **Controlling variables**: Explain how you controlled each relevant variable — from keeping volumes and temperatures constant to timing reactions precisely.
- **Visual aids**: Add a labeled diagram or setup photo if it helps clarify your setup. It's not required, but it can boost clarity and show attention to detail.

**Want feedback to ensure your methodology is precise enough?**
**Request a Chemistry IA review.**

## Data Collection (Results)



This section is all about presenting your Chemistry IA **raw data** — no analysis yet.

- **Data tables**: Organize your results clearly. Include units for every value and uncertainties where applicable (e.g., ±0.01 g for a balance).
- **Consistent formatting**: Use headings, consistent decimal places, and clean table layouts to make things easy to read.
- **Qualitative observations**: If there were color changes, precipitates, or other relevant visual cues, note them here.
- **No interpretation yet**: Don’t analyze or explain anything at this stage — just present the data you collected.

## Analysis (Data Processing & Interpretation)



This is where you make sense of the Chemistry IA **results** — not just what the data shows, but *why* it matters.

- **Calculations**: Show how you processed your data. Include at least one sample calculation with correct units and significant figures. If using formulas (e.g. for rates, molar masses, equilibrium constants), explain what each variable represents.
- **Graphs**: Add relevant graphs or charts — fully labeled, with titles, axis units, and trendlines if appropriate. Include error bars and uncertainties when possible.
- **Interpretation**: Identify patterns or relationships in the data. Discuss any anomalies, and explain what they might mean.
- **Connect to theory**: Tie your analysis back to the chemistry concepts discussed in your introduction. Make it clear how your data supports or challenges your original hypothesis or expectations.

**Want to be sure your analysis is on the right track?**
**Get targeted feedback from an IB Chemistry tutor.**

## Conclusion



This is where you wrap up your Chemistry IA and give a clear, direct answer to your research question.

Keep it tight:

- **State your conclusion clearly** – based on your processed data, what did you find?
- **Summarize key results** – highlight only the main trends or figures that support your conclusion.

- **Mention your hypothesis** – was it supported or not? Say so briefly if you included one earlier.

No new analysis here. Just close the loop and show you understood what your investigation revealed.

## Evaluation



This section shows your ability to think critically about your own work. Be honest and specific:

- **Strengths & Weaknesses**: What went well in your setup? What didn't?
- **Limitations & Errors**: Identify clear sources of uncertainty or error — not just "human error." Think equipment limitations, measurement precision, or control issues.
- **Improvements**: Suggest realistic changes that could make your results more reliable if you were to repeat the experiment.
- **Optional**: Propose a possible extension or follow-up investigation if it makes sense for your topic.

A strong evaluation demonstrates that you're reflective and understand how real chemistry experiments work — not just in theory, but in practice.

## References

Use a consistent academic citation style in  — APA is the most commonly used and accepted in IB Chemistry.

- **Include all sources**: textbooks, scientific articles, lab manuals, or any site you pulled background theory or procedures from.
- **Double-check for formatting**: consistency matters, and sloppiness here can cost marks.
- Don't forget **in-text citations** where appropriate.

This section might be brief, but it shows academic honesty and supports your scientific credibility.

## Appendices (Optional)

Use appendices for any extra information that supports your Chemistry IA but doesn't fit smoothly into the main sections. This might include:

- Sample calculations or data tables too large for the main bodyCalibration curves or spectrometer readouts
- Additional graphs or raw observations
- Risk assessments or safety data sheets (if not already summarized)

Label each appendix clearly (e.g., *Appendix A*, *Appendix B*) and refer to them in the main text when relevant. Don't include anything here that's essential to understanding your investigation — if it's important, it belongs in the body.