 Acid/Base analysis techniques

Module 6: Acid/base reactions[[1]](#footnote-1)

Key inquiry question

How are solutions of acids and bases analysed?

Outcomes

A student:

* CH12-13 Describes, explains and quantitatively analyses acids and bases using contemporary models

Content Descriptor

Students:

* Explore acid/base analysis techniques that are applied by Aboriginal and Torres Strait Islander Peoples

Teaching and learning activities

Key inquiry question

* What did Aboriginal and Torres Strait Islander Peoples do when experiencing indigestion or painful stings?

1. Plant treatments used by Aboriginal and Torres Strait Islander Peoples

Task

* Outline some of the uses Aboriginal and Torres Strait Islander Peoples had for various plant species, as treatments for illness or discomfort:
  + [Aboriginal Plant Use](http://www.anbg.gov.au/gardens/visiting/exploring/aboriginal-trail/)
  + [Aboriginal Plant Use - NSW Southern Tablelands](http://www.anbg.gov.au/apu/)
  + Wiradjuri Plant Use in the Murrumbidgee Catchment
  + [Bush Medicine](http://www.arrawarraculture.com.au/fact_sheets/pdfs/15_Medicine.pdf)
  + [Aboriginal healing practices and Australian bush medicine](http://www.friendsofglenthorne.org.au/wp-content/uploads/Clarke-Vol-33-2008.pdf)
  + [Healing Secrets of Aboriginal Bush Medicine](http://www.bri.net.au/medicine.html) (may be blocked on school servers)
  + Renwick, Cath. & Wreck Bay Community. 2000, Geebungs and snake whistles: Koori people and plants of Wreck Bay/Wreck Bay Community and Cath Renwick Aboriginal Studies Press [Canberra]
  + Packer, J, Harrington, D, Jamie, J, Brouwer, N, Gaikwad, J, Vemulpad, S & Yaegl, CE 2011, Yaegl: medicinal and plant resources handbook. 1st ed, Macquarie University Lighthouse Press, North Ryde, NSW.
  + Stewart, Kathy. & Percival, Bob. & Royal Botanic Gardens (Sydney, N.S.W.). & Environmental Trust (NSW). 1997, Bush foods of New South Wales: a botanic record and an Aboriginal oral history/Kathy Stewart, Bob Percival Royal Botanic Gardens Sydney, Sydney.

2. Analysis of the plant treatments used

Task

* Determine the impact of clay minerals, plant saps or poultices, on the treatment of indigestion or painful stings. A suggested teaching sequence is as follows:
  + Investigation- construct a list of the pH of stings from Australian invertebrates and plants
  + Investigation – what is the cause of the pain of indigestion?
  + Practical - measure the pH of substances extracted and constructed from plant materials or clay minerals
  + Assess the neutralising capabilities, and the impact of the use of substances extracted from plant materials has on indigestion and stings

1. This document references the[Chemistry Stage 6 Syllabus](https://syllabus.nesa.nsw.edu.au/chemistry-stage6/)© 2017 [NSW Education Standards Authority (NESA)](http://syllabus.nesa.nsw.edu.au/copyright/) for and on behalf of the Crown in right of the State of New South Wales. [↑](#footnote-ref-1)