

QUICK LINKS TO TECHNICAL QUESTIONS:

This document contains quick links to the technical laboratory questions which have been answered by the Science ASSIST Team and published on this website. The questions have been broadly grouped into categories. Note that the question name only gives an indication of the topic

Biological science

Biology Activities

1. [Depth Studies](#)
2. [DNA Extraction](#)
3. [Effective Enzymes PH](#)
4. [Eye Dissection](#)
5. [Food tests: glucose, starch and gelatine solutions](#)
6. [forensic entomology](#)
7. [Method for testing pH and catalase in liver for Yr 12 biology](#)
8. [Mitosis in onion root tip](#)
9. [Mosquito larvae](#)
10. [Piglet Dissection](#)
11. [Plankton](#)
12. [Snail Dissections](#)
13. [Water testing for PFOS and PFOA](#)

Microbiology

1. [Agar plate experiments](#)
2. [Agar plate storage in the fridge](#)
3. [agar plates](#)
4. [Autoclaving disposable Petri dishes](#)
5. [Autoclaving microbiological waste](#)
6. [Bacteria \(Micrococcus luteus\)](#)
7. [Bacteria in yoghurt](#)
8. [Disposal of Agar plates](#)
9. [Gene induction experiment?](#)
10. [Genetic modification of bacteria](#)
11. [Growing mould on bread](#)
12. [Handling cow manure in science labs](#)
13. [Inoculating agar plates and sealing them](#)
14. [Laboratory Signage & Waste Disposal](#)
15. [looking at decomposers -Micro biology experiment](#)
16. [Microbiology \(cultivating temperatures\)](#)
17. [Microbiology during COVID-19](#)
18. [Microbiology, 2016 draft of the new senior syllabus](#)
19. [Mould investigations extra questions](#)

20. [Observing bread mould](#)
21. [Observing growth on a slice of bread](#)
22. [Pressure cookers](#)
23. [students investigating mould and bacterial growth on food items](#)
24. [Transformation of E.coli with pFluoroGreen](#)
25. [Use of antibiotics \(Amoxycil\) in experiments](#)
26. [use of tears in a school practical](#)
27. [Using E. coli bacteria in schools](#)
28. [Using human tears in an experiment](#)

Biology Procedures

1. [Animal skeleton](#)
2. [Biological preserved specimens](#)
3. [Blood Typing - Use of Animal Blood](#)
4. [Calf Foetus](#)
5. [Cheek Cells](#)
6. [Cremated skeleton](#)
7. [Disinfecting Microscopes](#)
8. [Dissecting cane toads in WA](#)
9. [Enzyme preparation for experiments.](#)
10. [Enzymes](#)
11. [fainting during dissections](#)
12. [Human skeletons](#)
13. [Is it illegal to grow Hydrilla in WA?](#)
14. [Lung Dissection](#)
15. [Oil Immersion](#)
16. [Oxygen producing plants](#)
17. [Preparation of Equipment for Dissections](#)
18. [preserved specimens](#)
19. [Preserving sheep brains without formalin](#)
20. [Storage of offal](#)
21. [Tarantula kept in classroom](#)
22. [Use of a Spirometer](#)
23. [Using body fluids in science](#)
24. [Wildlife camera](#)

Chemical science

Chemical Activity

1. [Acetone and polystyrene foam](#)
2. [Alkane/Alkene/Bromine Water clean up](#)
3. [Bonding and conductivity](#)
4. [Burning Magnesium Ribbon](#)
5. [Chemical Cell](#)
6. [Chemicals \(cold pack practical\)](#)
7. [Chemistry](#)
8. [Chemistry Experiment](#)
9. [Combustion reaction](#)
10. [Determining empirical formula](#)
11. [Effect of catalyst and surface area on reaction rate](#)
12. [Flame testing](#)
13. [Formation of crystals](#)
14. [Fuels](#)
15. [HCl + NH₄OH Reaction](#)
16. [Lightning in a test tube](#)
17. [making ionic compounds](#)
18. [Making Nylon](#)
19. [Making Polyurethane foam](#)
20. [Making Sherbet](#)
21. [Measuring Corrosion of Iron-Yr12 EEI](#)
22. [Microscale Chemistry](#)
23. [Mixing of alcohols](#)
24. [pH Probe](#)
25. [Potassium Dichromate in the determination of alcohol content in wine](#)
26. [Precipitation reaction \(sodium hydroxide and barium nitrate\)](#)
27. [Precipitation reactions](#)
28. [Reaction between iron and sulfur](#)
29. [Reflux and distillation](#)
30. [Rusting of steel wool using vinegar](#)
31. [Safe concentration of HCl for Year 8 students to use?](#)
32. [Tollens Test](#)
33. [Toxic Alcohols in Spirit Burners to test Fuel Efficiency](#)
34. [Use of Liquid Nitrogen](#)
35. [Use of Sodium in Schools](#)
36. [Whoosh bottle](#)

