STANZ Inc. Recommendation
Regarding Code of Practice for School Exempt Laboratories
Section: *5.2.2 Flammable Gases*
a) Portable LPG cylinders (for heating purposes) shall not be stored or used in school science laboratories.

This phrase has caused confusion and many questions for our schools.

In consultation with MOE and NZASE, STANZ have sought to clarify the statement and now bring you this, our STANZ recommendation.

A 9kg (typical home BBQ or portable gas heater size) or smaller gas bottle is portable. This means all forms of gas bottle 9kg and smaller (inc butane type camping stoves) are not allowed in school laboratories for heating purposes.

For heating purposes refers to heating any and all forms of air/liquid/solid.

STANZ Approved & Recommended
External - Outside the building - piped in Gas Supply 

LPG piped into building from large externally-stored cylinder; or mains Natural Gas

Further to this all laboratories are to be routinely fitted with on/emergency off switches and timers in compliance with current best practice, see http://www.legislation.govt.nz/regulation/public/2010/0076/latest/whole.html

If your school has decided to not have piped in gas supply in the science laboratories, on the next page are some alternative options.

Water baths

A water bath will have a very stable heat that can be applied from every direction where the water is in contact with that that is being heated. Most school laboratories already have a water bath. Some schools have found small appliances, with suitable thermostat controls eg deep fryers, frying pans and slow cookers make good waterbaths and are significantly cheaper to purchase.

Heating mantles

Very good heat control; available in a variety of forms. Some with magnetic stirrers for stirring liquids.



Hot Plates

Kitchen type hotplates are a cheaper alternative to a heating mantle designed for laboratory use. These might be used for more general use (such as with junior classes) – reserving heating mantles for senior chemistry students. The temperature settings can be calibrated and written more accurately on the dial.

Heat guns

STANZ strongly advise against students using heat guns.

STANZ believe heat guns should be banned.

The air emerging from a heat gun can be extremely hot and is invisible. Heat guns should be treated with all the respect due to a blow torch.