Chemical Labelling

1. [Chemical Labelling](#)
2. [Chemical Labels](#)
3. [CSIS labelling](#)
4. [GHS](#)
5. [GHS Implementation](#)
6. [GHS Label](#)
7. [GHS labelling](#)
8. [Labelling decanted chemicals under new system](#)
9. [Labelling of solutions](#)
10. [Labelling silver nitrate and silver nitrate solutions](#)

Chemical laboratory preparation

1. [Bromine Water](#)
2. [Copper Sulfate Crystals](#)
3. [Drying of anhydrous sodium carbonate](#)
4. [Indicator for testing for water hardness](#)
5. [Solution making](#)
6. [Testing Alkanes and Alkenes](#)

Chemical Management

1. [Chem register](#)
2. [Chemical Register / SDS](#)
3. [Chemical Register information & SDS printing query](#)
4. [Chemical Registers](#)
5. [Chemical User Codes](#)
6. [MSDS update](#)
7. [Old Chemicals](#)
8. [Risk assessment versions](#)
9. [Safety Data Sheet updates](#)
10. [Safety Data Sheets](#)
11. [Safety Data Sheets](#)
12. [Safety Data Sheets](#)
13. [Safety Data Sheets and the GHS](#)
14. [School Chemical Register](#)
15. [SDS for non-hazardous chemicals](#)
16. [Third party Safety Data Sheets \(SDSs\)](#)
17. [Writing risk assessments for chemical classes](#)

Chemical List

- [Ammonium Nitrate](#)
- [Ammonium nitrate](#)
- [Ammonium thiocyanate](#)
- [Banned chemicals/materials list NSW & ACT](#)
- [Barium nitrate solutions](#)
- [Calcium Carbide](#)
- [Calcium Carbonate](#)
- [Calcium hydroxide](#)
- [Chemicals in schools \(formaldehyde, melamine and cyanuric acid\)](#)
- [Demonstration of phosphorus](#)
- [Electrophoresis Dyes](#)
- [Ferrocyanide \$\text{Fe}\(\text{SCN}\)_2\$](#)
- [Gallium Metal](#)
- [Genetics](#)
- [GHS Hazard category ratings](#)
- [Glutaric Acid](#)
- [Health monitoring requirements](#)
- [Lead and lead salts](#)
- [Litmus Paper](#)
- [Mercury \(II\) Thiocyanate](#)
- [organic chemicals](#)
- [Phenanthroline](#)
- [phenylthiocarbamide paper](#)
- [potassium bromate](#)
- [Potassium iodide status and EUDs](#)
- [Potassium metal](#)
- [Recommended Chemicals for secondary Schools](#)
- [Sulfuric acid- going brown](#)
- [Sulfur Hexafluoride](#)
- [Use of Iron III Nitrate and Zinc Nitrate](#)
- [Use of lead in ACT schools](#)

Chemical Disposal

- [Biodiesel](#)
- [Broken Max Min Thermometer](#)
- [Calcium Metal](#)
- [calcium oxide disposal](#)
- [Can Potassium Permanganate waste be neutralised?](#)
- [Chemical clock practical - waste disposal](#)
- [Chemical disposal](#)
- [Chemical disposal \(chromium\)](#)
- [Chemical disposal of Sudan 3](#)
- [Copper sulfate waste](#)
- [Disposal of agar with silver nitrate](#)
- [disposal of Ammonium Thiocyanate](#)

- [Disposal of potassium permanganate and glycerol reaction](#)
- [Disposal of silver nitrate solid](#)
- [Endothermic reaction disposal of products](#)
- [Ethylene Glycol disposal](#)
- [Laboratory Chemicals and Waste Management/Setup](#)
- [Mercury Spills](#)
- [Mercury Thermometer](#)
- [organic chemistry](#)
- [Organic waste](#)
- [potassium permanganate](#)
- [risk assessment \(thiosulfate\)](#)
- [Sulfur disposal](#)
- [waste chemical disposal](#)
- [Zinc Nitrate](#)

Chemical Storage

- [aerosol storage](#)
- [Aluminium powder](#)
- [Chemical Safety](#)
- [Chemical Storage](#)
- [Chemical Storage \(manganese dioxide\)](#)
- [Chemical storage and labelling](#)
- [chemical storage bottles](#)
- [Chemical Storage Timeframes](#)
- [Chemical Store](#)
- [Chemical Store \(ventilation\)](#)
- [Cleaning and reuse of a plastic container that previously held 10M HCl](#)
- [Container for sodium metal](#)
- [copper powder msds](#)
- [cyclohexene in dropper bottles](#)
- [Definition of "locked up" on MSDS](#)
- [Hydrogen peroxide storage](#)
- [Iron\(III\) Nitrate storage](#)
- [Oxidising Chemicals](#)
- [refrigerator](#)
- [shelf life of chemicals](#)
- [storage of nitrates](#)
- [Storage of Sodium & Phosphorus](#)
- [Storing magnesium ribbon](#)

Earth Science

- [Radioactive Minerals](#)
- [Serpentine Rock Specimens](#)
- [Talc asbestos](#)

Facilities

Chemical store

1. [Chemical storage](#)
2. [Chemical Storage](#)
3. [Chemical Storage Cabinets](#)
4. [Chemical Store Ventilation](#)
5. [Chemical stores legislations and requirements](#)
6. [GHS Signage on Flammable Liquids and Corrosives cabinets.](#)
7. [Legal Temperature for the Chemical Store Room in Schools](#)
8. [Ventilation in corrosive cupboard](#)

Design

1. [Australian Standards for window coverings in Science Labs](#)
2. [Fume Cupboards in Senior Chem Labs](#)
3. [Fumehood plumbing](#)
4. [Lab space for primary school](#)
5. [Lab Tech office space requirements](#)
6. [Laboratory technician office location](#)
7. [Laboratory ventilation](#)
8. [number of exit doors in labs and prep rooms](#)
9. [photocopier / printer stored outside chemical store room](#)
10. [Science Facilities](#)

Emergency response

1. [Chemical use in Junior laboratories](#)
2. [Electrical Services in a School Lab](#)
3. [Electrical standards for classroom laboratories](#)
4. [LAB SAFETY](#)
5. [Safety Shower Requirements](#)
6. [safety showers & eye washes](#)

Maintenance

1. [Emergency eye wash basins, showers and gas taps](#)
2. [Fume cupboard servicing](#)
3. [Testing emergency off buttons for power and gas](#)

Refurbishment

1. [Decommissioning a science area](#)
2. [Dust at workplace](#)

General

Equipment

1. [Bunsen burner tubing](#)
2. [Bunsen burners](#)
3. [Bunsen Tubing](#)
4. [Disposal of old equipment](#)
5. [DRONES](#)
6. [Gas Cylinders](#)
7. [lab dishwasher](#)
8. [Portable bunsen burners](#)
9. [Recommendations for microscope replacement](#)
10. [SOP for water aspirator/vacuum pump](#)

Glassware

1. [cleaning crucibles](#)
2. [Cleaning microscope slides](#)
3. [Dichromic acid glass cleaner waste](#)
4. [Glass stoppers fused to bottles](#)

Procedures

1. [Balloons](#)
2. [Disposal of empty helium cylinders](#)
3. [Disposing of wire gauze mats with ceramic centres](#)
4. [Eating in Labs?](#)
5. [Lab equipment database](#)
6. [Lab safety/guidelines](#)
7. [Lab Safety—sitting during practicals](#)
8. [laboratory doors](#)
9. [Legalities of practical work](#)
10. [Licence to purchase chemicals](#)
11. [Making hand sanitiser](#)
12. [online booking programs?](#)
13. [PC1 laboratory rules and eating in classrooms](#)
14. [PVA Slime](#)
15. [science drug lab equipment?](#)
16. [Sharps container disposal](#)
17. [Should shared safety glasses be decontaminated after each use?](#)
18. [Soldering](#)
19. [Spill Kit](#)
20. [Spill kits](#)
21. [Student practical activities at home](#)
22. [Sulfuric Acid in Corrosives Cabinet](#)
23. [Transportation of school chemicals](#)
24. [Use of Science ASSIST resources](#)

PPE

1. [Disposable nitrile gloves](#)
2. [Laboratory coats and aprons](#)
3. [Safety glasses](#)
4. [Safety glasses](#)
5. [safety glasses and assessing risks](#)

Risk Assessments

1. [Risk Assessment](#)
2. [Risk assessments for preparation and disposal](#)
3. [Risk Assessment](#)
4. [Risk assessments](#)
5. [Risk assessments - who does them?](#)

Technician

1. [Employment](#)
2. [Job description for lab assistant level 2,3,4](#)
3. [Science technician allocation](#)

Physical sciences

1. [Hearing Aids- Van der Graaff generator](#)
2. [laser classification](#)
3. [plasma ball](#)
4. [Radioactive sources](#)
5. [Radioisotopes](#)
6. [Using an air-rifle in schools to demonstrate velocity of a bullet](#)
7. [Van de Graaff generator/Insulin pump](#)

Suppliers

1. [Boiling Beads or Chips](#)
2. [Dissection materials](#)
3. [Large Calcium Carbonate Marble chips](#)
4. [Making Gold Nanoparticles](#)
5. [Microscope repair](#)
6. [Microscope Servicing - Gold Coast](#)
7. [Science Companies](#)
8. [Science suppliers for polymer slime powder and ochre](#)
9. [scientific dictionaries](#)
10. [Source of porous pots](#)
11. [Year 12 Biology \(Rennet\)](#)